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LIST OF DRAWINGS

EPA FORM 7520-6 (REV. 8-01)

PERMIT APPLICATION
PROPOSED CLASS II-D INJECTION WELL
AND PROPOSED UNDERGROUND INJECTION
OF
PRODUCED FLUIDS

CNX Gas Company LLC
2481 John Nash Blvd.
Bluefield, WV

1.0 INTRODUCTION

CNX Gas Company LLC is submitting this EPA Form 7520-6 (Rev. 8-01) Permit Application for a Class II-D Injection Well for disposal of brine water produced from methane production holes, coalbed methane wells, conventional wells, pit fluids from the drilling of the wells and any other fluids produced in conjunction with gas production operations. The produced fluids will be injected into an existing deep conventional gas production well, BPC1, into the Raven, Maxon, Weir, and Berea formations, at depths between 2375 and 5308 feet deep.

With the approval of this permit application, CNX proposes to convert the existing conventional production well, BPC1 (Permit No. 4845-01), into the injection well. Surface facilities currently exist and are permitted by the Virginia Department of Mines and Minerals and Energy, Division of Oil and Gas.

Produced fluids will be transported to injection well site, stored in above-ground storage tanks, filtered and deposited into the injection zone. The injection process will be monitored by trained personnel.

2.0 PERMIT APPLICATION

This permit application will present the necessary information and supporting documentation for permitting the disposal of produced fluids from the associated gas operations of CNX Gas Company LLC into the existing production well, BPC1, under

EPA injection well classification II-D. This application has been assembled following EPA Form 7520-6 (Rev. 8-01) instructions. Please reference the Table of Contents for information being submitted.

OMB No. 2040-0042 Approval Expires 12/31/2011

EPA

United States Environmental Protection Agency

Underground Injection Control Permit Application

(Collected under the authority of the Safe Drinking Water Act. Sections 1421, 1422, 40 CFR 144)

I. EPA ID Number

		T/A	C
U			

Read Attached Instructions Before Starting

For Official Use Only

Application approved mo day year	Date received mo day year	Permit Number	Well ID	FINDS Number

II. Owner Name and Address

Owner Name: CNX Gas Company, LLC

Street Address: 2481 John Nash Blvd | Phone Number: (304) 323-6500

City: Bluefield | State: WV | ZIP CODE: 24701

III. Operator Name and Address

Owner Name: CNX Gas Company, LLC

Street Address: 2481 John Nash Blvd | Phone Number: (304) 323-6643

City: Bluefield | State: WV | ZIP CODE: 24701

IV. Commercial Facility

- [ ] Yes
- [x] No

V. Ownership

- [x] Private
- [ ] Federal
- [ ] Other

VI. Legal Contact

- [x] Owner
- [ ] Operator

VII. SIC Codes

1311

VIII. Well Status *(Mark "x")*

- [x] A. Operating — Date Started mo day year: 07/13/2005
- [x] B. Modification/Conversion
- [ ] C. Proposed

IX. Type of Permit Requested *(Mark "x" and specify if required)*

- [x] A. Individual
- [ ] B. Area

Number of Existing Wells	Number of Proposed Wells	Name(s) of field(s) or project(s)
	1	BPC-01

X. Class and Type of Well *(see reverse)*

A. Class(es) (enter code(s))	B. Type(s) (enter code(s))	C. If class is "other" or type is code 'x,' explain	D. Number of wells per type (if area permit)
II	D		1

XI. Location of Well(s) or Approximate Center of Field or Project

Latitude Deg	Min	Sec	Longitude Deg	Min	Sec	Township and Range Sec	Twp	Range	1/4 Sec	Feet From	Line	Feet From	Line
37	07	30	82	02	30								

XII. Indian Lands (Mark 'x')

- [ ] Yes
- [x] No

XIII. Attachments

(Complete the following questions on a separate sheet(s) and number accordingly; see instructions)

For Classes I, II, III, (and other classes) complete and submit on a separate sheet(s) Attachments A--U (pp 2-6) as appropriate. Attach maps where required. List attachments by letter which are applicable and are included with your application.

XIV. Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR 144.32)

A. Name and Title *(Type or Print)*: Buford Myers, VP CAPP Operations, CNX Gas Company

B. Phone No. *(Area Code and No.)*: (276) 596-5002

C. Signature: Buford Myers

D. Date Signed: 2/4/2010

EPA FORM 7520-6 (REV. 8-01)

PERMIT APPLICATION
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This permit application will present the necessary information and supporting documentation for permitting the disposal of produced fluids from the associated gas operations of CNX Gas Company LLC into the existing production well, BPC1, under EPA injection well classification II-D. This application has been assembled following

EPA Form 7520-6 (Rev. 8-01) instructions. Please reference the Table of Contents for information being submitted.

Well Class and Type Codes

Class I Wells used to inject waste below the deepest underground source of drinking water.

Type "I" Nonhazardous industrial disposal well
"M" Nonhazardous municipal disposal well
"W" Hazardous waste disposal well injecting below USDWs
"X" Other Class I wells (not included in Type "I," "M," or "W")

Class II Oil and gas production and storage related injection wells.

Type "D" Produced fluid disposal well
"R" Enhanced recovery well
"H" Hydrocarbon storage well (excluding natural gas)
"X" Other Class II wells (not included in Type "D," "R," or "H")

Class III Special process injection wells.

Type "G" Solution mining well
"S" Sulfur mining well by Frasch process
"U" Uranium mining well (excluding solution mining of conventional mines)
"X" Other Class III wells (not included in Type "G," "S," or "U")

Other Classes Wells not included in classes above.
Class V wells which may be permitted under §144.12.
Wells not currently classified as Class I, II, III, or V.

Attachments to Permit Application

Class	Attachments
I new well	A, B, C, D, F, H – S, U
existing	A, B, C, D, F, H – U
II new well	A, B, C, E, G, H, M, Q, R; optional – I, J, K, O, P, U
existing	A, E, G, H, M, Q, R, – U; optional – J, K, O, P, Q
III new well	A, B, C, D, F, H, I, J, K, M – S, U
existing	A, B, C, D, F, H, J, K, M – U
Other Classes	To be specified by the permitting authority

INSTRUCTIONS - Underground Injection Control (UIC) Permit Application

Paperwork Reduction Act: The public reporting and record keeping burden for this collection of information is estimated to average 394 hours for a Class I hazardous well application, 252 hours for a Class I non-hazardous well application, 32 hours for a Class II well application, and 119 hours for a Class III well application. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, DC 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.

This form must be completed by all owners or operators of Class I, II, and III injection wells and others who may be directed to apply for permit by the Director.

I. **EPA I.D. NUMBER** - Fill in your EPA Identification Number. If you do not have a number, leave blank.

II. **OWNER NAME AND ADDRESS** - Name of well, well field or company and address.

III. **OPERATOR NAME AND ADDRESS** - Name and address of operator of well or well field.

IV. **COMMERCIAL FACILITY** - Mark the appropriate box to indicate the type of facility.

V. **OWNERSHIP** - Mark the appropriate box to indicate the type of ownership.

VI. **LEGAL CONTACT** - Mark the appropriate box.

VII. **SIC CODES** - List at least one and no more than four Standard Industrial Classification (SIC) Codes that best describe the nature of the business in order of priority.

VIII. **WELL STATUS** - Mark Box A if the well(s) were operating as injection wells on the effective date of the UIC Program for the State. Mark Box B if wells(s) existed on the effective date of the UIC Program for the State but were not utilized for injection. Box C should be marked if the application is for an underground injection project not constructed or not completed by the effective date of the UIC Program for the State.

IX. **TYPE OF PERMIT** - Mark "Individual" or "Area" to indicate the type of permit desired. Note that area permits are at the discretion of the Director and that wells covered by an area permit must be at one site, under the control of one person and do not inject hazardous waste. If an area permit is requested the number of wells to be included in the permit must be specified and the wells described and identified by location. If the area has a commonly used name, such as the "Jay Field," submit the name in the space provided. In the case of a project or field which crosses State lines, it may be possible to consider an area permit if EPA has jurisdiction in both States. Each such case will be considered individually, if the owner/operator elects to seek an area permit.

X. **CLASS AND TYPE OF WELL** - Enter in these two positions the Class and type of injection well for which a permit is requested. Use the most pertinent code selected from the list on the reverse side of the application. When selecting type X please explain in the space provided.

XI. **LOCATION OF WELL** - Enter the latitude and longitude of the existing or proposed well expressed in degrees, minutes, and seconds or the location by township, and range, and section, as required by 40 CFR Part 146. If an area permit is being requested, give the latitude and longitude of the approximate center of the area.

XII. **INDIAN LANDS** - Place an "X" in the box if any part of the facility is located on Indian lands.

XIII. **ATTACHMENTS** - Note that information requirements vary depending on the injection well class and status. Attachments for Class I, II, III are described on pages 4 and 5 of this document and listed by Class on page 2. Place EPA ID number in the upper right hand corner of each page of the Attachments.

XIV. **CERTIFICATION** - All permit applications (except Class II) must be signed by a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, and by a principal executive or ranking elected official for a public agency. For Class II, the person described above should sign, or a representative duly authorized in writing.

INSTRUCTIONS - Attachments

Attachments to be submitted with permit application for Class I, II, III and other wells.

A. **AREA OF REVIEW METHODS** - Give the methods and, if appropriate, the calculations used to determine the size of the area of review (fixed radius or equation). The area of review shall be a fixed radius of 1/4 mile from the well bore unless the use of an equation is approved in advance by the Director.

B. **MAPS OF WELL/AREA AND AREA OF REVIEW** - Submit a topographic map, extending one mile beyond the property boundaries, showing the injection well(s) or project area for which a permit is sought and the applicable area of review. The map must show all intake and discharge structures and all hazardous waste treatment, storage, or disposal facilities. If the application is for an area permit, the map should show the distribution manifold (if applicable) applying injection fluid to all wells in the area, including all system monitoring points. Within the area of review, the map must show the following:

Class I

The number, or name, and location of all producing wells, injection wells, abandoned wells, dry holes, surface bodies of water, springs, mines (surface and subsurface), quarries, and other pertinent surface features, including residences and roads, and faults, if known or suspected. In addition, the map must identify those wells, springs, other surface water bodies, and drinking water wells located within one quarter mile of the facility property boundary. Only information of public record is required to be included in this map;

Class II

In addition to requirements for Class I, include pertinent information known to the applicant. This requirement does not apply to existing Class II wells;

Class III

In addition to requirements for Class I, include public water systems and pertinent information known to the applicant.

C. **CORRECTIVE ACTION PLAN AND WELL DATA** - Submit a tabulation of data reasonably available from public records or otherwise known to the applicant on all wells within the area of review, including those on the map required in B, which penetrate the proposed injection zone. Such data shall include the following:

Class I

A description of each well's types, construction, date drilled, location, depth, record of plugging and/or completion, and any additional information the Director may require. In the case of new injection wells, include the corrective action proposed to be taken by the applicant under 40 CFR 144.55.

Class II

In addition to requirement for Class I, in the case of Class II wells operating over the fracture pressure of the injection formation, all known wells within the area of review which penetrate formations affected by the increase in pressure. This requirement does not apply to existing Class II wells.

Class III

In addition to requirements for Class I, the corrective action proposed under 40 CFR 144.55 for all Class III wells.

D. **MAPS AND CROSS SECTION OF USDWs** - Submit maps and cross sections indicating the vertical limits of all underground sources of drinking water within the area of review (both vertical and lateral limits for Class I), their position relative to the injection formation and the direction of water movement, where known, in every underground source of drinking water which may be affected by the proposed injection. (Does not apply to Class II wells.)

E. **NAME AND DEPTH OF USDWs (CLASS II)** - For Class II wells, submit geologic name, and depth to bottom of all underground sources of drinking water which may be affected by the injection.

F. **MAPS AND CROSS SECTIONS OF GEOLOGIC STRUCTURE OF AREA** - Submit maps and cross sections detailing the geologic structure of the local area (including the lithology of injection and confining intervals) and generalized maps and cross sections illustrating the regional geologic setting. (Does not apply to Class II wells.)

G. **GEOLOGICAL DATA ON INJECTION AND CONFINING ZONES (Class II)** - For Class II wells, submit appropriate geological data on the injection zone and confining zones including lithologic description, geological name, thickness, depth and fracture pressure.

H. **OPERATING DATA** - Submit the following proposed operating data for each well (including all those to be covered by area permits): (1) average and maximum daily rate and volume of the fluids to be injected; (2) average and maximum injection pressure; (3) nature of annulus fluid; (4) for Class I wells, source and analysis of the chemical, physical, radiological and biological characteristics, including density and corrosiveness, of injection fluids; (5) for Class II wells, source and analysis of the physical and chemical characteristics of the injection fluid; (6) for Class III wells, a qualitative analysis and ranges in concentrations of all constituents of injected fluids. If the information is proprietary, maximum concentrations only may be submitted, but all records must be retained.

I. **FORMATION TESTING PROGRAM** - Describe the proposed formation testing program. For Class I wells the program must be designed to obtain data on fluid pressure, temperature, fracture pressure, other physical, chemical, and radiological characteristics of the injection matrix and physical and chemical characteristics of the formation fluids.

For Class II wells the testing program must be designed to obtain data on fluid pressure, estimated fracture pressure, physical and chemical characteristics of the injection zone. (Does not apply to existing Class II wells or projects.)

For Class III wells the testing must be designed to obtain data on fluid pressure, fracture pressure, and physical and chemical characteristics of the formation fluids if the formation is naturally water bearing. Only fracture pressure is required if the program formation is not water bearing. (Does not apply to existing Class III wells or projects.)

J. **STIMULATION PROGRAM** - Outline any proposed stimulation program.

K. **INJECTION PROCEDURES** - Describe the proposed injection procedures including pump, surge, tank, etc.

L. **CONSTRUCTION PROCEDURES** - Discuss the construction procedures (according to §146.12 for Class I, §146.22 for Class II, and §146.32 for Class III) to be utilized. This should include details of the casing and cementing program, logging procedures, deviation checks, and the drilling, testing and coring program, and proposed annulus fluid. (Request and submission of justifying data must be made to use an alternative to packer for Class I.)

M. **CONSTRUCTION DETAILS** - Submit schematic or other appropriate drawings of the surface and subsurface construction details of the well.

N. **CHANGES IN INJECTED FLUID** - Discuss expected changes in pressure, native fluid displacement, and direction of movement of injection fluid. (Class III wells only.)

O. **PLANS FOR WELL FAILURES** - Outline contingency plans (proposed plans, if any, for Class II) to cope with all shut-ins or wells failures, so as to prevent migration of fluids into any USDW.

P. **MONITORING PROGRAM** - Discuss the planned monitoring program. This should be thorough, including maps showing the number and location of monitoring wells as appropriate and discussion of monitoring devices, sampling frequency, and parameters measured. If a manifold monitoring program is utilized, pursuant to §146.23(b)(5), describe the program and compare it to individual well monitoring.

Q. **PLUGGING AND ABANDONMENT PLAN** - Submit a plan for plugging and abandonment of the well including: (1) describe the type, number, and placement (including the elevation of the top and bottom) of plugs to be used; (2) describe the type, grade, and quantity of cement to be used; and (3) describe the method to be used to place plugs, including the method used to place the well in a state of static equilibrium prior to placement of the plugs. Also for a Class III well that underlies or is in an exempted aquifer, demonstrate adequate protection of USDWs. Submit this information on EPA Form 7520-14, Plugging and Abandonment Plan.

R. **NECESSARY RESOURCES** - Submit evidence such as a surety bond or financial statement to verify that the resources necessary to close, plug or abandon the well are available.

S. **AQUIFER EXEMPTIONS** - If an aquifer exemption is requested, submit data necessary to demonstrate that the aquifer meets the following criteria: (1) does not serve as a source of drinking water; (2) cannot now and will not in the future serve as a source of drinking water; and (3) the TDS content of the ground water is more than 3,000 and less than 10,000 mg/l and is not reasonably expected to supply a public water system. Data to demonstrate that the aquifer is expected to be mineral or hydrocarbon production, such as general description of the mining zone, analysis of the amenability of the mining zone to the proposed method, and time table for proposed development must also be included. For additional information on aquifer exemptions, see 40 CFR Sections 144.7 and 146.04.

T. **EXISTING EPA PERMITS** - List program and permit number of any existing EPA permits, for example, NPDES, PSD, RCRA, etc.

U. **DESCRIPTION OF BUSINESS** - Give a brief description of the nature of the business.

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ATTACHMENT A
AREA OF REVIEW

1.0 INTRODUCTION

The Area of Review consists of approximately 126 acres, ¼-mile radius from BPC1. The area of review can be seen on the location map BPC1-1 and the Area of Review Map BPC1-2. The area of review is located on the Big A Mountain, VA USGS 7.5 Quadrangle and in the Hurricane District of Buchanan County, Virginia.

All information presented and mapping provided are based upon the ¼-mile fixed radius centered on BPC1. On some mapping, a radius of one mile will be considered as the area of review, when required by this permit application.

EPA FORM 7520-6 (REV. 8-01)

ATTACHMENT B

REVIEW AREA AND WELL INFORMATION

1.0 INTRODUCTION

Drawing BPC1-2 is a topographic map at a scale of 1' = 1000' which identifies the area within one mile and ¼ mile of BPC1. The drawings in this application provide the following information:

- Intake and Discharge Structures – A surficial reconnaissance within the one-mile limits of BPC1, along with State and Federal records review, indicated no water intake or discharge structures were present in the proposed injection zone.
- Hazardous Waste Facilities - A surficial reconnaissance within the one-mile limits of BPC1, along with State and Federal records review, indicated no hazardous waste treatment, storage or disposal facilities were present.
- Well Information – Drawing BPC1-1 provides the number, name, and location of gas wells producing or abandoned boreholes, as well as dry holes and injection wells, located within one mile of BPC1.
- Surface Features – Drawing BPC1-4 shows the surface bodies of water, springs, quarries, residences, roads, and other pertinent surface features.
- Coal Mining – Drawing BPC1-5 shows all mining activity, both surface and deep, within the one-mile radius review area.
- Hydrologic – Drawing BPC1-6 shows the water source locations of drinking water within ¼ mile of BPC1. This information was collected by Environmental Monitoring Incorporated (EMI) on June 6, June 24, and June 25, 2008, during a door-to-door canvas of the review area. There are no public water intakes within the area of review.

2.0 SURROUNDING WELLS

A total of 32 known well locations exist within the one mile radius of BPC1. None of the known wells penetrate the proposed injection zone. One exploration hole, VA203, is located approximately one mile from BPC1 and was drilled to total depth of 1977.5 feet and plugged. There are 30 known producing coalbed methane wells and one deep formation conventional gas well, BPC1. Drawing BPC1-3 locates these known wells and identifies the type of well. A summary of these wells is provided in Appendix A.

3.0 WATER SOURCES

A surface survey of the water sources was conducted on June 6, June 24, and June 25, 2008 by Terry Meade of EMI. The surficial reconnaissance was conducted to identify water wells, springs, and other drinking water supplies within ¼ mile of BPC1. The inventory conducted consisted of a door-to-door canvassing of the surface area encompassed by a radius of ¼ mile from BPC1.

The information obtained from the water source survey is provided in Appendix B. It lists the water source, owner, address, and pertinent quality and quantity data. The survey identified three water sources. Two forty-foot deep wells and a spring with the locations shown on Drawing BPC1-6.

4.0 MINING ACTIVITIES

Drawing BPC1-5 identifies surface and deep mining activities that have taken place within ¼ mile radius of the BPC1. The only known mine within 1/4 –mile of BPC1 is the old P&R mine, which is in the Kennedy seam, above drainage of BPC1, and is abandoned.

5.0 LOCAL STRUCTURE AND FAULTS

A review of records and mine mapping indicates no faults are known to exist within one mile of BPC1. The closest known fault to BPC1 is Russell Fork Fault located slightly more than one mile to the southwest of BPC1. The Russell Fork Fault is shown on drawing BPC1-8

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ATTACHMENT C

EXISTING WELLS WITHIN AREA OF REVIEW

1.0 WELL DATA

APPENDIX A is a summary of well data for the one-mile radius area of review. Drawing BPC1-3 locates these wells and identifies the type of well. Appendix C provides copies of pertinent well data and geologic well summaries.

2.0 WELLS WITHIN AREA OF STUDY

Within the area extending ¼ mile beyond BPC1 no wells are known to penetrate the proposed injection zone. There are two coalbed methane wells that terminate above the proposed injection zone. Drawing BPC1-3 locates these wells and identifies the type of well. A summary of these wells is provided in Appendices A and C. Plugging information and dates are listed in Appendix H. Also included is plugging information for the exploration core hole within one mile of BPC1.

3.0 CORRECTIVE ACTION

Collected brine water will be injected into existing well BPC1. The location of the injection well is shown on Drawing BPC1-2. The maximum injection pressure will be 812 psig. The injection pump will automatically shut down if the operating in the injection tubing exceeds 812 psig.

No known wells penetrate the proposed injection zone within ¼ mile of BPC1. Any unplugged well discovered within ¼ mile of BPC1 will be plugged and abandoned in accordance with Virginia Division of Oil and Gas regulations.

4.0 PROPERTY OWNERS

The names and addresses of record of property owners overlying and within ¼ mile of the proposed area under study are listed in Appendix G. Drawing BPC1-5 shows the location of the surface tracts.

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ATTACHMENT E

UNDERWATER DRINKING WATER SOURCES

1.0 UNDERGROUND DRINKING WATER SOURCES

No known public supplies or underground drinking water sources occur within the ¼ mile radius of BPC1.

An inventory of private supplies of underground drinking water sources was conducted by EMI on June 6, June 24 and June 25, 2008, and accompanies this report as Appendix B. All known water sources are shown on Drawing BPC1-6, but only those within the ¼ mile boundary are included in Appendix B. EMI identified two wells, one drilled and one hand-dug, completed to forty-feet deep. Also, one spring was identified and was flowing at approximately three gallons per minute. All three sources were sampled and the results are included in Appendix B.

In general, sandstone holding the deepest fresh drinking water source of this area lies at a depth shallower than 375 feet, and thus greater than 2000 feet above the proposed injection zone.

The numerous confining layers provide extraordinary safety factors to protect and separate fresh water sources from the brine water proposed to be disposed in the injection zone.

2.0 HYDROGEOLOGIC CONDITIONS

Most of the rocks close to the surface in Buchanan County, Virginia are of Pennsylvanian Age, and consist mostly of sandstone, siltstone, shale, and coal beds. Groundwater is produced from permeable sandstone layers and from fractures and bedding planes between rock layers (Epps, 1978, p. 23).

Groundwater yield in Buchanan County is from aquifers that are generally within 300 to 400 feet below ground surface. Shales typically provide very small quantities of water, coal produces some water, and sandstones generally store and produce water from voids between the grains of sand. However, the voids between the sandstone grains in this area are often filled with recemented mineral matter, clay and silt-sized particles, and mica flakes that reduce their ability to store and transmit water. Fractures and fissures in the rocks provide the source for most of the groundwater in the area, but are mostly closed at depths below 400 feet, due to the overlying strata weight. This greatly diminishes both the volume and flow of groundwater from depths greater than 400 feet. Additionally, the water below 400 feet becomes increasingly salty (Epps, 1978, p 23-24).

Groundwater in this coal field area of Buchanan County is typically slightly acidic and somewhat hard, containing iron and compounds of sulfur. Methane and hydrogen sulfide gases commonly occur in the groundwater and often require well venting to prevent accumulation (Epps, 1978, pp 29-30).

The 2008 inventory of drinking water sources found three water supplies varying in depth from a surface spring to a maximum of 40 feet. Yields for the two wells were not measured during this study. The spring was measured at 3 gallons per minute.
The majority of the water wells in Buchanan County are drilled to provide 3 to 10 gallon per minute. Water wells are generally 50 to 250 feet deep and are located in valleys where there is normally enough water for domestic consumption (Epps, 1999, p. 63).
The following is a list of the data sources used to generate this groundwater review:

- Epps, S. R., 1978, Buchanan County Groundwater – Present Conditions and Prospects: Commonwealth of Virginia, State Water Control Board, Bureau of Water Control Management, 75 p.
- Environmental Monitoring, Incorporated, June 2008, V. P. No. 8 Groundwater Inventory

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ATTACHMENT G

GEOLOGIC INFORMATION

1.0 INJECTION ZONE

The uppermost zone planned for injection is the Raven formation. The Raven formation is considered Upper Mississippian in age and is part of the Bluefield formation. The perforated zone in the Raven (depth from surface) ranges from 2670'-2721'. According to a post frac report submitted by HALLIBURTON, when the Raven was fracture stimulated on February 27, 2001 the breakdown pressure ~4000 psi with an ISIP of 1858 psi.

Descending down the hole is the Middle Maxon Sandstone. The Middle Maxon Sandstone is considered Upper Mississippian in age and is part of the Bluefield formation. In well BPC-01 the Middle Maxon sandstone is preceded by 136' unnamed shale with calcareous sand streaks. The perforated zone in the Middle Maxon (depth from surface) ranges from 3414' – 3558'. According to a post frac report submitted by HALLIBURTON, when the Middle Maxon was fracture stimulated on February 27, 2001 the breakdown pressure ~4000 psi with an ISIP of 2692 psi.

Descending down the hole, the next zone planned for injection is known as the Weir sandstone. The Weir sandstone is considered Lower Mississippian in age and is joined with Price Formation. The Weir lies below a sandstone formation named the Big Injun; in well BPC-01 the Big Injun is shaley and poorly developed. Marking the top of the Big Injun interval is the base of a ~550' limestone named the Greenbrier Limestone also known as the Big Lime. In BPC-01 the interval from the base of the Big Lime to the top of the Weir is 201' in thickness (4662' – 4863'). In well BPC-01 the perforated zone of the Weir ranges from 4863' – 4866'. According to a post frac report submitted by HALLIBURTON, when the Weir was fracture stimulated on February 27, 2001 the breakdown pressure ~4019 psi with an ISIP of 812 psi.

Below the Weir and the next zone planned for injection is the Berea Sandstone. Like the Weir, the Berea Sandstone is also Lower Mississippian in age and part of the Price Formation. Above the Berea is a thick shale package known as the Sunbury Shale. In well BPC-01 the Sunbury shale's log signature is very uniform until the last forty feet in which it becomes more organic. This organic section is sometimes broken out and referred to as the "coffee" shale. The perforated zone of the Berea in well BPC-01 ranges from 5300' – 5308' (depth from surface). According to a post frac report submitted by HALLIBURTON, when the Berea was fracture stimulated on February 27, 2001 the breakdown pressure ~1128 psi with an ISIP of 1123 psi.

2.0 CONFINING ZONES

Lying directly over the Pocahontas No. 3 coal seam are Pocahontas Formation shales and siltstones of low permeability. These rocks are almost always overlain by competent and dense quartz arenite, which is overlain by impermeable Pennsylvanian Lee Formation shales. This sequence provides structural competence and permeability barriers that will limit the upward migration of fluids. Drawings BPC1-6 and BPC1-7 are north-south and east-west cross sections.

3.0 FRACTURE PRESSURE

In February 2001, the Berea, Weir, Maxon and Raven zones were fractured in preparation for gas production. The Berea, perforations from 5300 to 5308 feet deep, demonstrated a break pressure of 1128 psi. The Weir formation, perforated from 4863 to 4866 feet deep, demonstrated a break pressure of 4019 psi. The Maxon formation, perforated from 3414 to 3558, demonstrated a break pressure of 4000 psi. The Raven formation, perforated from 2670 to 2721, demonstrated a break pressure of 3105 psi.

4.0 FUTURE DRILLING AND MINING

Neither CNX Gas Company LLC nor any other company currently has plans for future drilling in this area. With the existence of potentially minable coal above the Pocahontas No. 3 seam, given certain economic conditions and it is possible that

mining plans could be considered for these upper coal seams sometime in the future. However, such mining of these upper coal seams would only be above any potential zone of influence by the disposal plan.

BPC-01

EPA FORM 7520-6 (REV. 8-01)

ATTACHMENT H

OPERATION INFORMATION

1.0 OPERATION DATA

The proposed injection well has been previously drilled and cased to approximately 5300 feet deep, as shown on Drawing BPC1-9 and BPC1-9-A.

This well will be converted into an injection well as a conduit to inject brine water into Raven, Maxon, Weir, and Berea formations. CNX proposes to store brine water in above-ground storage tanks, filter the fluid through 5 micron filters, and inject into the injection zone at 812 psi (maximum). See the attached BPC-1-10 drawing for a general site layout plan.

2.0 FLOW RATES

Based on the total fluids produced in CNX Gas Company LLC's Virginia operations, the average maximum daily rate and volume of brine waters to be injected are estimated to be 1,500bbls/avg./day or 45,000bbls./month.

3.0 ANNULUS FLUIDS

The annulus between the injection tubing and the formation protection casing will be filled with a mixture of water and a corrosion inhibitor.

4.0 INJECTION FLUID

Appendix E provides test results from CNX Gas Company LLC's Virginia Operations' quarterly samples for its existing Class II-D injections wells. The holes are located in Buchanan County, Virginia, and are considered to be representative samples of our produced fluids that will be injected into Raven, Maxon, Weir, and Berea formations.

EPA FORM 7520-6 (REV. 8-01)

ATTACHMENT I

FORMATION TESTING PROGRAM

The injection well casing and cementing was tested for mechanical integrity during construction. Results of that testing are attached. See Appendix J

EPA FORM 7520-6 (REV. 8-01)

ATTACHMENT J

STIMULATION PROGRAM

The proposed injection well was previously stimulated during preparation as a production well. Results of this stimulation are included in Appendix E.

EPA FORM 7520-6 (REV. 8-01)

ATTACHMENT K

INJECTION PROCEDURES

1.0 INJECTION PROCEDURES

A tank truck will arrive at injection well BPC1 carrying collected brine water. Truck unloading will take place on a truck containment pad for purposes of containing any potential spillage. The brine water will be drained directly from the tank truck into the storage tanks for further deposit into the BPC1 injection well.

The annular space between the 2 3/8-inch injection tubing and the 4 1/2-inch casing will be filled with a mixture of corrosion inhibitor and water. Any integrity failure will be detected by loss of pressure on the annular fluid, or an observed increase in annular pressure. The annular fluid pressure will be monitored weekly.

2.0 INJECTION FACILITIES

Drawing BPC1-10 is a schematic illustrating the injection facilities. Injection into the rock matrix is being proposed; therefore, surface storage, settling, or filtration systems will be necessary.

3.0 SECURITY

The injection site BPC1 will be secured by a chain-link fence with locked gate entry. Additionally, the well head will have a locking valve.

EPA FORM 7520-6 (REV. 8-01)

ATTACHMENT L

PROPOSED INJECTION WELL

1.0 DRILLING AND WELL CONSTRUCTION PROCEDURES

The proposed injection well, BPC1, is an existing gas production well to be converted to an injection well. The well construction is illustrated on Drawing BPC1-9. The drawing shows the following information:

- 16-inch conductor was set and cemented along its entire length from the surface to 43-feet deep.
- 11 ¾-inch casing was set and cemented along its entire length from the surface to 428-feet deep inside the 16-inch conductor. This will seal and protect any groundwater aquifers.
- 8 5/8-inch casing was set and cemented along its entire length from the surface to 2,375-feet deep inside the 11 ¾-inch casing. This will seal and provide additional protection to any ground water aquifers.
- 4 ½-inch casing was set from the surface to 5,470-feet deep and cemented to the bottom of the 8 5/8-inch casing.
- The well was drilled to a total depth of 5,631 feet.
- Casing and tubing head equipment will be fitted so that the well can be shut in with valves, yet access will be easy for checking the annulus pressure and for easy brine disposal into the 2 3/8-inch tubing.
- Overpressure relief piping will divert fluid back to storage tanks.

2.0 LOGGING

A copy of the high-resolution density, gamma ray, deviation and caliper logs from BPC1 are provided in Appendix J.

3.0 MATERIALS

Drawing BPC1-9 provides a schematic of the drilling, casing and materials used to construct well BPC1.

EPA FORM 7520-6 (REV. 8-01)

ATTACHMENT M

CONSTRUCTION DETAILS

Drawing BPC1-10 provides the schematic layout of the surface facilities and subsurface construction details for the proposed injection well.

EPA FORM 7520-6 (REV. 8-01)

ATTACHMENT O

WELL FAILURES

1.0 WELL FAILURES

Injection of brine water will be filtered and pumped from the proposed storage tanks via the 2 3/8 -inch tubing. The injection pressure will be monitored.

Any failure in the system would likely be in the form of lost annular pressure or pressure increase in the 2 3/8 X 4 ½ annulus. Should a well failure occur, the well would be shut-in, all injection operations would stop immediately and no additional water would be transported to the injection well site. If the problem could not be readiliy corrected or immediate danger existed regarding unsatisfactory migration, then the following will be taken:

- Reduce and stabilize any fluid pressure build-up in the well. Water may be returned to surface tanks for proper disposal at other permitted locations.
- With water pressure stabilized, the injection well will be properly repaired so as to return the well to normal injection operating condition. Then a pressure test will be conducted to demonstrate mechanical integrity.

2.0 WELL FAILURE SHUT-IN

Well failure, as indicated by tubing overpressure, significant unexpected tubing pressure drop, annulus pressure drop, annulus pressure increase will trigger an automatic alarm to the Command Center at Claypool Hill. The well would then be shut in, all injection operations would stop immediately and no additional water would be transported to the injection well site.

EPA FORM 7520-6 (REV. 8-01)

ATTACHMENT P

MONITORING PROGRAM

1.0 MONITORING INJECTION WELL

The injection well will be monitored while injection is taking place.

Tubing pressure, annulus pressure, injection rate (flowmeter), and pump vibration will be monitored continuously with electric/electronic controls. Tubing pressure and injection volumes will be continuously recorded. Overpressure or underpressure of either tubing or annulus will trigger automatic alarms to the Command Center at Claypool Hill.

2.0 MECHANICAL INTEGRITY TEST

Prior to converting BPC1 into an injection well, the following mechanical integrity test procedures will be performed to ensure the mechanical integrity of the 2 3/8-inch by 4 1/2-inch annulus and packer:

Mechanical Integrity Testing Pressure:

- The minimum mechanical integrity testing pressure will be 892 psig.

Estimated Duration of Test:

- Thirty minutes after desired test pressure is obtained.

Mechanical Integrity Testing:

- The pressuring of the 2 3/8-inch by 4 1/2-inch annulus with the test duration being recorded by a calibrated pressure chart recorder. The pressure will be monitored for thirty minutes, minimum. If there is loss of pressure no greater than five percent during this time period, the test will be terminated.
- Should a loss of pressure greater than five percent, or the inability to establish the desired minimum test pressure, all testing will cease. The problem will be corrected and testing resumed, based on the concurrence of the U. S. EPA, Region III's representative present during the testing.

- The U. S. EPA, Region III and CNX Gas Company LLC personnel will observe the mechanical integrity testing.

EPA FORM 7520-6 (REV. 8-01)

ATTACHMENT Q

PLUGGING AND ABANDONMENT PLANS

The following plugging and abandonment plan will be employed should the injection well or any monitoring points require plugging:

- Move in service rig and rig up.
- Release the packer and pull the tubing. If the tubing cannot be pulled, it would be cut off just above the packer and then pulled.
- Set a cast iron bridge plug as near as possible to the bottom of the 4 ½ inch casing just above the uppermost perforations.
- Fill the casing from bridge plug to surface with Class A cement with 2 percent calcium chloride, 2 percent bentonite gel and 1/8 pound per sack cellophane flakes.
- Install top on 8 5/8-inch casing and connect a 2-inch vent
- With the plugging and abandonment of any well, all surface equipment and facilities will be removed and the well site reclaimed and vegetated.

The following page is a fully executed Plugging and Abandonment Plan as submitted to the United States Environmental Protection Agency.

EPA FORM 7520-6 (REV. 8-01)

ATTACHMENT R

FINANCIAL RESOURCES

CNX Gas Company LLC will be the financially responsible party.

EPA FORM 7520-6 (REV. 8-01)

ATTACHMENT T

EXISTING EPA PERMITS

VAS2D921BBUC

VAS2D926BBUC

VAS2D930BBUC

PAS2D210BGRE

Surface tract owners

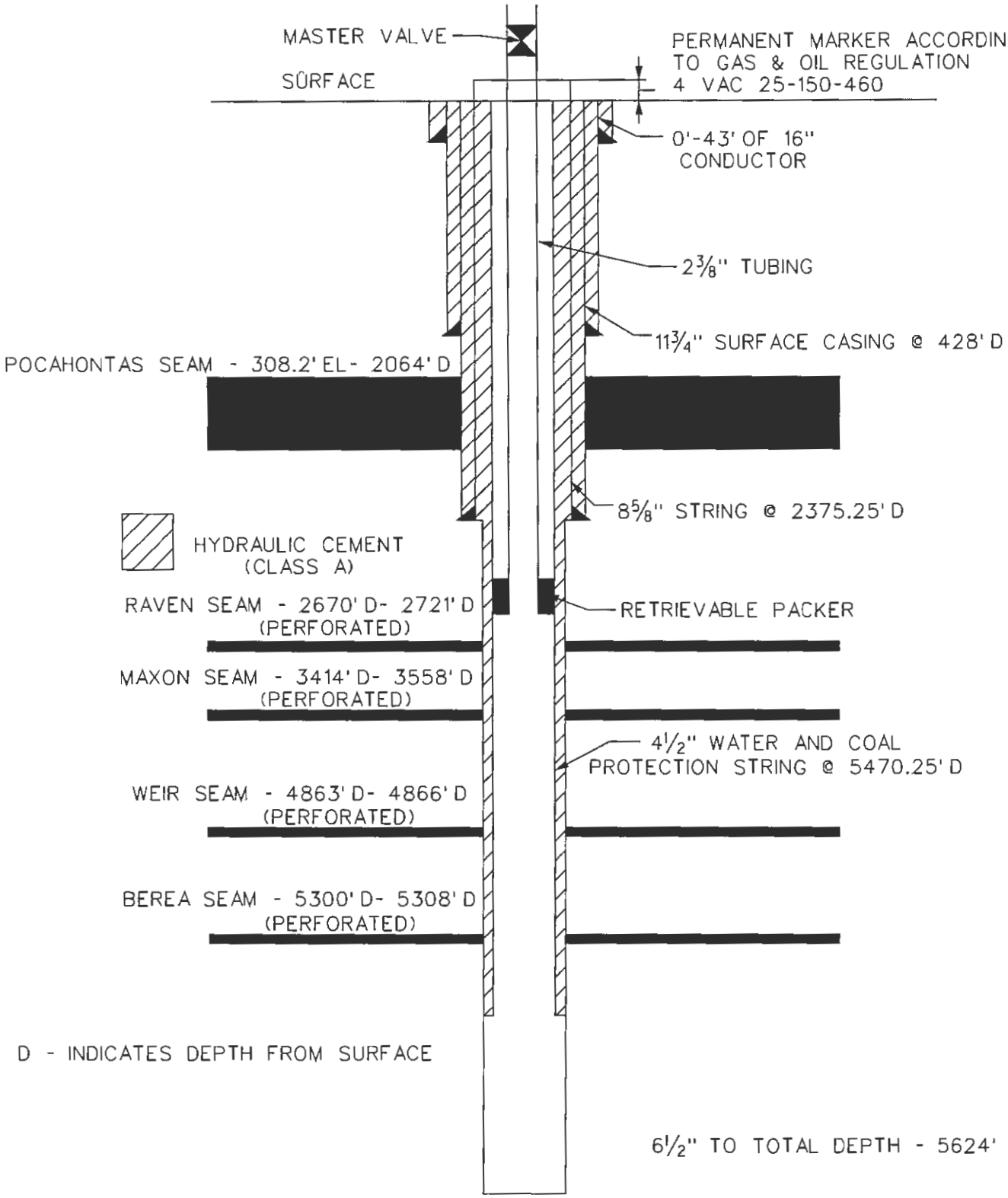
LNAME	FNAME	ADDRESS1	ADDRESS2	ADDRESS3	tract number
Austin	Curtis		Rt. 2, Box 455I	Honaker, VA 24260	19
Austin	Garland		5416 Old Grissom Creek Road	Honaker, VA 24260-5162	10
Austin et ux	Hampton E.		Rt. 2, Box 456B	Honaker, VA 24260	2 and 11
Buchanan Production Company			PO Drawer Q	Richlands, VA 24641	7, 12 and 13
Combs	Ervin J.	(Irvin J. Combs)	344 Sandhill Road	Fairborn, OH 45324-9410	16
Combs	James J.		3239 Old Grissom Creek Road	Honaker, VA 24260-5189	14 and 17
Hess	Howard		PO Box 163	Richlands, VA 24641-0163	1
Hess	Jonah C.		Address Unknown		8
Hess	Mintie		1141 Venia Church Road	Honaker, VA 24260	3 and 5
Johnson	Earl D.		1655 Old Grissom Creek Road	Honaker, VA 24260-5145	15
Owens	Shelia Ann		Route 1 Box 253A	Grundy, VA 24614	18
Rose	Nannie	c/o Juanita Leedy	13916 State Rt. 279	Oak Hill, OH 45656	6
VDOT			870 Bonham Road	Bristol, VA 24201-2002	4 and 9

CNX GAS COMPANY LLC

DGO-GO-11(b)

CBM-BPC-1

PROPOSED OPERATION SCHEMATIC



4/9/10 DRAWING NO. BPC-1-9-A

FORM 4

ATTACHMENT U

DESCRIPTION OF BUSINESS

1.0 DESCRIPTION OF BUSINESS

CNX GAS CORPORATION is a Pittsburgh-based independent natural gas exploration, development, production and gathering company operating in the Appalachian and Illinois Basins of the United States. In particular, we are a leading producer of coalbed methane (CBM). Our production in 2008 was 76.6 billion cubic feet (Bcf), making us one of the largest gas producer in the Appalachian Basin. Proved reserves at December 31, 2008 were 1.422 trillion cubic feet (Tcf). Only 783 Bcf, or 55%, of these reserves were developed at year end. CNX Gas also has a substantial acreage position. As of April 30, 2008, CNX Gas had access to over 4.2 million gross acres.

CNX Gas was established on June 30, 2005. CONSOL Energy Inc. contributed its gas assets to CNX Gas effective August 8, 2005, and retains an 81.5% ownership interest. Our stock trades on the New York Stock Exchange under the symbol CXG. The value of the company's stock at December 31, 2007 was $31.95 per share, resulting in a total equity market capitalization of $4.82 billion.

We began extracting CBM in the early 1980s in order to reduce the gas content in the coal being mined by CONSOL Energy. We developed techniques to extract CBM from coal seams prior to mining in order to enhance the safety and productivity of mining operations. As a result of our more than 20 years of experience with CBM extraction, we believe we have developed industry-leading expertise.

CNX Gas currently has several active conventional and unconventional natural gas operational areas across the eastern United States including: Virginia Operations, a CBM play in southwestern Virginia; Mountaineer, a CBM and Marcellus Shale play in southwestern Pennsylvania and northern West Virginia; Nittany, a CBM play east of Pittsburgh; and Knox Energy, a Chattanooga Shale play in northern Tennessee.

The company has earned a reputation as a safe, efficient producer, with one of the industry's lowest cost structures. Low costs, when combined with the relatively high prices we receive because of the proximity of our production to East Coast markets, enables us to earn near industry-leading margins and returns on capital employed

File #	Company Name	Operation	Inspector	Inspr Email	Quadrangle	Plane	Status	Op. Type	Permit	Issue Date	County
BU-2017	CNX Gas Company LLC	**CBM BPC-1**	Matthew Kent	matthew.kent@dmme.virginia.gov	BIG A MOUNTAIN	965309.0800 / 293968.9900	Producing	Gas	4845-02	8/19/2004	BUCHANAN
BU-2198	CNX Gas Company LLC	**CBM BD-98**	Matthew Kent	matthew.kent@dmme.virginia.gov	BIG A MOUNTAIN	965121.4000 / 293851.9500	Producing	Coal Bed	5180	12/12/2001	BUCHANAN
BU-2266	CNX Gas Company LLC	**CBM BE101**	Matthew Kent	matthew.kent@dmme.virginia.gov	BIG A MOUNTAIN	969589.0600 / 292781.8600	Producing	Coal Bed	5315-01	7/6/2005	BUCHANAN
BU-2389	CNX Gas Company LLC	**PGP BB100 W/PL**	Matthew Kent	matthew.kent@dmme.virginia.gov	BIG A MOUNTAIN	968450.5500 / 296984.9200	Producing	Coalbed/Pipeline	5584-02	12/9/2003	BUCHANAN
BU-2401	CNX Gas Company LLC	**PGP BC101 W/PL**	Matthew Kent	matthew.kent@dmme.virginia.gov	BIG A MOUNTAIN	969956.3700 / 296093.2600	Producing	Coalbed/Pipeline	5602	11/22/2002	BUCHANAN
BU-2430	CNX Gas Company LLC	**CBM BD101 W/PL**	Matthew Kent	matthew.kent@dmme.virginia.gov	BIG A MOUNTAIN	970226.6600 / 293631.7400	Producing	Coalbed/Pipeline	5669-01	7/19/2006	BUCHANAN
BU-2591	CNX Gas Company LLC	**CBM BB101**	Matthew Kent	matthew.kent@dmme.virginia.gov	BIG A MOUNTAIN	970145.9000 / 297278.4300	Producing	Coal Bed	6013	12/9/2003	BUCHANAN
BU-2601	CNX Gas Company LLC	**CBM BC100 W/PL**	Matthew Kent	matthew.kent@dmme.virginia.gov	BIG A MOUNTAIN	968843.8900 / 296226.3100	Producing	Coalbed/Pipeline	6049	1/22/2004	BUCHANAN
BU-2604	CNX Gas Company LLC	**CBM BA98 W/PL**	Matthew Kent	matthew.kent@dmme.virginia.gov	BIG A MOUNTAIN	965644.3200 / 299194.5900	Producing	Coalbed/Pipeline	6056-01	6/18/2004	BUCHANAN
BU-2643	CNX Gas Company LLC	**CBM BB99 W/PL**	Matthew Kent	matthew.kent@dmme.virginia.gov	BIG A MOUNTAIN	966430.4900 / 297551.5600	Producing	Coalbed/Pipeline	6139-01	6/9/2004	BUCHANAN
BU-2644	CNX Gas Company LLC	**CBM BB98 W/PL**	Matthew Kent	matthew.kent@dmme.virginia.gov	BIG A MOUNTAIN	965420.5700 / 297204.9700	Producing	Coalbed/Pipeline	6140	4/2/2004	BUCHANAN
BU-2654	CNX Gas Company LLC	**CBM BC99 W/PL**	Matthew Kent	matthew.kent@dmme.virginia.gov	BIG A MOUNTAIN	966914.2000 / 295954.3900	Producing	Coalbed/Pipeline	6153-02	1/4/2005	BUCHANAN
BU-2660	CNX Gas Company LLC	**CBM BD97 W/PL**	Matthew Kent	matthew.kent@dmme.virginia.gov	BIG A MOUNTAIN	963107.8300 / 293970.8800	Producing	Coalbed/Pipeline	6169	4/30/2004	BUCHANAN

BU-2661	NX Gas Company LLC	**CBM BE97 W/PL**	Matthew Kent	matthew.kent@dmm e.virginia.gov	BIG A MOUNTAIN	[illegible]/500 / 2[illegible]3.7400	Producing	Coalbed/Pipeline	6170-01	11/16/2004	BUCHANAN
BU-2662	CNX Gas Company LLC	**CBM BE98 W/PL**	Matthew Kent	matthew.kent@dmm e.virginia.gov	BIG A MOUNTAIN	964805.6500 / 292920.5500	Producing	Coalbed/Pipeline	6171-01	5/13/2004	BUCHANAN
BU-2663	CNX Gas Company LLC	**CBM BC98 W/PL**	Matthew Kent	matthew.kent@dmm e.virginia.gov	BIG A MOUNTAIN	965670.0700 / 295338.9400	Producing	Coalbed/Pipeline	6172-01	9/28/2004	BUCHANAN
BU-2681	CNX Gas Company LLC	**CBM BE99 W/PL**	Matthew Kent	matthew.kent@dmm e.virginia.gov	BIG A MOUNTAIN	966625.4200 / 292333.3100	Producing	Coalbed/Pipeline	6195-01	9/28/2004	BUCHANAN
BU-2723	CNX Gas Company LLC	**CBM-BC97 W/PL**	Matthew Kent	matthew.kent@dmm e.virginia.gov	BIG A MOUNTAIN	962998.6100 / 295613.4500	Producing	Coalbed/Pipeline	6300	7/23/2004	BUCHANAN
BU-2725	CNX Gas Company LLC	**CBM BD99 W/PL**	Matthew Kent	matthew.kent@dmm e.virginia.gov	BIG A MOUNTAIN	966769.5000 / 293774.6500	Producing	Coalbed/Pipeline	6302	7/23/2004	BUCHANAN
BU-2729	CNX Gas Company LLC	**CBM BD100 W/PL**	Matthew Kent	matthew.kent@dmm e.virginia.gov	BIG A MOUNTAIN	967693.6700 / 294512.8800	Producing	Coalbed/Pipeline	6312	7/29/2004	BUCHANAN
BU-2819	CNX Gas Company LLC	**CBM BF100 W/PL**	Matthew Kent	matthew.kent@dmm e.virginia.gov	BIG A MOUNTAIN	967454.5500 / 291757.0900	Producing	Coalbed/Pipeline	6514	1/7/2005	BUCHANAN
BU-2824	CNX Gas Company LLC	**CBM BF98 W/PL**	Matthew Kent	matthew.kent@dmm e.virginia.gov	BIG A MOUNTAIN	965176.2100 / 291812.6400	Producing	Coalbed/Pipeline	6529	1/19/2005	BUCHANAN
BU-2825	CNX Gas Company LLC	**CBM BE100 W/PL**	Matthew Kent	matthew.kent@dmm e.virginia.gov	BIG A MOUNTAIN	967751.2100 / 293025.7000	Producing	Coalbed/Pipeline	6530	1/19/2005	BUCHANAN
BU-3241	CNX Gas Company LLC	**CBM BF99 W/PL**	Matthew Kent	matthew.kent@dmm e.virginia.gov	BIG A MOUNTAIN	966001.0000 / 290750.0000	Producing	Coalbed/Pipeline	7572	8/25/2006	BUCHANAN
BU-3269	CNX Gas Company LLC	**CBM BG98 W/PL**	Matthew Kent	matthew.kent@dmm e.virginia.gov	BIG A MOUNTAIN	965310.0000 / 290075.0000	Producing	Coalbed/Pipeline	7619	9/26/2006	BUCHANAN
BU-3346	CNX Gas Company LLC	**CBM BG99 W/PL**	Matthew Kent	matthew.kent@dmm e.virginia.gov	BIG A MOUNTAIN	966197.0000 / 289737.0000	Producing	Coalbed/Pipeline	7798-01	2/20/2007	BUCHANAN

BU-345[illegible]	NX Gas Company LLC	**CBM BB101A W/PL**	Matthew Kent	matthew.kent@dmme.virginia.gov	BIG A MOUNTAIN	[illegible]5200 / 2[illegible]4.9600	Producing	Coalbed/Pipeline	8024	3/29/2007	BUCHANAN
BU-3462	CNX Gas Company LLC	**CBM BA97**	Matthew Kent	matthew.kent@dmme.virginia.gov	BIG A MOUNTAIN	963629.9400 / 299015.6600	Producing	Coal Bed	8044	4/11/2007	BUCHANAN
BU-3500	CNX Gas Company LLC	**CBM BB97 W/PL**	Matthew Kent	matthew.kent@dmme.virginia.gov	BIG A MOUNTAIN	963345.2800 / 297939.3300	Producing	Coalbed/Pipeline	8195	5/29/2007	BUCHANAN
BU-3519	CNX Gas Company LLC	**CBM BE101A W/PL**	Matthew Kent	matthew.kent@dmme.virginia.gov	BIG A MOUNTAIN	970244.3200 / 292883.4300	STABILIZED/PRODUCING	Coalbed/Pipeline	8254	6/15/2007	BUCHANAN
BU-3571	CNX Gas Company LLC	**CBM BC101A W/PL**	Matthew Kent	matthew.kent@dmme.virginia.gov	BIG A MOUNTAIN	969804.6700 / 295229.8000	STABILIZED/PRODUCING	Coalbed/Pipeline	8357	7/18/2007	BUCHANAN

ENVIRONMENTAL MONITORING, INCORPORATED
ENVIRONMENTAL CONSULTANTS ▲ ANALYTICAL LABORATORIES
P.O. BOX 1190 ▲ NORTON, VIRGINIA 24273 ▲ 276/679-6544

July 2, 2008

Mr. Les Arrington
Consol, Inc.
2481 John Nash Blvd.
Bluefield, WV 24701

RE: BPC-1 Injection Well
EMI Project 743.4930

Dear Mr. Arrington:

On June 6, June 24, and June 25, 2008, Environmental Monitoring, Inc. conducted a groundwater inventory in an area surrounding proposed Injection Well BPC-1. This inventory consisted of collecting samples from all domestic groundwater supplies located within a quarter mile radius (1320') of BPC-1.

This water supply inventory was performed by Terry Meade of EMI. Please see the attached information concerning domestic water supplies within the quarter mile radius of BPC-1.

Should you have questions concerning this project, please feel free to contact me at 888-2EMILAB.

Respectfully submitted,

Environmental Monitoring, Inc.

David W. Porter
Project Manager

attachments

OIL AND GAS GROUNDWATER SURVEY

ENVIRONMENTAL MONITORING, INC.
P.O. BOX 1190, NORTON, VA 24273
888-2EMILAB

DATE: 06-06-08, 06-24-08, 06-25-08
PROJ. #: 743.4930
WELL #: BPC-1 Injection Well
SAMPLED BY: T. MEADE

MAP REFERENCE NO.	DESCRIPTION	TOTAL DEPTH WELL	G.P.M. SPRING	DISTANCE & DIRECTION FROM PROPOSED WELL	COMMENTS
1	KEN STREET	40'	3	775' E-NE	SAMPLED WELL AND SPRING
2	VACANT	-----	-----	610' E-SE	NO SAMPLE
3	NO LONGER EXISTS	-----	-----	430' E-SE	NO SAMPLE
4	NO LONGER EXISTS	-----	-----	400' SE	NO SAMPLE
5	NO LONGER EXISTS	-----	-----	350' N-NE	NO SAMPLE
6	NO LONGER EXISTS	-----	-----	620' NW	NO SAMPLE
7	NO RESPONSE	-----	-----	970' N-NW	NO SAMPLE
8	VACANT	-----	-----	1260' N-NW	NO SAMPLE
9	KEITH McGLOTHLIN	40' HAND DUG	-----	860' SE	PUBLIC WATER, SAMPLED WELL

ADDITIONAL COMMENTS: Memorandums are placed at locations with no one home or no answer explaining the reason of the visit.

ENVIRONMENTAL MONITORING, INCORPORATED
ENVIRONMENTAL CONSULTANTS ▲ ANALYTICAL LABORATORIES
P.O. BOX 1190 ▲ NORTON, VIRGINIA 24273 ▲ 276/679-6544

CERTIFICATE OF ANALYSIS

Client Name: CONSOL, INC.
Address: 2481 JOHN NASH BLVD.
BLUEFIELD, WV 24701

Report Date: 06/17/08
Lab Sample No.: **896106**
Client No.: 743
EMI Project No.: 4930

Sample Identification: KEN STREET WELL
NAD27 Site Coordinates: 37.08780000 N 82.04546000 W Elev. 1992
Site Description: BPC-1 INJECTION WELL

Date Collected: 06/06/08
Time Collected: 930
Sample Matrix: AQ
Collected By: T MEADE

Parameter	Sample Result	Units	MDL	Method	Date Analyzed	Time Analyzed	Analyst
Acidity, Hot	BDL	mg/l CaCO3	1.00	SM 20th 2310B	6/13/2008	935	RSV
Alkalinity	87.0	mg/l CaCO3	1.00	SM 20TH, 2320B	6/13/2008	840	RSV
Chloride	1.88	mg/l	0.046	300.0	6/10/2008	1148	AAB
Conductivity	203	umhos/cm	0.800	SM 2510B	6/11/2008	915	RKT
Hardness, Total	64.0	mg/l CaCO3	4.00	SM 2340C	6/10/2008	1555	KBE
[illegible]	6.30	STD		SM 20 4500-H+B	6/6/2008	930	FLD
Sul[illegible]	7.71	mg/l	0.070	300.0	6/10/2008	1148	AAB
Total Dissolved Solids	248	mg/l	12.0	SM 2540C	6/9/2008	2020	DWB
Total Suspended Solids	BDL	mg/l	4.00	SM 2540D	6/10/2008	1428	DME
Coliform, Total	POS	Pos/Neg		Colisure Test	6/6/2008	1540	ALS
Iron, Total	0.595	mg/l	0.0080	200.7	6/11/2008	252	CHP
Manganese, Total	0.219	mg/l	0.0040	200.7	6/11/2008	252	CHP
Sodium, Total	16.2	mg/l	0.0040	200.7	6/16/2008	1338	CHP
N-Hexane Extractable Material (O & G)	BDL	mg/l	2.20	EPA 1664 REV-A	6/12/2008	1030	AAB

[illegible]est of our knowledge and belief, the collection, preservation, and analysis of all parameters represented by this report have been determined to comply the requirements as specified in 40 CFR, Part 136.

Flow if Avaliable (GPM):
Temp. if Available (C): 24.0
Depth if Available (Ft):
Analysis Package Code: VB

Type of Sample: Grab
BDL = Below Detection Limit
FLD = Field Technician
CWOR

ISV = Insufficient Sample Volume

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P.O. BOX 1190 ▲ NORTON, VIRGINIA 24273 ▲ 276/679-6544

CERTIFICATE OF ANALYSIS

Client Name: CONSOL, INC.
Address: 2481 JOHN NASH BLVD.
BLUEFIELD, WV 24701

Report Date: 06/17/08
Lab Sample No.: **896107**
Client No.: 743
EMI Project No.: 4930

Sample Identification: KEN STREET SPRING
NAD27 Site Coordinates: 37.08781000 N 82.04544000 W Elev. 1922
Site Description: BPC-1 INJECTION WELL

Date Collected: 06/06/08
Time Collected: 940
Sample Matrix: AQ
Collected By: T MEADE

Parameter	Sample Result	Units	MDL	Method	Date Analyzed	Time Analyzed	Analyst
Acidity, Hot	BDL	mg/l CaCO3	1.00	SM 20th 2310B	6/13/2008	935	RSV
Alkalinity	9.00	mg/l CaCO3	1.00	SM 20TH, 2320B	6/13/2008	840	RSV
Chloride	9.72	mg/l	0.046	300.0	6/10/2008	1158	AAB
Conductivity	85.0	umhos/cm	0.800	SM 2510B	6/11/2008	915	RKT
Hardness, Total	32.0	mg/l CaCO3	4.00	SM 2340C	6/10/2008	1555	KBE
[illegible]	5.60	STD		SM 20 4500-H+B	6/6/2008	940	FLD
Su[illegible]	8.04	mg/l	0.070	300.0	6/10/2008	1158	AAB
Total Dissolved Solids	156	mg/l	12.0	SM 2540C	6/9/2008	2020	DWB
Total Suspended Solids	BDL	mg/l	4.00	SM 2540D	6/10/2008	1430	DME
Coliform, Total	POS	Pos/Neg		Colisure Test	6/6/2008	1540	ALS
Iron, Total	0.073	mg/l	0.0080	200.7	6/11/2008	301	CHP
Manganese, Total	0.0060	mg/l	0.0040	200.7	6/11/2008	301	CHP
Sodium, Total	3.39	mg/l	0.0040	200.7	6/16/2008	1342	CHP
N-Hexane Extractable Material (O & G)	BDL	mg/l	2.20	EPA 1664 REV-A	6/12/2008	1030	AAB

[illegible]est of our knowledge and belief, the collection, preservation, and analysis of all parameters represented by this report have been determined to comply the requirements as specified in 40 CFR, Part 136.

Flow if Avaliable (GPM): 3.0
Temp. if Available (C): 17.0
Depth if Available (Ft):
Analysis Package Code: VB

Type of Sample: Grab
BDL = Below Detection Limit
FLD = Field Technician
CWOR

ISV = Insufficient Sample Volume

EMI
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Pre Drill ✓
Post Drill ✓

SITE VISIT FORM

Visit Date: 6.6.08 Map ID # -1 Proj. # 743.4930 Gas Well ID BPC 1

Name: KEN STREET Contact Time: ANY

Address: P.O. BOX 112 DAVENPORT, VA. 24239 Present at Interview: SAME

Phone: Owner: SAME

WATER SOURCE LOCATION: Distance from residence: Direction from residence:

Distance from proposed gas well: 775' Direction from proposed gas well: E-NE

Elevation GPS (LL27/dec. deg.): Lat. Long.

37.08780
82.04546

WATER WELL INFORMATION

Drilled or Hand Dug DRILLED Total Depth: 40' Year Drilled:

Static Water Level How Measured: Casing material and length

Where is the well (well house, outside, buried, etc) Is well vented:

Describe well cap (ex. expandable plug): Type of pump

Was drilled: Drillers log available from owner?

Permission to ask drilling company for copy of drill log?

Signature for copy of drill log:

Type of Filter: NONE Model #: Year Installed:

Sample Location (s) (outside tap, kitchen, aerator removed, pre-filter, etc): KITCHEN TAP

37.08781 - 82.04544
1992'

SPRINGS

Flow Rate: 3 gpm How Measured: EST Protected (explain how?) NO

Treatment on Spring (explain): NONE Sample Location: Spring Outcrop

QUALITY INFORMATION

OWNER/ USER COMMENTS:

History of Well (describe low flow times/plenty of water/well dry, etc) SPRING, PLENTY OF WATER WELL, gets low at times

Well Water use (consumption/agricultural/household)? WELL, ALL - SPRING DRINKING

Taste (describe) GOOD, SEL DARKER, BOTH Odor (describe) NONE

Stains (describe) NO Tested before/when? YES

Does owner have additional water source (describe) P.S.A. NOT CONNECTED

MAILED RESULTS 7-2-08

Additional owner/user comments: MR. STREET REQUEST A COPY OF RESULTS.

Field technician observations/comments: WATER WELL, NO ODOR OR BOTH

Person Conducting Interview: TERRY MEADE Interviewers Signature: Terry Meade

Owner/User Signature:

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P.O. BOX 1190 ▲ NORTON, VIRGINIA 24273 ▲ 276/679-6544

Pre Drill ___
Post Drill ✓

SITE VISIT FORM

Visit Date: 6·6·08 Map ID # -9 Proj. # 7434930 Gas Well ID BPC1

Name: KEITH McGLOTHLIN Contact Time: ___

Address: 3239 Old GRISSOM CREEK Rd. HONAKER, VA. 24260 Present at Interview: ___

Phone: ___ Owner: HAZEL COMBS

WATER SOURCE LOCATION: Distance from residence: ___ Direction from residence: ___

Distance from proposed gas well: 860' Direction from proposed gas well: SE

Elevation 2003 GPS (LL27/dec. deg.): Lat. 37.08583 Long. 82.04577

WATER WELL INFORMATION

Drilled or Hand Dug HAND DUG Total Depth: 40' Year Drilled: ___

Static Water Level ___ How Measured: ___ Casing material and length ___

Where is the well (well house, outside, buried, etc) IN HOUSE Is well vented: ___

Describe well cap (ex. expandable plug): ___ Type of pump ___

Drilled: ___ Drillers log available from owner? ___

Permission to ask drilling company for copy of drill log? ___

Signature for copy of drill log: ___

Type of Filter: NONE Model #: ___ Year Installed: ___

Sample Location (s) (outside tap, kitchen, aerator removed, pre-filter, etc): FROM WELL

SPRINGS

Flow Rate: ___ How Measured: ___ Protected (explain how?) N/A

Treatment on Spring (explain): ___ Sample Location: ___

QUALITY INFORMATION

OWNER/ USER COMMENTS:

History of Well (describe low flow times/plenty of water/well dry, etc) PLENTY OF WATER

Well Water use (consumption/agricultural/household)? CONSUMPTION

Taste (describe) GOOD, PER OWNER Odor (describe) NONE

Stains (describe) NONE Tested before/when? ___

Does owner have additional water source (describe) P.S.A.

MAILED RESULTS 7-2-08

Additional owner/user comments: MR. McGLOTHLIN REQUEST A COPY OF RESULTS

Field technician observations/comments: WATER CLEAR, NO ODOR WHEN SAMPLED

Person Conducting Interview: TERRY MEADE Interviewers Signature: Terry Meade

Owner/User Signature: ___

V3

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CERTIFICATE OF ANALYSIS

Client Name: CONSOL, INC.
Address: 2481 JOHN NASH BLVD.
BLUEFIELD, WV 24701

Report Date: 06/17/08
Lab Sample No.: **896108**
Client No.: 743
EMI Project No.: 4930

Sample Identification: KEITH MCGLOTHLIN WELL
NAD27 Site Coordinates: 37.08583000 N 82.04577000 W Elev. 2003
Site Description: BPC-1 INJECTION WELL

Date Collected: 06/06/08
Time Collected: 1040
Sample Matrix: AQ
Collected By: T MEADE

Parameter	Sample Result	Units	MDL	Method	Date Analyzed	Time Analyzed	Analyst
Acidity, Hot	BDL	mg/l CaCO3	1.00	SM 20th 2310B	6/13/2008	935	RSV
Alkalinity	31.0	mg/l CaCO3	1.00	SM 20TH, 2320B	6/13/2008	840	RSV
Chloride	5.89	mg/l	0.046	300.0	6/10/2008	1208	AAB
Conductivity	126	umhos/cm	0.800	SM 2510B	6/11/2008	915	RKT
Hardness, Total	48.0	mg/l CaCO3	4.00	SM 2340C	6/10/2008	1555	KBE
-	6.20	STD		SM 20 4500-H+B	6/6/2008	1040	FLD
S...	10.3	mg/l	0.070	300.0	6/10/2008	1208	AAB
Total Dissolved Solids	150	mg/l	12.0	SM 2540C	6/9/2008	2020	DWB
Total Suspended Solids	6.00	mg/l	4.00	SM 2540D	6/10/2008	1431	DME
Coliform, Total	POS	Pos/Neg		Colisure Test	6/6/2008	1540	ALS
Iron, Total	0.235	mg/l	0.0080	200.7	6/11/2008	1025	CHP
Manganese, Total	0.0042	mg/l	0.0040	200.7	6/11/2008	1025	CHP
Sodium, Total	3.07	mg/l	0.0040	200.7	6/16/2008	1440	CHP
N-Hexane Extractable Material (O & G)	BDL	mg/l	2.20	EPA 1664 REV-A	6/12/2008	1030	AAB

best of our knowledge and belief, the collection, preservation, and analysis of all parameters represented by this report have been determined to comply the requirements as specified in 40 CFR, Part 136.

Flow if Avaliable (GPM):
Temp. if Available (C): 14.0
Depth if Available (Ft): 7.00
Analysis Package Code: VB

Type of Sample: Grab
BDL = Below Detection Limit
FLD = Field Technician
CWOR

ISV = Insufficient Sample Volume

Log Sheet 1 of ___

EMI PROFESSIONAL SERVICES

ENVIRONMENTAL MONITORING, INCORPORATED
ENVIRONMENTAL CONSULTANTS ▲ ANALYTICAL LABORATORIES
P.O. Box 1190 ▲ Norton, Virginia 24273 ▲ 276-679-6544

SAMPLE LOG SHEET & CHAIN OF CUSTODY

LAB USE ONLY
COC No.: ___
DATE RECEIVED LAB: ___

CUSTOMER INFORMATION: Shaded Areas • LAB INFORMATION: White Areas

*CLIENT: BPXSOL
*CONTACT: Les Arrington
BILLING ADDRESS:
CITY:
STATE/ZIP:
PHONE ( ) ___
FAX ( ) ___
Purchase Order No. ___

*Required Information
*COLLECTED BY (print): Terry Cease
COLLECTOR(S) SIGNATURE(S): Terry Mcade
TURN-AROUND (circle): 2 Day (Working Days) 3 Day (Working Days) 5 Day (Working Days) 10 Day (Working Days) Regular (15 Working Days)
Additional Cost May Apply – Any TAT Not Specified Will Be Regular

*SITE ID: BPC1
CLIENT PROJ. NO.
*EMI PROJECT NO.: 143.4930
EMI PROJECT MANAGER: DWP
Special Instructions / QC Requirements & Comments

*PARAMETER (ANALYSIS REQUESTED): VB Analysis Code; Field pH; Field Temp; Lab Cond; Flow GPM; Depth

*PRESERVATIVE USED: Cool < 6°C; HNO_3; HCl; H_2SO_4; Na OH; Other:

Check Shaded Area for Each Parameter Requested on Each Sample
White Area Lab Use Only

Preservation Checked By: Date:

SAMPLES WILL BE DISPOSED OF IN ACCORDANCE WITH EMI's TERMS & CONDITIONS OR RETURNED TO CLIENT OR Archive for ___ months

	EMI No.	EMI SAMPLE #	*CUSTOMER SAMPLE IDENTIFICATION	*DATE COLLECTED	*TIME COLLECTED	*SAMPLE MATRIX	No. of CNTRS	Cool < 6°C	HNO_3	HCl	H_2SO_4	Na OH	Other:	—	—	—	—		REMARKS
1.		896100	KEN STREET WELL	6-6-08	9:30	AQ	4	X	L2	L2			6.3	14°		N/A	?	TM	37.08180° N
2.																			82.04546° W
3.																			1992'
4.		107	KEN STREET SPRING	6-6-08	9:40	AQ	4	X	L2	L2			5.6	7°		3	N/A	TM	37.08781° N
5.																			82.04540° W
6.																			1922'
7.		108	KEITH MCDONALD WELL	6-6-08	10:40	AQ	4	X	L2	L2			6.2	14°		N/A	7'	TM	37.08583° N
8.																			82.04577° W
9.																			2003'
10.																			

QA Review: DW 6/16/08
Anomaly Report Required:

* Hazard Information: (circle) Non Hazard Flammable Skin Irritant Poison B Unknown

*Relinquished by (sign)	*Date/Time	*Received By (sign)	*Relinquished by (sign)	*Date/Time	*Received By (sign)
Mcade	6-6-08 15:00	LAB Collar			1600 RET 6/9/08
*Relinquished by (sign)	*Date/Time	*Received By (sign)	*Relinquished by (sign)	*Date/Time	*Received By (sign)

Report to be sent (if different than customer information):
NAME:
ADDRESS:
CITY:
STATE/ZIP: FAX ( )

*METHOD OF SHIPMENT TO LAB (circle): US MAIL UPS FED. EX. EMI-DIRECT EMI PICKUP PERSONAL DELIVERY OTHER

Temperature of Cooler upon Receipt by Lab: 3° TSM

Customer Complete all shaded categories, use additional forms if necessary Additional Remarks:

EMI-30 (Revised 10/07) WHITE – EMI YELLOW – REPORT

Log Sheet 1 of ___

EMI PROFESSIONAL SERVICES

SAMPLE LOG SHEET & CHAIN OF CUSTODY

LAB USE ONLY
COC No.: ___
DATE RECEIVED LAB: ___

ENVIRONMENTAL MONITORING, INCORPORATED
ENVIRONMENTAL CONSULTANTS ▲ ANALYTICAL LABORATORIES
P.O. Box 1190 ▲ Norton, Virginia 24273 ▲ 276-679-6544

CUSTOMER INFORMATION: Shaded Areas • LAB INFORMATION: White Areas

*CLIENT: Carson
*CONTACT: Les Arrington
BILLING ADDRESS:
CITY:
STATE/ZIP:
PHONE ( ) ___
FAX ( ) ___
Purchase Order No. ___

*Required Information
*COLLECTED BY (print): Terry Lease
COLLECTOR(S) SIGNATURE(S): Terry Lease
TURN-AROUND (circle): 2 Day (Working Days) 3 Day (Working Days) 5 Day (Working Days) 10 Day (Working Days) Regular (15 Working Days)

Additional Cost May Apply – Any TAT Not Specified Will Be Regular

*SITE ID: BPC 1
CLIENT PROJ. NO.
*EMI PROJECT NO.: 143.4930
EMI PROJECT MANAGER: DWP
Special Instructions / QC Requirements & Comments

*PARAMETER (ANALYSIS REQUESTED): VB | Analysis Pbe | Field pH | Field Temp | Lab Cond | Elev. & Ann. | Depth

*PRESERVATIVE USED: Cool < 6°C | HNO_3 | HCl | H_2SO_4 | Na OH | Other: | — | — | — | —

Preservation Checked By Date: D.W. 6-9-08

SAMPLES WILL BE DISPOSED OF IN ACCORDANCE WITH EMI's TERMS & CONDITIONS OR RETURNED TO CLIENT OR Archive for ___ months

Check Shaded Area for Each Parameter Requested on Each Sample
White Area Lab Use Only

	EMI No.	EMI SAMPLE #	*CUSTOMER SAMPLE IDENTIFICATION	*DATE COLLECTED	*TIME COLLECTED	*SAMPLE MATRIX	No. of CNTRS.	Cool < 6°C	HNO_3	HCl	H_2SO_4	Na OH	Other:	—	—	—	—	Preservation Checked By	REMARKS
1.		896106	Ken Street Well	6-6-08	9:30	AQ	4	X	X	X			0.3	14°		N/A	?	TM	37.08780° N
2.																			82.04546° W
3.																			1992'
4.		107	Ken Street Spring	6-6-08	9:40	AQ	4	X	X	X			5.6	14°		3	N/A	TM	37.08781° N
5.																			82.04544° W
6.																			1922'
7.		108	Keith McDiffitt Well	6-6-08	10:40	AQ	4	X	X	X			0.2	14°		N/A	?	TM	37.08583° N
8.																			82.04577° W
9.																			2003'
10.																			QA Review: DW 6/9/08

Anomaly Report Required:

* Hazard Information: (circle) Non Hazard Flammable Skin Irritant Poison B Unknown

*Relinquished by (sign)	*Date/Time	*Received By (sign)	*Relinquished by (sign)	*Date/Time	*Received By (sign)
[signature]	6-6-08 15:00	LAB [signature]			1600 RET 6/9/08
*Relinquished by (sign)	*Date/Time	*Received By (sign)	*Relinquished by (sign)	*Date/Time	*Received By (sign)

Report to be sent (if different than customer information):
NAME:
ADDRESS:
CITY:
STATE/ZIP: FAX ( )

*METHOD OF SHIPMENT TO LAB (circle): US MAIL UPS FED. EX. EMI-DIRECT EMI PICKUP PERSONAL DELIVERY OTHER

Temperature of Cooler upon Receipt by Lab: 2° TM

Customer [illegible] complete all shaded categories, use additional forms if necessary

Additional [illegible]rks:

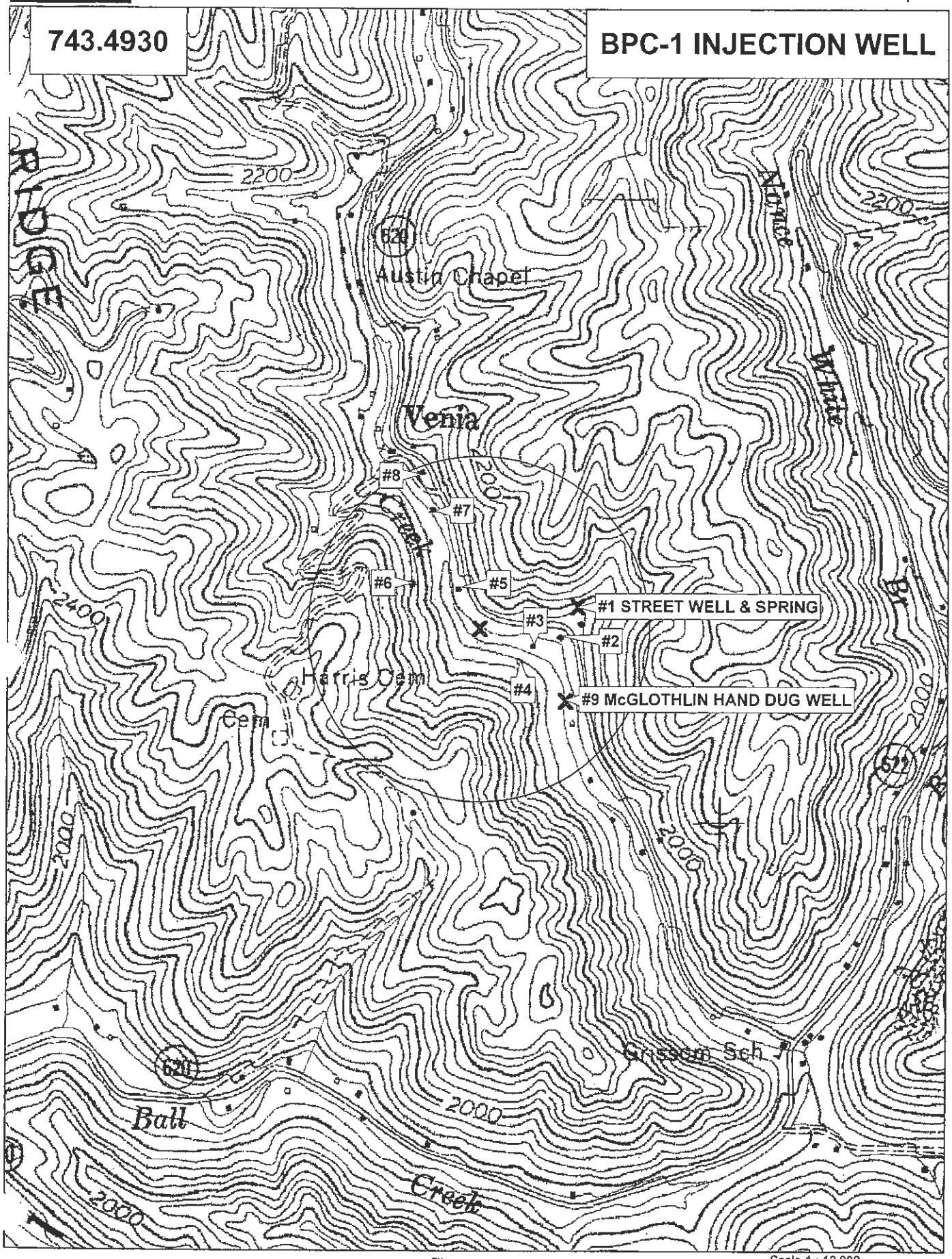
EMI-30 (Revised 10/07) WHITE – EMI YELLOW – REPORT

DeLORME

XMap® 4.5

743.4930

BPC-1 INJECTION WELL



TN
MN (0.0°E)

Scale 1 : 12,000

1" = 1,000.0 ft

Data Zoom 14-0

Appendix C

Well Logs

Exhibit A

Well Name: 07 CBM BA97
SURFACE ELEV: 2469.28 EASTING: 963629.94 NORTHING: 299015.66

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
COAL	86.20	86.90	2383.08	0.70	
	86.90	110.60	2382.38	23.70	
COAL	110.60	111.60	2358.68	1.00	
	111.60	169.50	2357.68	57.90	
LB1	169.50	172.70	2299.78	3.20	
	172.70	352.80	2296.58	180.10	
KN2	352.80	354.30	2116.48	1.50	
	354.30	399.60	2114.98	45.30	
COAL	399.60	399.90	2069.68	0.30	
	399.90	493.80	2069.38	93.90	
AL1	493.80	494.20	1975.48	0.40	
	494.20	510.90	1975.08	16.70	
AL2	510.90	512.60	1958.38	1.70	
	512.60	564.80	1956.68	52.20	
RA1	564.80	564.90	1904.48	0.10	
	564.90	610.60	1904.38	45.70	
RA2	610.60	612.50	1858.68	1.90	
	612.50	787.00	1856.78	174.50	
JB1	787.00	789.50	1682.28	2.50	
	789.50	820.00	1679.78	30.50	
JB3	820.00	821.20	1649.28	1.20	
	821.20	870.00	1648.08	48.80	
T2	870.00	870.50	1599.28	0.50	
	870.50	890.00	1598.78	19.50	
T1	890.00	890.70	1579.28	0.70	
	890.70	923.30	1578.58	32.60	
TI	923.30	923.70	1545.98	0.40	
	923.70	924.70	1545.58	1.00	
TI	924.70	925.00	1544.58	0.30	
	925.00	925.40	1544.28	0.40	
TI	925.40	925.60	1543.88	0.20	
	925.60	1037.80	1543.68	112.20	
US1	1037.80	1038.80	1431.48	1.00	
	1038.80	1066.30	1430.48	27.50	
LC4	1066.30	1068.10	1402.98	1.80	
	1068.10	1178.30	1401.18	110.20	
*GC1	1178.30	1178.70	1290.98	0.40	
	1178.70	1284.60	1290.58	105.90	
*COAL	1284.60	1284.80	1184.68	0.20	
	1284.80	1312.10	1184.48	27.30	
*SE2	1312.10	1312.80	1157.18	0.70	
	1312.80	1362.90	1156.48	50.10	
*LS1	1362.90	1363.50	1106.38	0.60	
*LS2	1363.50	1364.80	1105.78	1.30	
	1364.80	1424.80	1104.48	60.00	
*LS3	1424.80	1425.80	1044.48	1.00	
	1425.80	1464.10	1043.48	38.30	

*UH2	1464.10	1465.00	1005.18	0.90
	1465.00	1486.80	1004.28	21.80
*UH3	1486.80	1487.70	982.48	0.90
	1487.70	1520.00	981.58	32.30
*MH1	1520.00	1521.30	949.28	1.30
	1521.30	1628.00	947.98	106.70
*P11	1628.00	1630.50	841.28	2.50
	1630.50	1630.90	838.78	0.40
*P11	1630.90	1631.20	838.38	0.30
	1631.20	1635.40	838.08	4.20
*P10	1635.40	1636.10	833.88	0.70
	1636.10	1664.70	833.18	28.60
*LH1	1664.70	1665.80	804.58	1.10
	1665.80	1717.10	803.48	51.30
*P91	1717.10	1718.30	752.18	1.20
	1718.30	1776.60	750.98	58.30
*P81	1776.60	1777.90	692.68	1.30
	1777.90	1778.10	691.38	0.20
*P81	1778.10	1778.40	691.18	0.30
	1778.40	1778.70	690.88	0.30
*P82	1778.70	1780.00	690.58	1.30
	1780.00	1800.60	689.28	20.60
*COAL	1800.60	1801.00	668.68	0.40
	1801.00	2091.00	668.28	290.00
*P52	2091.00	2091.80	378.28	0.80
	2091.80	2135.80	377.48	44.00
*P41	2135.80	2136.60	333.48	0.80
	2136.60	2136.80	332.68	0.20
*P41	2136.80	2137.90	332.48	1.10
	2137.90	2138.10	331.38	0.20
*P41	2138.10	2138.50	331.18	0.40
	2138.50	2151.00	330.78	12.50
*P42	2151.00	2151.50	318.28	0.50
	2151.50	2165.00	317.78	13.50
*P43	2165.00	2165.70	304.28	0.70
	2165.70	2223.90	303.58	58.20
*P31	2223.90	2224.90	245.38	1.00
	2224.90	2261.80	244.38	36.90
*P34	2261.80	2262.10	207.48	0.30
	2262.10	2388.96	207.18	126.86

COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO GRISOM CREEK AND WATER WELL BA98-5.
GAMMA-CALIPER LOG FROM 0 TO 320.00
GAMMA-DENSITY LOG FROM 320.00 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\BA97.CMP
DATE: 07/03/07

Exhibit A

Well Name: 04-CNX-BA-98
SURFACE ELEV: 2139.63 EASTING: 965642.51 NORTHING: 299198.23

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
AL1	122.00	122.20	2017.63	0.20	
	122.20	155.10	2017.43	32.90	
AL2	155.10	156.90	1984.53	1.80	
	156.90	248.70	1982.73	91.80	
RA2	248.70	250.40	1890.93	1.70	
	250.40	321.00	1889.23	70.60	
COAL	321.00	321.20	1818.63	0.20	
	321.20	411.30	1818.43	90.10	
JB1	411.30	413.40	1728.33	2.10	
	413.40	442.70	1726.23	29.30	
JB3	442.70	443.70	1696.93	1.00	
	443.70	501.00	1695.93	57.30	
T2	501.00	501.50	1638.63	0.50	
	501.50	513.30	1638.13	11.80	
T1	513.30	514.00	1626.33	0.70	
	514.00	555.20	1625.63	41.20	
TI	555.20	556.00	1584.43	0.80	
	556.00	557.60	1583.63	1.60	
COAL	557.60	558.00	1582.03	0.40	
	558.00	664.90	1581.63	106.90	
US1	664.90	665.00	1474.73	0.10	
	665.00	712.90	1474.63	47.90	
LC4	712.90	714.00	1426.73	1.10	
	714.00	827.20	1425.63	113.20	
*GC1	827.20	827.30	1312.43	0.10	
	827.30	963.90	1312.33	136.60	
*SE2	963.90	964.70	1175.73	0.80	
	964.70	1016.10	1174.93	51.40	
*LS1	1016.10	1016.80	1123.53	0.70	
*LS2	1016.80	1018.00	1122.83	1.20	
	1018.00	1084.00	1121.63	66.00	
*LS3	1084.00	1085.20	1055.63	1.20	
	1085.20	1114.50	1054.43	29.30	
*UH2	1114.50	1115.20	1025.13	0.70	
	1115.20	1135.30	1024.43	20.10	
*UH3	1135.30	1135.40	1004.33	0.10	
	1135.40	1168.00	1004.23	32.60	
*MH1	1168.00	1169.10	971.63	1.10	
	1169.10	1275.80	970.53	106.70	
*P11	1275.80	1277.50	863.83	1.70	
	1277.50	1287.00	862.13	9.50	
*P10	1287.00	1287.50	852.63	0.50	
	1287.50	1318.00	852.13	30.50	
*LH1	1318.00	1319.00	821.63	1.00	
	1319.00	1367.90	820.63	48.90	
*P91	1367.90	1369.00	771.73	1.10	
	1369.00	1426.50	770.63	57.50	

*P81	1426.50	1427.70	713.13	1.20
	1427.70	1429.00	711.93	1.30
*P82	1429.00	1429.90	710.63	0.90
	1429.90	1467.50	709.73	37.60
*COAL	1467.50	1468.00	672.13	0.50
	1468.00	1473.90	671.63	5.90
*COAL	1473.90	1474.00	665.73	0.10
	1474.00	1474.80	665.63	0.80
*COAL	1474.80	1475.00	664.83	0.20
	1475.00	1520.00	664.63	45.00
*COAL	1520.00	1520.10	619.63	0.10
	1520.10	1778.00	619.53	257.90
*P41	1778.00	1781.90	361.63	3.90
	1781.90	1794.60	357.73	12.70
*P42	1794.60	1794.70	345.03	0.10
	1794.70	1806.00	344.93	11.30
*P43	1806.00	1806.70	333.63	0.70
	1806.70	1860.80	332.93	54.10
*P31	1860.80	1862.00	278.83	1.20
	1862.00	2059.70	277.63	197.70
*SJ3	2059.70	2060.00	79.93	0.30
	2060.00	2142.63	79.63	82.63

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO GRISSOM CREEK AND WATER WELL AZ98-9.
GAMMA-CALIPER LOG FROM 0 TO 221.00
GAMMA-DENSITY LOG FROM 221.00 TO TD.

FILE: C:\VP\GAS\BA98.CMP
DATE: 05/26/04

Exhibit A

Well Name: 07 CBM BB97
SURFACE ELEV: 2363.91 EASTING: 963345.28 NORTHING: 297939.33

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
COAL	39.00	41.80	2324.91	2.80	
	41.80	62.60	2322.11	20.80	
LB1	62.60	64.90	2301.31	2.30	
	64.90	239.40	2299.01	174.50	
COAL	239.40	239.70	2124.51	0.30	
	239.70	240.80	2124.21	1.10	
KN2	240.80	242.90	2123.11	2.10	
	242.90	381.80	2121.01	138.90	
AL1	381.80	382.60	1982.11	0.80	
	382.60	409.50	1981.31	26.90	
AL2	409.50	410.80	1954.41	1.30	
	410.80	500.20	1953.11	89.40	
RA2	500.20	502.00	1863.71	1.80	
	502.00	672.00	1861.91	170.00	
JB1	672.00	674.20	1691.91	2.20	
	674.20	674.80	1689.71	0.60	
COAL	674.80	675.00	1689.11	0.20	
	675.00	685.50	1688.91	10.50	
JB3	685.50	686.10	1678.41	0.60	
	686.10	756.30	1677.81	70.20	
T2	756.30	757.00	1607.61	0.70	
	757.00	757.80	1606.91	0.80	
T2	757.80	758.70	1606.11	0.90	
	758.70	766.60	1605.21	7.90	
T1	766.60	767.00	1597.31	0.40	
	767.00	812.60	1596.91	45.60	
TI	812.60	813.00	1551.31	0.40	
	813.00	814.20	1550.91	1.20	
TI	814.20	814.80	1549.71	0.60	
	814.80	935.20	1549.11	120.40	
*US1	935.20	936.70	1428.71	1.50	
	936.70	949.30	1427.21	12.60	
*LC3	949.30	950.30	1414.61	1.00	
	950.30	954.20	1413.61	3.90	
*LC4	954.20	955.40	1409.71	1.20	
	955.40	1081.70	1408.51	126.30	
*GC1	1081.70	1081.90	1282.21	0.20	
	1081.90	1171.90	1282.01	90.00	
*COAL	1171.90	1172.10	1192.01	0.20	
	1172.10	1207.20	1191.81	35.10	
*SE2	1207.20	1208.10	1156.71	0.90	
	1208.10	1256.20	1155.81	48.10	
*LS1	1256.20	1257.90	1107.71	1.70	
	1257.90	1320.60	1106.01	62.70	
*LS3	1320.60	1322.70	1043.31	2.10	
	1322.70	1356.80	1041.21	34.10	
*UH2	1356.80	1357.50	1007.11	0.70	

	1357.50	1380.60	1006.41	23.10
*UH3	1380.60	1381.30	983.31	0.70
	1381.30	1415.00	982.61	33.70
*MH1	1415.00	1416.20	948.91	1.20
	1416.20	1523.00	947.71	106.80
*P11	1523.00	1525.40	840.91	2.40
	1525.40	1536.00	838.51	10.60
*P10	1536.00	1536.20	827.91	0.20
	1536.20	1562.50	827.71	26.30
*LH1	1562.50	1564.10	801.41	1.60
	1564.10	1579.50	799.81	15.40
*COAL	1579.50	1579.80	784.41	0.30
	1579.80	1605.70	784.11	25.90
*P91	1605.70	1607.10	758.21	1.40
	1607.10	1662.50	756.81	55.40
*P81	1662.50	1664.20	701.41	1.70
	1664.20	1664.70	699.71	0.50
*P82	1664.70	1665.70	699.21	1.00
	1665.70	1697.60	698.21	31.90
*COAL	1697.60	1698.30	666.31	0.70
	1698.30	1698.70	665.61	0.40
*COAL	1698.70	1699.00	665.21	0.30
	1699.00	2016.80	664.91	317.80
*P41	2016.80	2019.10	347.11	2.30
	2019.10	2038.90	344.81	19.80
*P42	2038.90	2039.20	325.01	0.30
	2039.20	2050.40	324.71	11.20
*P43	2050.40	2050.80	313.51	0.40
	2050.80	2103.90	313.11	53.10
*P31	2103.90	2104.90	260.01	1.00
	2104.90	2386.97	259.01	282.07

COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO GRISSOM CREEK AND WATER WELL BB98-8.
GAMMA-CALIPER LOG FROM 0 TO 221.00
GAMMA-DENSITY LOG FROM 221.00 TO 2386.97
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
DATE: 08/01/07

Exhibit A

Well Name: 04-CNX-BB-98
SURFACE ELEV: 2322.42 EASTING: 965413.91 NORTHING: 297204.06

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)*	THK. (FT)	REMARKS
LB2	59.40	59.70	2263.02	0.30	
	59.70	125.70	2262.72	66.00	
KN1	125.70	125.80	2196.72	0.10	
	125.80	161.00	2196.62	35.20	
KN2	161.00	163.50	2161.42	2.50	
	163.50	334.00	2158.92	170.50	
AL2	334.00	335.90	1988.42	1.90	
	335.90	387.10	1986.52	51.20	
RA1	387.10	387.20	1935.32	0.10	
	387.20	435.00	1935.22	47.80	
RA2	435.00	437.10	1887.42	2.10	
	437.10	498.70	1885.32	61.60	
COAL	498.70	499.00	1823.72	0.30	
	499.00	592.00	1823.42	93.00	
JB1	592.00	594.00	1730.42	2.00	
	594.00	619.00	1728.42	25.00	
JB3	619.00	620.00	1703.42	1.00	
	620.00	689.00	1702.42	69.00	
T2	689.00	689.70	1633.42	0.70	
	689.70	696.10	1632.72	6.40	
T1	696.10	697.30	1626.32	1.20	
	697.30	751.20	1625.12	53.90	
TI	751.20	752.10	1571.22	0.90	
	752.10	752.70	1570.32	0.60	
TI	752.70	753.20	1569.72	0.50	
	753.20	753.30	1569.22	0.10	
TI	753.30	754.00	1569.12	0.70	
	754.00	862.00	1568.42	108.00	
US1	862.00	862.90	1460.42	0.90	
	862.90	892.00	1459.52	29.10	
LC4	892.00	893.90	1430.42	1.90	
	893.90	1020.60	1428.52	126.70	
GC1	1020.60	1021.40	1301.82	0.80	
	1021.40	1022.60	1301.02	1.20	
COAL	1022.60	1023.00	1299.82	0.40	
	1023.00	1148.20	1299.42	125.20	
SE2	1148.20	1149.50	1174.22	1.30	
	1149.50	1197.00	1172.92	47.50	
LS1	1197.00	1197.50	1125.42	0.50	
LS2	1197.50	1198.90	1124.92	1.40	
	1198.90	1261.00	1123.52	62.10	
LS3	1261.00	1262.90	1061.42	1.90	
	1262.90	1296.40	1059.52	33.50	
UH2	1296.40	1297.70	1026.02	1.30	
	1297.70	1315.50	1024.72	17.80	
UH3	1315.50	1316.60	1006.92	1.10	
	1316.60	1350.20	1005.82	33.60	

MH1	1350.20	1351.70	972.22	1.50
	1351.70	1457.00	970.72	105.30
*P11	1457.00	1459.20	865.42	2.20
	1459.20	1468.80	863.22	9.60
*P10	1468.80	1469.10	853.62	0.30
	1469.10	1499.50	853.32	30.40
*LH1	1499.50	1500.90	822.92	1.40
	1500.90	1608.10	821.52	107.20
*P81	1608.10	1610.90	714.32	2.80
	1610.90	1611.10	711.52	0.20
*P82	1611.10	1611.80	711.32	0.70
	1611.80	1624.80	710.62	13.00
*P71	1624.80	1625.10	697.62	0.30
	1625.10	1651.40	697.32	26.30
*COAL	1651.40	1652.10	671.02	0.70
	1652.10	1652.90	670.32	0.80
*COAL	1652.90	1653.60	669.52	0.70
	1653.60	1654.00	668.82	0.40
*COAL	1654.00	1654.30	668.42	0.30
	1654.30	1959.20	668.12	304.90
*P41	1959.20	1962.00	363.22	2.80
	1962.00	1987.90	360.42	25.90
*P42	1987.90	1988.00	334.52	0.10
	1988.00	2005.30	334.42	17.30
*P43	2005.30	2006.50	317.12	1.20
	2006.50	2020.00	315.92	13.50
*COAL	2020.00	2020.80	302.42	0.80
	2020.80	2046.60	301.62	25.80
*P31	2046.60	2047.80	275.82	1.20
	2047.80	2104.40	274.62	56.60
*P21	2104.40	2104.90	218.02	0.50
	2104.90	2408.52	217.52	303.62

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO GRISSOM CREEK AND WATER WELL BC98-1.
GAMMA-CALIPER LOG FROM 0 TO 221.00
GAMMA-DENSITY LOG FROM 221.00 TO TD.

FILE: C:\VP\GAS\BB98.CMP
DATE: 07/15/04

Exhibit A

Well Name: 04-CNX-BB-99
SURFACE ELEV: 2469.66 EASTING: 966430.11 NORTHING: 297551.31

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
LB1	110.00	110.80	2359.66	0.80	
	110.80	260.00	2358.86	149.20	
KN1	260.00	260.30	2209.66	0.30	
	260.30	289.90	2209.36	29.60	
KN2	289.90	292.00	2179.76	2.10	
	292.00	434.00	2177.66	142.00	
AL1	434.00	434.70	2035.66	0.70	
	434.70	466.00	2034.96	31.30	
AL2	466.00	467.50	2003.66	1.50	
	467.50	521.80	2002.16	54.30	
RA1	521.80	522.00	1947.86	0.20	
	522.00	572.70	1947.66	50.70	
RA2	572.70	574.80	1896.96	2.10	
	574.80	597.00	1894.86	22.20	
RA3	597.00	597.10	1872.66	0.10	
	597.10	631.10	1872.56	34.00	
COAL	631.10	631.90	1838.56	0.80	
	631.90	725.10	1837.76	93.20	
JB1	725.10	727.00	1744.56	1.90	
	727.00	757.60	1742.66	30.60	
JB3	757.60	758.60	1712.06	1.00	
	758.60	826.20	1711.06	67.60	
T2	826.20	827.00	1643.46	0.80	
	827.00	835.90	1642.66	8.90	
T1	835.90	836.80	1633.76	0.90	
	836.80	883.60	1632.86	46.80	
COAL	883.60	884.00	1586.06	0.40	
	884.00	885.30	1585.66	1.30	
TI	885.30	886.00	1584.36	0.70	
	886.00	1002.80	1583.66	116.80	
US1	1002.80	1003.70	1466.86	0.90	
	1003.70	1014.00	1465.96	10.30	
LC3	1014.00	1014.70	1455.66	0.70	
	1014.70	1027.10	1454.96	12.40	
LC4	1027.10	1028.80	1442.56	1.70	
	1028.80	1157.10	1440.86	128.30	
*GC1	1157.10	1157.80	1312.56	0.70	
	1157.80	1159.10	1311.86	1.30	
*COAL	1159.10	1159.60	1310.56	0.50	
	1159.60	1291.00	1310.06	131.40	
*SE2	1291.00	1292.00	1178.66	1.00	
	1292.00	1340.60	1177.66	48.60	
*LS1	1340.60	1341.00	1129.06	0.40	
*LS2	1341.00	1342.60	1128.66	1.60	
	1342.60	1412.90	1127.06	70.30	
*LS3	1412.90	1413.90	1056.76	1.00	
	1413.90	1414.40	1055.76	0.50	

*LS3	1414.40	1416.00	1055.26	1.60
	1416.00	1452.80	1053.66	36.80
*UH2	1452.80	1453.60	1016.86	0.80
	1453.60	1490.90	1016.06	37.30
*MH1	1490.90	1491.90	978.76	1.00
	1491.90	1598.20	977.76	106.30
*P11	1598.20	1599.60	871.46	1.40
	1599.60	1615.00	870.06	15.40
*P10	1615.00	1615.60	854.66	0.60
	1615.60	1640.60	854.06	25.00
*LH1	1640.60	1642.00	829.06	1.40
	1642.00	1699.50	827.66	57.50
*P92	1699.50	1700.80	770.16	1.30
	1700.80	1755.40	768.86	54.60
*P81	1755.40	1756.90	714.26	1.50
	1756.90	1757.00	712.76	0.10
*P81	1757.00	1757.30	712.66	0.30
	1757.30	1758.00	712.36	0.70
*P82	1758.00	1758.30	711.66	0.30
	1758.30	1762.50	711.36	4.20
*P71	1762.50	1763.00	707.16	0.50
	1763.00	1793.90	706.66	30.90
*COAL	1793.90	1794.70	675.76	0.80
	1794.70	1795.60	674.96	0.90
*COAL	1795.60	1796.10	674.06	0.50
	1796.10	1796.30	673.56	0.20
*COAL	1796.30	1797.00	673.36	0.70
	1797.00	1797.10	672.66	0.10
*COAL	1797.10	1797.60	672.56	0.50
	1797.60	1946.00	672.06	148.40
*COAL	1946.00	1946.60	523.66	0.60
	1946.60	1947.90	523.06	1.30
*COAL	1947.90	1948.30	521.76	0.40
	1948.30	2095.30	521.36	147.00
*P41	2095.30	2096.10	374.36	0.80
	2096.10	2124.70	373.56	28.60
*P42	2124.70	2125.00	344.96	0.30
	2125.00	2144.30	344.66	19.30
*P43	2144.30	2145.10	325.36	0.80
	2145.10	2180.00	324.56	34.90
*P31	2180.00	2181.30	289.66	1.30
	2181.30	2435.00	288.36	253.70
*COAL	2435.00	2435.10	34.66	0.10
	2435.10	2490.19	34.56	55.09

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO GRISSOM CREEK AND WATER WELL BB100-3.
GAMMA-CALIPER LOG FROM 0 TO 352.50
GAMMA-DENSITY LOG FROM 352.50 TO TD.
FILE: C:\VP\GAS\BB99.CMP
DATE: 07/15/04

Exhibit A

Well Name: 03-BPC-BB-100
SURFACE ELEV: 2107.57 EASTING: 968448.55 NORTHING: 296993.87

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
AL2	46.30	48.00	2061.27	1.70	
	48.00	97.10	2059.57	49.10	
RA1	97.10	97.80	2010.47	0.70	
	97.80	144.00	2009.77	46.20	
RA2	144.00	146.00	1963.57	2.00	
	146.00	204.70	1961.57	58.70	
COAL	204.70	205.00	1902.87	0.30	
	205.00	207.80	1902.57	2.80	
COAL	207.80	208.00	1899.77	0.20	
	208.00	227.00	1899.57	19.00	
COAL	227.00	227.30	1880.57	0.30	
	227.30	244.90	1880.27	17.60	
COAL	244.90	245.10	1862.67	0.20	
	245.10	301.90	1862.47	56.80	
JB1	301.90	303.90	1805.67	2.00	
	303.90	328.00	1803.67	24.10	
JB3	328.00	329.40	1779.57	1.40	
	329.40	454.60	1778.17	125.20	
COAL	454.60	455.00	1652.97	0.40	
	455.00	455.60	1652.57	0.60	
COAL	455.60	456.40	1651.97	0.80	
	456.40	457.00	1651.17	0.60	
TI	457.00	457.70	1650.57	0.70	
	457.70	558.70	1649.87	101.00	
US1	558.70	559.00	1548.87	0.30	
	559.00	740.10	1548.57	181.10	
*GC2	740.10	740.60	1367.47	0.50	
	740.60	850.50	1366.97	109.90	
*SE1	850.50	851.00	1257.07	0.50	
	851.00	878.40	1256.57	27.40	
*SE2	878.40	879.10	1229.17	0.70	
	879.10	934.50	1228.47	55.40	
*LS1	934.50	935.00	1173.07	0.50	
	935.00	935.80	1172.57	0.80	
*LS2	935.80	937.00	1171.77	1.20	
	937.00	998.00	1170.57	61.00	
*LS3	998.00	999.50	1109.57	1.50	
	999.50	1045.20	1108.07	45.70	
*UH2	1045.20	1046.50	1062.37	1.30	
	1046.50	1064.40	1061.07	17.90	
*UH3	1064.40	1065.10	1043.17	0.70	
	1065.10	1095.00	1042.47	29.90	
*MH1	1095.00	1097.00	1012.57	2.00	
	1097.00	1160.60	1010.57	63.60	
*MH2	1160.60	1161.00	946.97	0.40	
	1161.00	1176.40	946.57	15.40	
*COAL	1176.40	1176.50	931.17	0.10	

	1176.50	1200.90	931.07	24.40
*P11	1200.90	1203.00	906.67	2.10
	1203.00	1216.80	904.57	13.80
*P10	1216.80	1217.30	890.77	0.50
	1217.30	1246.20	890.27	28.90
*LH1	1246.20	1248.10	861.37	1.90
	1248.10	1291.90	859.47	43.80
*P91	1291.90	1292.80	815.67	0.90
*P92	1292.80	1294.70	814.77	1.90
	1294.70	1348.30	812.87	53.60
*P81	1348.30	1349.70	759.27	1.40
*P82	1349.70	1350.90	757.87	1.20
	1350.90	1355.00	756.67	4.10
*P71	1355.00	1355.50	752.57	0.50
	1355.50	1391.00	752.07	35.50
*COAL	1391.00	1391.90	716.57	0.90
	1391.90	1393.00	715.67	1.10
*COAL	1393.00	1393.10	714.57	0.10
	1393.10	1711.10	714.47	318.00
*P41	1711.10	1713.00	396.47	1.90
	1713.00	1754.40	394.57	41.40
*P42	1754.40	1755.00	353.17	0.60
	1755.00	1805.10	352.57	50.10
*P31	1805.10	1806.20	302.47	1.10
	1806.20	2154.53	301.37	348.33

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO WHITE BRANCH AND WATER WELL BC100-1.
GAMMA-CALIPER LOG FROM 0 TO 667.00
GAMMA-DENSITY LOG FROM 667.00 TO TD.

FILE: C:\VP\GAS\BB100.CMP
DATE: 10/02/03

Exhibit A

Well Name: 07 CBM BB101A
SURFACE ELEV: 2259.84 EASTING: 969428.52 NORTHING: 297024.96

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
AL1	172.00	173.50	2087.84	1.50	
	173.50	197.00	2086.34	23.50	
AL2	197.00	199.70	2062.84	2.70	
	199.70	254.20	2060.14	54.50	
RA1	254.20	254.60	2005.64	0.40	
	254.60	302.90	2005.24	48.30	
RA2	302.90	305.00	1956.94	2.10	
	305.00	324.70	1954.84	19.70	
COAL	324.70	325.10	1935.14	0.40	
	325.10	332.90	1934.74	7.80	
COAL	332.90	333.10	1926.94	0.20	
	333.10	343.90	1926.74	10.80	
COAL	343.90	344.20	1915.94	0.30	
	344.20	347.40	1915.64	3.20	
COAL	347.40	347.90	1912.44	0.50	
	347.90	444.10	1911.94	96.20	
JB1	444.10	446.20	1815.74	2.10	
	446.20	468.90	1813.64	22.70	
JB3	468.90	470.00	1790.94	1.10	
	470.00	534.60	1789.84	64.60	
COAL	534.60	534.80	1725.24	0.20	
	534.80	603.90	1725.04	69.10	
TI	603.90	604.50	1655.94	0.60	
	604.50	605.60	1655.34	1.10	
TI	605.60	605.90	1654.24	0.30	
	605.90	606.60	1653.94	0.70	
TI	606.60	606.80	1653.24	0.20	
	606.80	712.50	1653.04	105.70	
US1	712.50	712.70	1547.34	0.20	
	712.70	757.00	1547.14	44.30	
LC3	757.00	758.10	1502.84	1.10	
	758.10	758.10	1501.74	0.00	
LC4	758.10	759.20	1501.74	1.10	
	759.20	892.80	1500.64	133.60	
GC1	892.80	893.10	1367.04	0.30	
	893.10	893.50	1366.74	0.40	
GC1	893.50	894.20	1366.34	0.70	
	894.20	999.10	1365.64	104.90	
SE1	999.10	999.60	1260.74	0.50	
	999.60	1025.00	1260.24	25.40	
SE2	1025.00	1025.80	1234.84	0.80	
	1025.80	1063.00	1234.04	37.20	
SE3	1063.00	1063.20	1196.84	0.20	
	1063.20	1080.00	1196.64	16.80	
*LS3	1080.00	1081.60	1179.84	1.60	
	1081.60	1144.10	1178.24	62.50	
*COAL	1144.10	1146.20	1115.74	2.10	

	1146.20	1189.50	1113.64	43.30
*UH2	1189.50	1191.20	1070.34	1.70
	1191.20	1209.80	1068.64	18.60
*UH3	1209.80	1210.80	1050.04	1.00
	1210.80	1247.80	1049.04	37.00
*MH1	1247.80	1249.10	1012.04	1.30
	1249.10	1316.70	1010.74	67.60
*MH2	1316.70	1317.20	943.14	0.50
	1317.20	1352.00	942.64	34.80
*P11	1352.00	1354.10	907.84	2.10
	1354.10	1369.60	905.74	15.50
*P10	1369.60	1370.20	890.24	0.60
	1370.20	1398.70	889.64	28.50
*LH1	1398.70	1400.80	861.14	2.10
	1400.80	1429.40	859.04	28.60
*COAL	1429.40	1429.60	830.44	0.20
	1429.60	1492.90	830.24	63.30
*P81	1492.90	1493.90	766.94	1.00
	1493.90	1494.30	765.94	0.40
*P82	1494.30	1495.10	765.54	0.80
	1495.10	1499.20	764.74	4.10
*P71	1499.20	1499.80	760.64	0.60
	1499.80	1544.70	760.04	44.90
*COAL	1544.70	1545.00	715.14	0.30
	1545.00	1545.70	714.84	0.70
*COAL	1545.70	1545.90	714.14	0.20
	1545.90	1546.20	713.94	0.30
*COAL	1546.20	1546.80	713.64	0.60
	1546.80	1547.40	713.04	0.60
*COAL	1547.40	1547.60	712.44	0.20
	1547.60	1859.30	712.24	311.70
*P41	1859.30	1860.30	400.54	1.00
	1860.30	1889.70	399.54	29.40
*P42	1889.70	1890.00	370.14	0.30
	1890.00	1901.10	369.84	11.10
*P43	1901.10	1901.80	358.74	0.70
	1901.80	1902.10	358.04	0.30
*P43	1902.10	1902.70	357.74	0.60
	1902.70	1956.70	357.14	54.00
*P31	1956.70	1957.50	303.14	0.80
	1957.50	1957.90	302.34	0.40
*P31	1957.90	1958.60	301.94	0.70
	1958.60	2191.80	301.24	233.20
*COAL	2191.80	2192.10	68.04	0.30
	2192.10	2264.60	67.74	72.50

COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO NANCE BRANCH.
GAMMA-CALIPER LOG FROM 0 TO 230.00
GAMMA-DENSITY LOG FROM 230.00 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\BB101A.CMP
DATE: 06/13/07

Exhibit A

Well Name: 04-CNX-BC-97
SURFACE ELEV: 2489.89 EASTING: 962997.38 NORTHING: 295618.40

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
LB1	176.90	179.10	2312.99	2.20	
	179.10	346.90	2310.79	167.80	
KN1	346.90	347.70	2142.99	0.80	
	347.70	360.50	2142.19	12.80	
KN2	360.50	363.00	2129.39	2.50	
	363.00	375.10	2126.89	12.10	
COAL	375.10	376.00	2114.79	0.90	
	376.00	376.90	2113.89	0.90	
COAL	376.90	377.30	2112.99	0.40	
	377.30	525.00	2112.59	147.70	
AL2	525.00	526.30	1964.89	1.30	
	526.30	596.70	1963.59	70.40	
RA1	596.70	597.00	1893.19	0.30	
	597.00	624.80	1892.89	27.80	
RA2	624.80	626.90	1865.09	2.10	
	626.90	637.10	1862.99	10.20	
RA3	637.10	637.50	1852.79	0.40	
	637.50	772.40	1852.39	134.90	
JB1	772.40	774.10	1717.49	1.70	
	774.10	807.90	1715.79	33.80	
JB3	807.90	809.20	1681.99	1.30	
	809.20	875.90	1680.69	66.70	
T2	875.90	877.30	1613.99	1.40	
	877.30	880.90	1612.59	3.60	
T1	880.90	881.90	1608.99	1.00	
	881.90	925.40	1607.99	43.50	
TI	925.40	926.30	1564.49	0.90	
	926.30	926.90	1563.59	0.60	
TI	926.90	927.90	1562.99	1.00	
	927.90	1043.60	1561.99	115.70	
US1	1043.60	1044.00	1446.29	0.40	
	1044.00	1068.10	1445.89	24.10	
*LC3	1068.10	1068.70	1421.79	0.60	
	1068.70	1068.90	1421.19	0.20	
*LC4	1068.90	1071.00	1420.99	2.10	
	1071.00	1204.90	1418.89	133.90	
*COAL	1204.90	1205.30	1284.99	0.40	
	1205.30	1206.10	1284.59	0.80	
*GC1	1206.10	1206.80	1283.79	0.70	
	1206.80	1295.70	1283.09	88.90	
*SE1	1295.70	1296.00	1194.19	0.30	
	1296.00	1330.20	1193.89	34.20	
*SE2	1330.20	1331.40	1159.69	1.20	
	1331.40	1374.90	1158.49	43.50	
*LS1	1374.90	1376.00	1114.99	1.10	
*LS2	1376.00	1377.00	1113.89	1.00	
	1377.00	1441.90	1112.89	64.90	

*LS3	1441.90	1442.40	1047.99	0.50
	1442.40	1443.60	1047.49	1.20
*UH1	1443.60	1444.70	1046.29	1.10
	1444.70	1483.10	1045.19	38.40
*UH2	1483.10	1484.00	1006.79	0.90
	1484.00	1503.70	1005.89	19.70
*UH3	1503.70	1504.70	986.19	1.00
	1504.70	1536.40	985.19	31.70
*MH1	1536.40	1538.00	953.49	1.60
	1538.00	1646.90	951.89	108.90
*P11	1646.90	1649.50	842.99	2.60
	1649.50	1650.00	840.39	0.50
*113	1650.00	1650.10	839.89	0.10
	1650.10	1657.00	839.79	6.90
*P10	1657.00	1657.60	832.89	0.60
	1657.60	1691.60	832.29	34.00
*LH1	1691.60	1693.00	798.29	1.40
	1693.00	1713.30	796.89	20.30
*LH3	1713.30	1714.50	776.59	1.20
	1714.50	1735.00	775.39	20.50
*P91	1735.00	1737.00	754.89	2.00
	1737.00	1790.90	752.89	53.90
*P81	1790.90	1792.60	698.99	1.70
	1792.60	1792.90	697.29	0.30
*P81	1792.90	1793.20	696.99	0.30
	1793.20	1794.00	696.69	0.80
*P82	1794.00	1794.50	695.89	0.50
	1794.50	1838.90	695.39	44.40
*COAL	1838.90	1839.70	650.99	0.80
	1839.70	1840.20	650.19	0.50
*COAL	1840.20	1841.00	649.69	0.80
	1841.00	1841.10	648.89	0.10
*COAL	1841.10	1841.60	648.79	0.50
	1841.60	1847.10	648.29	5.50
*COAL	1847.10	1847.20	642.79	0.10
	1847.20	1899.10	642.69	51.90
*COAL	1899.10	1899.20	590.79	0.10
	1899.20	2111.70	590.69	212.50
*P52	2111.70	2113.00	378.19	1.30
	2113.00	2185.30	376.89	72.30
*COAL	2185.30	2185.40	304.59	0.10
	2185.40	2187.10	304.49	1.70
*COAL	2187.10	2187.20	302.79	0.10
	2187.20	2188.70	302.69	1.50
*COAL	2188.70	2188.90	301.19	0.20
	2188.90	2191.30	300.99	2.40
*COAL	2191.30	2191.50	298.59	0.20
	2191.50	2212.50	298.39	21.00
*P43	2212.50	2215.52	277.39	3.02
	2215.52	2237.34	274.37	21.82
*P31	2237.34	2238.60	252.55	1.26
	2238.60	2303.10	251.29	64.50
*P21	2303.10	2303.20	186.79	0.10
	2303.20	2343.30	186.69	40.10
*P22	2343.30	2344.00	146.59	0.70
	2344.00	2529.63	145.89	185.63

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO GRISSOM CREEK AND WATER WELL BC96-3.
GAMMA-CALIPER LOG FROM 0 TO 222.00
GAMMA-DENSITY LOG FROM 222.00 TO TD.

FILE: C:\VP\GAS\BC97.CMP

DATE: 11/30/04

Exhibit A

Well Name: 04-CNX-BC-98
SURFACE ELEV: 2366.32 EASTING: 965666.94 NORTHING: 295345.39

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
LB2	68.90	69.00	2297.42	0.10	
	69.00	161.00	2297.32	92.00	
KN1	161.00	161.10	2205.32	0.10	
	161.10	172.80	2205.22	11.70	
KN2	172.80	175.50	2193.52	2.70	
	175.50	347.10	2190.82	171.60	
AL2	347.10	347.90	2019.22	0.80	
	347.90	348.50	2018.42	0.60	
AL2	348.50	351.70	2017.82	3.20	
	351.70	466.10	2014.62	114.40	
RA2	466.10	469.10	1900.22	3.00	
	469.10	478.10	1897.22	9.00	
RA3	478.10	478.30	1888.22	0.20	
	478.30	558.60	1888.02	80.30	
COAL	558.60	558.70	1807.72	0.10	
	558.70	622.30	1807.62	63.60	
JB1	622.30	624.00	1744.02	1.70	
	624.00	624.50	1742.32	0.50	
JB1	624.50	625.00	1741.82	0.50	
	625.00	654.00	1741.32	29.00	
JB3	654.00	655.10	1712.32	1.10	
	655.10	722.00	1711.22	66.90	
T2	722.00	723.00	1644.32	1.00	
	723.00	726.00	1643.32	3.00	
T1	726.00	727.00	1640.32	1.00	
	727.00	769.50	1639.32	42.50	
TI	769.50	770.50	1596.82	1.00	
	770.50	771.30	1595.82	0.80	
TI	771.30	772.30	1595.02	1.00	
	772.30	886.80	1594.02	114.50	
US1	886.80	887.90	1479.52	1.10	
	887.90	897.00	1478.42	9.10	
LC1	897.00	897.10	1469.32	0.10	
	897.10	909.00	1469.22	11.90	
LC2	909.00	909.40	1457.32	0.40	
	909.40	913.80	1456.92	4.40	
LC3	913.80	914.00	1452.52	0.20	
	914.00	915.00	1452.32	1.00	
LC4	915.00	917.30	1451.32	2.30	
	917.30	1051.50	1449.02	134.20	
*COAL	1051.50	1052.00	1314.82	0.50	
	1052.00	1052.60	1314.32	0.60	
*GC1	1052.60	1053.30	1313.72	0.70	
	1053.30	1154.60	1313.02	101.30	
*SE1	1154.60	1155.20	1211.72	0.60	
	1155.20	1181.50	1211.12	26.30	
*SE2	1181.50	1182.50	1184.82	1.00	

	1182.50	1235.10	1183.82	52.60
*LS1	1235.10	1236.40	1131.22	1.30
*LS2	1236.40	1237.00	1129.92	0.60
	1237.00	1302.30	1129.32	65.30
*COAL	1302.30	1303.00	1064.02	0.70
	1303.00	1305.40	1063.32	2.40
*LS3	1305.40	1307.80	1060.92	2.40
	1307.80	1372.20	1058.52	64.40
*UH3	1372.20	1373.00	994.12	0.80
	1373.00	1403.50	993.32	30.50
*MH1	1403.50	1406.00	962.82	2.50
	1406.00	1513.20	960.32	107.20
*P11	1513.20	1515.00	853.12	1.80
	1515.00	1532.40	851.32	17.40
*P10	1532.40	1533.20	833.92	0.80
	1533.20	1555.50	833.12	22.30
*LH1	1555.50	1557.00	810.82	1.50
	1557.00	1574.90	809.32	17.90
*LH3	1574.90	1575.80	791.42	0.90
	1575.80	1576.00	790.52	0.20
*LH3	1576.00	1576.70	790.32	0.70
	1576.70	1592.70	789.62	16.00
*P91	1592.70	1594.40	773.62	1.70
	1594.40	1648.40	771.92	54.00
*P81	1648.40	1650.70	717.92	2.30
	1650.70	1657.00	715.62	6.30
*P82	1657.00	1657.60	709.32	0.60
	1657.60	1699.00	708.72	41.40
*COAL	1699.00	1700.90	667.32	1.90
	1700.90	1709.80	665.42	8.90
*COAL	1709.80	1709.90	656.52	0.10
	1709.90	1761.20	656.42	51.30
*COAL	1761.20	1761.40	605.12	0.20
	1761.40	1841.00	604.92	79.60
*P61	1841.00	1841.50	525.32	0.50
	1841.50	1954.00	524.82	112.50
*P52	1954.00	1954.80	412.32	0.80
	1954.80	2025.90	411.52	71.10
*P42	2025.90	2026.00	340.42	0.10
	2026.00	2096.90	340.32	70.90
*P31	2096.90	2098.09	269.42	1.19
	2098.09	2138.90	268.23	40.81
*P34	2138.90	2139.00	227.42	0.10
	2139.00	2164.50	227.32	25.50
*P21	2164.50	2164.60	201.82	0.10
	2164.60	2394.53	201.72	229.93

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO GRISSOM CREEK AND WATER WELL BC98-12.
GAMMA-CALIPER LOG FROM 0 TO 219.00
GAMMA-DENSITY LOG FROM 219.00 TO TD.

FILE: C:\VP\GAS\BC98.CMP
DATE: 11/04/04

Exhibit A

Well Name: 04-CNX-BC-99
SURFACE ELEV: 2489.63 EASTING: 966910.76 NORTHING: 295961.64

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
LB1	113.50	116.10	2376.13	2.60	
	116.10	184.10	2373.53	68.00	
LB2	184.10	184.20	2305.53	0.10	
	184.20	286.00	2305.43	101.80	
KN1	286.00	287.00	2203.63	1.00	
	287.00	307.00	2202.63	20.00	
KN2	307.00	308.50	2182.63	1.50	
	308.50	453.00	2181.13	144.50	
AL1	453.00	453.10	2036.63	0.10	
	453.10	476.10	2036.53	23.00	
AL2	476.10	478.00	2013.53	1.90	
	478.00	586.80	2011.63	108.80	
RA2	586.80	589.00	1902.83	2.20	
	589.00	743.00	1900.63	154.00	
JB1	743.00	745.00	1746.63	2.00	
	745.00	766.60	1744.63	21.60	
JB3	766.60	767.80	1723.03	1.20	
	767.80	802.50	1721.83	34.70	
COAL	802.50	803.50	1687.13	1.00	
	803.50	832.00	1686.13	28.50	
T2	832.00	832.90	1657.63	0.90	
	832.90	838.70	1656.73	5.80	
T1	838.70	839.40	1650.93	0.70	
	839.40	890.40	1650.23	51.00	
COAL	890.40	891.30	1599.23	0.90	
	891.30	892.50	1598.33	1.20	
TI	892.50	893.70	1597.13	1.20	
	893.70	1002.90	1595.93	109.20	
US1	1002.90	1003.10	1486.73	0.20	
	1003.10	1003.90	1486.53	0.80	
COAL	1003.90	1004.00	1485.73	0.10	
	1004.00	1033.00	1485.63	29.00	
LC4	1033.00	1035.50	1456.63	2.50	
	1035.50	1167.40	1454.13	131.90	
*COAL	1167.40	1168.00	1322.23	0.60	
	1168.00	1169.10	1321.63	1.10	
*GC1	1169.10	1170.00	1320.53	0.90	
	1170.00	1229.00	1319.63	59.00	
*COAL	1229.00	1229.20	1260.63	0.20	
	1229.20	1272.70	1260.43	43.50	
*SE1	1272.70	1273.00	1216.93	0.30	
	1273.00	1303.00	1216.63	30.00	
*SE2	1303.00	1304.00	1186.63	1.00	
	1304.00	1350.10	1185.63	46.10	
*LS1	1350.10	1351.40	1139.53	1.30	
*LS2	1351.40	1352.00	1138.23	0.60	
	1352.00	1413.00	1137.63	61.00	

*LS3	1413.00	1414.60	1076.63	1.60
	1414.60	1464.00	1075.03	49.40
*UH2	1464.00	1465.90	1025.63	1.90
	1465.90	1476.80	1023.73	10.90
*UH3	1476.80	1477.60	1012.83	0.80
	1477.60	1513.00	1012.03	35.40
*MH1	1513.00	1514.50	976.63	1.50
	1514.50	1575.10	975.13	60.60
*MH2	1575.10	1575.30	914.53	0.20
	1575.30	1624.80	914.33	49.50
*P11	1624.80	1626.30	864.83	1.50
	1626.30	1643.10	863.33	16.80
*P10	1643.10	1644.00	846.53	0.90
	1644.00	1671.00	845.63	27.00
*LH1	1671.00	1673.00	818.63	2.00
	1673.00	1715.00	816.63	42.00
*P92	1715.00	1715.60	774.63	0.60
	1715.60	1768.00	774.03	52.40
*P81	1768.00	1769.10	721.63	1.10
	1769.10	1769.30	720.53	0.20
*P81	1769.30	1770.00	720.33	0.70
	1770.00	1771.60	719.63	1.60
*P82	1771.60	1772.00	718.03	0.40
	1772.00	1813.00	717.63	41.00
*COAL	1813.00	1813.60	676.63	0.60
	1813.60	1814.40	676.03	0.80
*COAL	1814.40	1815.50	675.23	1.10
	1815.50	2107.90	674.13	292.40
*P41	2107.90	2109.50	381.73	1.60
	2109.50	2139.20	380.13	29.70
*P42	2139.20	2139.50	350.43	0.30
	2139.50	2216.00	350.13	76.50
*P31	2216.00	2217.10	273.63	1.10
	2217.10	2217.40	272.53	0.30
*P32	2217.40	2218.00	272.23	0.60
	2218.00	2524.75	271.63	306.75

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO NANCE WHITE BRANCH AND WATER WELL BC100-1.
GAMMA-CALIPER LOG FROM 0 TO 647.50
GAMMA-DENSITY LOG FROM 647.50 TO TD.

FILE: C:\VP\GAS\BC99.CMP
DATE: 07/15/04

Exhibit A

Well Name: 04-CNX-BC-100
SURFACE ELEV: 2246.64 EASTING: 968847.71 NORTHING: 296231.00

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
AL2	188.90	190.40	2057.74	1.50	
	190.40	292.00	2056.24	101.60	
RA2	292.00	294.40	1954.64	2.40	
	294.40	346.70	1952.24	52.30	
COAL	346.70	347.10	1899.94	0.40	
	347.10	442.00	1899.54	94.90	
JB1	442.00	444.00	1804.64	2.00	
	444.00	481.70	1802.64	37.70	
JB3	481.70	483.40	1764.94	1.70	
	483.40	595.90	1763.24	112.50	
COAL	595.90	596.00	1650.74	0.10	
	596.00	597.30	1650.64	1.30	
TI	597.30	598.00	1649.34	0.70	
	598.00	704.60	1648.64	106.60	
US1	704.60	704.70	1542.04	0.10	
	704.70	747.50	1541.94	42.80	
LC3	747.50	748.40	1499.14	0.90	
LC4	748.40	749.50	1498.24	1.10	
	749.50	877.90	1497.14	128.40	
COAL	877.90	878.00	1368.74	0.10	
	878.00	879.00	1368.64	1.00	
GC1	879.00	879.20	1367.64	0.20	
	879.20	989.60	1367.44	110.40	
*SE1	989.60	989.70	1257.04	0.10	
	989.70	1021.30	1256.94	31.60	
*SE2	1021.30	1022.00	1225.34	0.70	
	1022.00	1073.30	1224.64	51.30	
*LS2	1073.30	1074.40	1173.34	1.10	
	1074.40	1138.10	1172.24	63.70	
*LS3	1138.10	1139.50	1108.54	1.40	
	1139.50	1182.90	1107.14	43.40	
*UH2	1182.90	1183.90	1063.74	1.00	
	1183.90	1202.90	1062.74	19.00	
*UH3	1202.90	1203.20	1043.74	0.30	
	1203.20	1241.00	1043.44	37.80	
*MH1	1241.00	1242.00	1005.64	1.00	
	1242.00	1306.90	1004.64	64.90	
*MH2	1306.90	1307.00	939.74	0.10	
	1307.00	1357.50	939.64	50.50	
*P11	1357.50	1358.50	889.14	1.00	
	1358.50	1377.30	888.14	18.80	
*P10	1377.30	1378.60	869.34	1.30	
	1378.60	1397.00	868.04	18.40	
*LH1	1397.00	1399.00	849.64	2.00	
	1399.00	1404.40	847.64	5.40	
*LH2	1404.40	1405.40	842.24	1.00	
	1405.40	1434.80	841.24	29.40	

*P91	1434.80	1436.00	811.84	1.20
	1436.00	1491.30	810.64	55.30
*P81	1491.30	1492.20	755.34	0.90
	1492.20	1495.00	754.44	2.80
*P82	1495.00	1495.30	751.64	0.30
	1495.30	1534.30	751.34	39.00
*COAL	1534.30	1535.00	712.34	0.70
	1535.00	1535.90	711.64	0.90
*COAL	1535.90	1536.00	710.74	0.10
	1536.00	1848.10	710.64	312.10
*P41	1848.10	1849.50	398.54	1.40
	1849.50	1951.10	397.14	101.60
*P31	1951.10	1952.30	295.54	1.20
	1952.30	2281.50	294.34	329.20

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO NANCE WHITE BRANCH AND WATER WELL BB100-3.
GAMMA-CALIPER LOG FROM 0 TO 310.00
GAMMA-DENSITY LOG FROM 310.00 TO TD.

FILE: C:\VP\GAS\BC100.CMP
DATE: 04/01/04

Exhibit A

Well Name: 03-CNX-BC-101
SURFACE ELEV: 2496.93 EASTING: 969955.99 NORTHING: 296099.88

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
LB1	56.90	59.60	2440.03	2.70	
	59.60	127.10	2437.33	67.50	
LB2	127.10	127.30	2369.83	0.20	
	127.30	214.90	2369.63	87.60	
KN1	214.90	216.00	2282.03	1.10	
	216.00	244.00	2280.93	28.00	
KN2	244.00	247.00	2252.93	3.00	
	247.00	396.60	2249.93	149.60	
AL1	396.60	398.00	2100.33	1.40	
	398.00	424.10	2098.93	26.10	
AL2	424.10	425.50	2072.83	1.40	
	425.50	483.60	2071.43	58.10	
RA1	483.60	484.00	2013.33	0.40	
	484.00	531.80	2012.93	47.80	
RA2	531.80	533.50	1965.13	1.70	
	533.50	553.60	1963.43	20.10	
RA3	553.60	554.10	1943.33	0.50	
	554.10	575.80	1942.83	21.70	
COAL	575.80	576.00	1921.13	0.20	
	576.00	580.20	1920.93	4.20	
COAL	580.20	580.70	1916.73	0.50	
	580.70	670.60	1916.23	89.90	
JB1	670.60	672.90	1826.33	2.30	
	672.90	699.00	1824.03	26.10	
JB3	699.00	700.00	1797.93	1.00	
	700.00	838.10	1796.93	138.10	
COAL	838.10	839.00	1658.83	0.90	
	839.00	839.90	1657.93	0.90	
TI	839.90	840.90	1657.03	1.00	
	840.90	948.10	1656.03	107.20	
US1	948.10	948.50	1548.83	0.40	
	948.50	993.50	1548.43	45.00	
*LC3	993.50	994.10	1503.43	0.60	
*LC4	994.10	995.10	1502.83	1.00	
	995.10	1132.00	1501.83	136.90	
*COAL	1132.00	1132.10	1364.93	0.10	
	1132.10	1132.90	1364.83	0.80	
*GC1	1132.90	1133.40	1364.03	0.50	
	1133.40	1188.30	1363.53	54.90	
*COAL	1188.30	1188.50	1308.63	0.20	
	1188.50	1237.00	1308.43	48.50	
*SE1	1237.00	1237.40	1259.93	0.40	
	1237.40	1265.00	1259.53	27.60	
*SE2	1265.00	1265.90	1231.93	0.90	
	1265.90	1296.90	1231.03	31.00	
*SE3	1296.90	1297.00	1200.03	0.10	
	1297.00	1299.00	1199.93	2.00	

*COAL	1299.00	1299.10	1197.93	0.10
	1299.10	1315.10	1197.83	16.00
*LS1	1315.10	1315.60	1181.83	0.50
*LS2	1315.60	1316.50	1181.33	0.90
	1316.50	1380.80	1180.43	64.30
*LS3	1380.80	1383.00	1116.13	2.20
	1383.00	1429.60	1113.93	46.60
*UH2	1429.60	1430.90	1067.33	1.30
	1430.90	1450.50	1066.03	19.60
*UH3	1450.50	1451.00	1046.43	0.50
	1451.00	1486.50	1045.93	35.50
*MH1	1486.50	1487.70	1010.43	1.20
	1487.70	1558.80	1009.23	71.10
*MH2	1558.80	1559.00	938.13	0.20
	1559.00	1573.00	937.93	14.00
*COAL	1573.00	1573.10	923.93	0.10
	1573.10	1597.90	923.83	24.80
*P11	1597.90	1600.50	899.03	2.60
	1600.50	1602.90	896.43	2.40
*113	1602.90	1603.00	894.03	0.10
	1603.00	1618.60	893.93	15.60
*P10	1618.60	1620.20	878.33	1.60
	1620.20	1630.80	876.73	10.60
*LH1	1630.80	1632.00	866.13	1.20
	1632.00	1681.60	864.93	49.60
*P91	1681.60	1682.00	815.33	0.40
*P92	1682.00	1683.50	814.93	1.50
	1683.50	1736.00	813.43	52.50
*P81	1736.00	1737.00	760.93	1.00
	1737.00	1738.20	759.93	1.20
*P82	1738.20	1738.50	758.73	0.30
	1738.50	1742.00	758.43	3.50
*P71	1742.00	1742.50	754.93	0.50
	1742.50	1783.80	754.43	41.30
*COAL	1783.80	1784.00	713.13	0.20
	1784.00	1785.40	712.93	1.40
*COAL	1785.40	1785.70	711.53	0.30
	1785.70	1786.60	711.23	0.90
*COAL	1786.60	1786.80	710.33	0.20
	1786.80	1903.00	710.13	116.20
*COAL	1903.00	1903.40	593.93	0.40
	1903.40	1913.50	593.53	10.10
*COAL	1913.50	1914.10	583.43	0.60
	1914.10	2096.10	582.83	182.00
*P41	2096.10	2096.90	400.83	0.80
	2096.90	2181.30	400.03	84.40
*P31	2181.30	2181.90	315.63	0.60
	2181.90	2523.28	315.03	341.38

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO NANCE WHITE BRANCH.
GAMMA-CALIPER LOG FROM 0 TO 311.00
GAMMA-DENSITY LOG FROM 311.00 TO TD.

FILE: C:\VP\GAS\BC101.CMP
DATE: 09/02/03

Exhibit A

Well Name: 07 CBM BC101A
SURFACE ELEV: 2355.34 EASTING: 969804.67 NORTHING: 295229.80

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
COAL	64.30	64.70	2291.04	0.40	
	64.70	80.70	2290.64	16.00	
KN1	80.70	81.40	2274.64	0.70	
	81.40	115.20	2273.94	33.80	
KN2	115.20	118.00	2240.14	2.80	
	118.00	303.70	2237.34	185.70	
AL2	303.70	304.90	2051.64	1.20	
	304.90	364.80	2050.44	59.90	
RA1	364.80	365.00	1990.54	0.20	
	365.00	410.80	1990.34	45.80	
RA2	410.80	412.20	1944.54	1.40	
	412.20	469.80	1943.14	57.60	
COAL	469.80	470.00	1885.54	0.20	
	470.00	565.80	1885.34	95.80	
JB1	565.80	567.80	1789.54	2.00	
	567.80	601.20	1787.54	33.40	
JB3	601.20	602.00	1754.14	0.80	
	602.00	682.70	1753.34	80.70	
TI	682.70	682.90	1672.64	0.20	
	682.90	829.50	1672.44	146.60	
US1	829.50	830.00	1525.84	0.50	
	830.00	865.80	1525.34	35.80	
LC3	865.80	866.90	1489.54	1.10	
LC4	866.90	867.90	1488.44	1.00	
	867.90	1003.00	1487.44	135.10	
GC1	1003.00	1003.50	1352.34	0.50	
	1003.50	1004.70	1351.84	1.20	
COAL	1004.70	1004.90	1350.64	0.20	
	1004.90	1143.20	1350.44	138.30	
*SE2	1143.20	1144.00	1212.14	0.80	
	1144.00	1192.80	1211.34	48.80	
*LS1	1192.80	1194.10	1162.54	1.30	
	1194.10	1258.70	1161.24	64.60	
*LS3	1258.70	1259.90	1096.64	1.20	
	1259.90	1307.90	1095.44	48.00	
*UH2	1307.90	1308.90	1047.44	1.00	
	1308.90	1329.90	1046.44	21.00	
*UH3	1329.90	1330.70	1025.44	0.80	
	1330.70	1363.90	1024.64	33.20	
*MH1	1363.90	1364.90	991.44	1.00	
	1364.90	1438.20	990.44	73.30	
*MH2	1438.20	1438.80	917.14	0.60	
	1438.80	1482.60	916.54	43.80	
*P11	1482.60	1484.70	872.74	2.10	
	1484.70	1497.10	870.64	12.40	
*COAL	1497.10	1497.70	858.24	0.60	
	1497.70	1498.10	857.64	0.40	

*P10	1498.10	1499.00	857.24	0.90
	1499.00	1523.10	856.34	24.10
*LH1	1523.10	1524.30	832.24	1.20
	1524.30	1542.50	831.04	18.20
*LH3	1542.50	1543.20	812.84	0.70
	1543.20	1571.30	812.14	28.10
*P91	1571.30	1572.50	784.04	1.20
	1572.50	1628.00	782.84	55.50
*P81	1628.00	1629.20	727.34	1.20
	1629.20	1630.00	726.14	0.80
*P82	1630.00	1630.40	725.34	0.40
	1630.40	1633.00	724.94	2.60
*P71	1633.00	1633.50	722.34	0.50
	1633.50	1676.00	721.84	42.50
*COAL	1676.00	1676.70	679.34	0.70
	1676.70	1677.00	678.64	0.30
*COAL	1677.00	1677.80	678.34	0.80
	1677.80	1785.30	677.54	107.50
*COAL	1785.30	1785.90	569.04	0.60
	1785.90	1794.80	568.44	8.90
*COAL	1794.80	1795.30	560.54	0.50
	1795.30	1920.00	560.04	124.70
*COAL	1920.00	1920.70	435.34	0.70
	1920.70	1942.30	434.64	21.60
*COAL	1942.30	1942.50	413.04	0.20
	1942.50	2090.40	412.84	147.90
*P31	2090.40	2091.90	264.94	1.50
	2091.90	2366.00	263.44	274.10

COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO TOPOGRAPHY AND WATER WELL BC-100-3.
GAMMA-CALIPER LOG FROM 0 TO 222.00
GAMMA-DENSITY LOG FROM 222.00 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\BC101A.CMP
DATE: 09/19/07

Exhibit A

Well Name: 04-CNX-BD-97
SURFACE ELEV: 2525.76 EASTING: 963108.98 NORTHING: 293973.96

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
UB1	111.40	111.90	2414.36	0.50	
	111.90	193.80	2413.86	81.90	
LB1	193.80	195.20	2331.96	1.40	
	195.20	378.00	2330.56	182.80	
KN2	378.00	381.00	2147.76	3.00	MINED OUT
	381.00	552.40	2144.76	171.40	
AL2	552.40	554.40	1973.36	2.00	
	554.40	647.10	1971.36	92.70	
RA2	647.10	649.50	1878.66	2.40	
	649.50	661.00	1876.26	11.50	
RA3	661.00	661.60	1864.76	0.60	
	661.60	700.20	1864.16	38.60	
COAL	700.20	700.90	1825.56	0.70	
	700.90	795.00	1824.86	94.10	
JB1	795.00	796.80	1730.76	1.80	
	796.80	797.00	1728.96	0.20	
JB1	797.00	797.50	1728.76	0.50	
	797.50	823.00	1728.26	25.50	
JB3	823.00	823.90	1702.76	0.90	
	823.90	895.50	1701.86	71.60	
T1	895.50	896.40	1630.26	0.90	
	896.40	899.00	1629.36	2.60	
COAL	899.00	900.00	1626.76	1.00	
	900.00	943.00	1625.76	43.00	
COAL	943.00	943.40	1582.76	0.40	
	943.40	944.60	1582.36	1.20	
TI	944.60	945.50	1581.16	0.90	
	945.50	1062.50	1580.26	117.00	
*US1	1062.50	1063.50	1463.26	1.00	
	1063.50	1245.20	1462.26	181.70	
*GC1	1245.20	1245.90	1280.56	0.70	
	1245.90	1246.10	1279.86	0.20	
*GC1	1246.10	1246.80	1279.66	0.70	
	1246.80	1341.00	1278.96	94.20	
*SE1	1341.00	1341.40	1184.76	0.40	
	1341.40	1375.90	1184.36	34.50	
*SE2	1375.90	1376.90	1149.86	1.00	
	1376.90	1423.00	1148.86	46.10	
*LS1	1423.00	1424.00	1102.76	1.00	
*LS2	1424.00	1425.20	1101.76	1.20	
	1425.20	1483.80	1100.56	58.60	
*LS3	1483.80	1484.80	1041.96	1.00	
	1484.80	1495.10	1040.96	10.30	
*UH1	1495.10	1497.50	1030.66	2.40	
	1497.50	1538.50	1028.26	41.00	
*UH2	1538.50	1538.90	987.26	0.40	
	1538.90	1539.20	986.86	0.30	

*UH2	1539.20	1540.00	986.56	0.80
	1540.00	1558.50	985.76	18.50
*UH3	1558.50	1559.30	967.26	0.80
	1559.30	1589.50	966.46	30.20
*MH1	1589.50	1591.00	936.26	1.50
	1591.00	1698.90	934.76	107.90
*P11	1698.90	1699.50	826.86	0.60
	1699.50	1700.00	826.26	0.50
*P11	1700.00	1702.00	825.76	2.00
	1702.00	1713.00	823.76	11.00
*P10	1713.00	1713.60	812.76	0.60
	1713.60	1743.20	812.16	29.60
*LH1	1743.20	1745.80	782.56	2.60
	1745.80	1756.70	779.96	10.90
*LH2	1756.70	1757.00	769.06	0.30
	1757.00	1781.30	768.76	24.30
*P91	1781.30	1783.00	744.46	1.70
	1783.00	1836.90	742.76	53.90
*P81	1836.90	1838.10	688.86	1.20
	1838.10	1838.50	687.66	0.40
*P81	1838.50	1839.00	687.26	0.50
	1839.00	1841.10	686.76	2.10
*P82	1841.10	1841.80	684.66	0.70
	1841.80	1888.00	683.96	46.20
*COAL	1888.00	1890.00	637.76	2.00
	1890.00	2024.70	635.76	134.70
*COAL	2024.70	2025.00	501.06	0.30
	2025.00	2153.80	500.76	128.80
*P41	2153.80	2154.20	371.96	0.40
	2154.20	2164.00	371.56	9.80
*P42	2164.00	2164.10	361.76	0.10
	2164.10	2252.10	361.66	88.00
*P31	2252.10	2253.00	273.66	0.90
	2253.00	2291.00	272.76	38.00
*P34	2291.00	2292.30	234.76	1.30
	2292.30	2581.55	233.46	289.25

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO TOPOGRAPHY.
GAMMA-CALIPER LOG FROM 0 TO 444.00
GAMMA-DENSITY LOG FROM 444.00 TO TD.
FILE: C:\VP\GAS\BD97.CMP
DATE: 07/22/04

Exhibit A

Well Name: 02-BPC-BD-98
SURFACE ELEV: 1951.34 EASTING: 965118.61 NORTHING: 293843.21

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
RA2	55.60	58.00	1895.74	2.40	
	58.00	208.00	1893.34	150.00	
JB1	208.00	209.80	1743.34	1.80	
	209.80	237.40	1741.54	27.60	
JB3	237.40	238.00	1713.94	0.60	
	238.00	314.90	1713.34	76.90	
T1	314.90	316.20	1636.44	1.30	
	316.20	355.40	1635.14	39.20	
TI	355.40	356.60	1595.94	1.20	
	356.60	358.10	1594.74	1.50	
COAL	358.10	359.20	1593.24	1.10	
	359.20	468.90	1592.14	109.70	
COAL	468.90	469.10	1482.44	0.20	
	469.10	482.10	1482.24	13.00	
US1	482.10	482.50	1469.24	0.40	
	482.50	543.00	1468.84	60.50	
US2	543.00	543.10	1408.34	0.10	
	543.10	668.80	1408.24	125.70	
*GC2	668.80	669.10	1282.54	0.30	
	669.10	670.00	1282.24	0.90	
*GC2	670.00	670.60	1281.34	0.60	
	670.60	762.10	1280.74	91.50	
*SE1	762.10	762.40	1189.24	0.30	
	762.40	795.00	1188.94	32.60	
*SE2	795.00	796.00	1156.34	1.00	
	796.00	848.50	1155.34	52.50	
*LS1	848.50	849.00	1102.84	0.50	
*LS2	849.00	850.40	1102.34	1.40	
	850.40	916.00	1100.94	65.60	
*UH1	916.00	918.00	1035.34	2.00	
	918.00	958.00	1033.34	40.00	
*UH2	958.00	959.60	993.34	1.60	
	959.60	966.00	991.74	6.40	
*UH3	966.00	967.20	985.34	1.20	
	967.20	997.00	984.14	29.80	
*MH1	997.00	998.50	954.34	1.50	
	998.50	1064.00	952.84	65.50	
*MH2	1064.00	1064.90	887.34	0.90	
	1064.90	1114.10	886.44	49.20	
*COAL	1114.10	1114.40	837.24	0.30	
	1114.40	1115.00	836.94	0.60	
*P11	1115.00	1116.90	836.34	1.90	
	1116.90	1132.00	834.44	15.10	
*P10	1132.00	1133.10	819.34	1.10	
	1133.10	1144.00	818.24	10.90	
*LH1	1144.00	1145.80	807.34	1.80	
	1145.80	1200.50	805.54	54.70	

*LH3	1200.50	1202.40	750.84	1.90
	1202.40	1259.00	748.94	56.60
*P91	1259.00	1260.50	692.34	1.50
	1260.50	1260.90	690.84	0.40
*P91	1260.90	1261.40	690.44	0.50
	1261.40	1264.70	689.94	3.30
*P92	1264.70	1265.10	686.64	0.40
	1265.10	1310.60	686.24	45.50
*COAL	1310.60	1311.20	640.74	0.60
	1311.20	1312.00	640.14	0.80
*P81	1312.00	1313.50	639.34	1.50
	1313.50	1443.00	637.84	129.50
*COAL	1443.00	1443.10	508.34	0.10
	1443.10	1574.90	508.24	131.80
*P61	1574.90	1575.50	376.44	0.60
	1575.50	1585.90	375.84	10.40
*P62	1585.90	1586.00	365.44	0.10
	1586.00	1682.60	365.34	96.60
*P31	1682.60	1683.00	268.74	0.40
	1683.00	1718.70	268.34	35.70
*P35	1718.70	1720.00	232.64	1.30
	1720.00	1765.90	231.34	45.90
*P21	1765.90	1766.20	185.44	0.30
	1766.20	1777.10	185.14	10.90
*P22	1777.10	1777.40	174.24	0.30
	1777.40	1931.50	173.94	154.10

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO GRISSOM CREEK.
GAMMA-CALIPER LOG FROM 0 TO 312.00
GAMMA-DENSITY LOG FROM 312.00 TO TD.

FILE: C:\VP\GAS\BD98.CMP
DATE: 02/25/02

Exhibit A

Well Name: 04-CNX-BD-99
SURFACE ELEV: 2369.99 EASTING: 966777.27 NORTHING: 293771.28

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
LB2	68.90	69.00	2301.09	0.10	
	69.00	145.70	2300.99	76.70	
KN1	145.70	146.00	2224.29	0.30	
	146.00	179.20	2223.99	33.20	
KN2	179.20	182.40	2190.79	3.20	
	182.40	375.80	2187.59	193.40	
AL2	375.80	377.50	1994.19	1.70	
	377.50	439.60	1992.49	62.10	
RA1	439.60	439.90	1930.39	0.30	
	439.90	491.50	1930.09	51.60	
RA2	491.50	494.00	1878.49	2.50	
	494.00	501.00	1875.99	7.00	
RA3	501.00	502.00	1868.99	1.00	
	502.00	530.80	1867.99	28.80	
COAL	530.80	531.10	1839.19	0.30	
	531.10	631.00	1838.89	99.90	
JB1	631.00	633.00	1738.99	2.00	
	633.00	637.90	1736.99	4.90	
JB2	637.90	638.00	1732.09	0.10	
	638.00	669.60	1731.99	31.60	
JB3	669.60	671.50	1700.39	1.90	
	671.50	724.40	1698.49	52.90	
T2	724.40	725.60	1645.59	1.20	
	725.60	730.60	1644.39	5.00	
T1	730.60	731.90	1639.39	1.30	
	731.90	774.70	1638.09	42.80	
COAL	774.70	775.70	1595.29	1.00	
	775.70	776.30	1594.29	0.60	
TI	776.30	777.10	1593.69	0.80	
	777.10	892.00	1592.89	114.90	
US1	892.00	892.40	1477.99	0.40	
	892.40	894.40	1477.59	2.00	
COAL	894.40	894.60	1475.59	0.20	
	894.60	905.60	1475.39	11.00	
LC1	905.60	906.00	1464.39	0.40	
	906.00	917.00	1463.99	11.00	
LC2	917.00	917.90	1452.99	0.90	
	917.90	923.60	1452.09	5.70	
LC3	923.60	924.00	1446.39	0.40	
LC4	924.00	926.60	1445.99	2.60	
	926.60	1053.30	1443.39	126.70	
*GC1	1053.30	1053.90	1316.69	0.60	
	1053.90	1066.30	1316.09	12.40	
*GC2	1066.30	1067.10	1303.69	0.80	
	1067.10	1169.00	1302.89	101.90	
*SE1	1169.00	1169.60	1200.99	0.60	
	1169.60	1196.90	1200.39	27.30	

*SE2	1196.90	1197.90	1173.09	1.00
	1197.90	1246.00	1172.09	48.10
*LS1	1246.00	1247.00	1123.99	1.00
*LS2	1247.00	1248.00	1122.99	1.00
	1248.00	1314.60	1121.99	66.60
*LS3	1314.60	1316.30	1055.39	1.70
	1316.30	1355.10	1053.69	38.80
*UH2	1355.10	1356.60	1014.89	1.50
	1356.60	1373.00	1013.39	16.40
*UH3	1373.00	1374.00	996.99	1.00
	1374.00	1406.90	995.99	32.90
*MH1	1406.90	1408.00	963.09	1.10
	1408.00	1477.10	961.99	69.10
*MH2	1477.10	1477.90	892.89	0.80
	1477.90	1525.90	892.09	48.00
*P11	1525.90	1528.00	844.09	2.10
	1528.00	1540.50	841.99	12.50
*P10	1540.50	1541.20	829.49	0.70
	1541.20	1568.00	828.79	26.80
*LH1	1568.00	1569.00	801.99	1.00
	1569.00	1590.00	800.99	21.00
*LH3	1590.00	1591.50	779.99	1.50
	1591.50	1615.90	778.49	24.40
*P91	1615.90	1617.60	754.09	1.70
	1617.60	1669.00	752.39	51.40
*P81	1669.00	1670.60	700.99	1.60
	1670.60	1670.80	699.39	0.20
*P81	1670.80	1671.30	699.19	0.50
	1671.30	1672.00	698.69	0.70
*P82	1672.00	1672.30	697.99	0.30
	1672.30	1715.40	697.69	43.10
*COAL	1715.40	1716.00	654.59	0.60
	1716.00	1716.30	653.99	0.30
*COAL	1716.30	1717.10	653.69	0.80
	1717.10	1717.40	652.89	0.30
*COAL	1717.40	1718.00	652.59	0.60
	1718.00	1844.90	651.99	126.90
*COAL	1844.90	1845.00	525.09	0.10
	1845.00	1847.00	524.99	2.00
*COAL	1847.00	1847.90	522.99	0.90
	1847.90	1863.50	522.09	15.60
*COAL	1863.50	1864.40	506.49	0.90
	1864.40	2005.10	505.59	140.70
*P41	2005.10	2007.10	364.89	2.00
	2007.10	2136.80	362.89	129.70
*P31	2136.80	2138.00	233.19	1.20
*P32	2138.00	2138.30	231.99	0.30
	2138.30	2178.80	231.69	40.50
*P34	2178.80	2179.10	191.19	0.30
	2179.10	2407.36	190.89	228.26

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO GRISSOM CREEK AND WATER WELL BE99-2.
GAMMA-CALIPER LOG FROM 0 TO 219.00
GAMMA-DENSITY LOG FROM 219.00 TO TD.

FILE: C:\VP\GAS\BD99.CMP

*SE2	1196.90	1197.90	1173.09	1.00
	1197.90	1246.00	1172.09	48.10
*LS1	1246.00	1247.00	1123.99	1.00
*LS2	1247.00	1248.00	1122.99	1.00
	1248.00	1314.60	1121.99	66.60
*LS3	1314.60	1316.30	1055.39	1.70
	1316.30	1355.10	1053.69	38.80
*UH2	1355.10	1356.60	1014.89	1.50
	1356.60	1373.00	1013.39	16.40
*UH3	1373.00	1374.00	996.99	1.00
	1374.00	1406.90	995.99	32.90
*MH1	1406.90	1408.00	963.09	1.10
	1408.00	1477.10	961.99	69.10
*MH2	1477.10	1477.90	892.89	0.80
	1477.90	1525.90	892.09	48.00
*P11	1525.90	1528.00	844.09	2.10
	1528.00	1540.50	841.99	12.50
*P10	1540.50	1541.20	829.49	0.70
	1541.20	1568.00	828.79	26.80
*LH1	1568.00	1569.00	801.99	1.00
	1569.00	1590.00	800.99	21.00
*LH3	1590.00	1591.50	779.99	1.50
	1591.50	1615.90	778.49	24.40
*P91	1615.90	1617.60	754.09	1.70
	1617.60	1669.00	752.39	51.40
*P81	1669.00	1670.60	700.99	1.60
	1670.60	1670.80	699.39	0.20
*P81	1670.80	1671.30	699.19	0.50
	1671.30	1672.00	698.69	0.70
*P82	1672.00	1672.30	697.99	0.30
	1672.30	1715.40	697.69	43.10
*COAL	1715.40	1716.00	654.59	0.60
	1716.00	1716.30	653.99	0.30
*COAL	1716.30	1717.10	653.69	0.80
	1717.10	1717.40	652.89	0.30
*COAL	1717.40	1718.00	652.59	0.60
	1718.00	1844.90	651.99	126.90
*COAL	1844.90	1845.00	525.09	0.10
	1845.00	1847.00	524.99	2.00
*COAL	1847.00	1847.90	522.99	0.90
	1847.90	1863.50	522.09	15.60
*COAL	1863.50	1864.40	506.49	0.90
	1864.40	2005.10	505.59	140.70
*P41	2005.10	2007.10	364.89	2.00
	2007.10	2136.80	362.89	129.70
*P31	2136.80	2138.00	233.19	1.20
*P32	2138.00	2138.30	231.99	0.30
	2138.30	2178.80	231.69	40.50
*P34	2178.80	2179.10	191.19	0.30
	2179.10	2407.36	190.89	228.26

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO GRISSOM CREEK AND WATER WELL BE99-2.
GAMMA-CALIPER LOG FROM 0 TO 219.00
GAMMA-DENSITY LOG FROM 219.00 TO TD.

FILE: C:\VP\GAS\BD99.CMP

Exhibit A

Well Name: 04-CNX-BD-100
SURFACE ELEV: 2456.48 EASTING: 967686.78 NORTHING: 294509.85

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
LB1	62.00	63.70	2394.48	1.70	
	63.70	127.50	2392.78	63.80	
LB2	127.50	127.70	2328.98	0.20	
	127.70	203.10	2328.78	75.40	
KN1	203.10	203.20	2253.38	0.10	
	203.20	239.50	2253.28	36.30	
KN2	239.50	242.80	2216.98	3.30	
	242.80	418.60	2213.68	175.80	
AL1	418.60	419.00	2037.88	0.40	
	419.00	432.50	2037.48	13.50	
AL2	432.50	434.30	2023.98	1.80	
	434.30	486.20	2022.18	51.90	
RA1	486.20	486.40	1970.28	0.20	
	486.40	537.00	1970.08	50.60	
RA2	537.00	539.00	1919.48	2.00	
	539.00	561.80	1917.48	22.80	
RA3	561.80	562.00	1894.68	0.20	
	562.00	596.60	1894.48	34.60	
COAL	596.60	597.10	1859.88	0.50	
	597.10	701.00	1859.38	103.90	
JB1	701.00	703.10	1755.48	2.10	
	703.10	705.10	1753.38	2.00	
JB2	705.10	705.40	1751.38	0.30	
	705.40	727.00	1751.08	21.60	
JB3	727.00	728.70	1729.48	1.70	
	728.70	779.60	1727.78	50.90	
COAL	779.60	779.70	1676.88	0.10	
	779.70	791.00	1676.78	11.30	
T2	791.00	792.00	1665.48	1.00	
	792.00	796.90	1664.48	4.90	
T1	796.90	798.00	1659.58	1.10	
	798.00	840.50	1658.48	42.50	
COAL	840.50	841.30	1615.98	0.80	
	841.30	843.90	1615.18	2.60	
TI	843.90	844.40	1612.58	0.50	
	844.40	968.40	1612.08	124.00	
*US1	968.40	968.70	1488.08	0.30	
	968.70	971.30	1487.78	2.60	
*COAL	971.30	972.00	1485.18	0.70	
	972.00	998.20	1484.48	26.20	
*LC4	998.20	999.70	1458.28	1.50	
	999.70	1118.60	1456.78	118.90	
*GC1	1118.60	1118.90	1337.88	0.30	
	1118.90	1132.90	1337.58	14.00	
*COAL	1132.90	1133.00	1323.58	0.10	
	1133.00	1133.20	1323.48	0.20	
*GC2	1133.20	1133.90	1323.28	0.70	

	1133.90	1200.80	1322.58	66.90
*COAL	1200.80	1201.10	1255.68	0.30
	1201.10	1234.50	1255.38	33.40
*SE1	1234.50	1234.90	1221.98	0.40
	1234.90	1260.20	1221.58	25.30
*SE2	1260.20	1261.20	1196.28	1.00
	1261.20	1308.00	1195.28	46.80
*LS1°	1308.00	1308.20	1148.48	0.20
*LS2	1308.20	1310.00	1148.28	1.80
	1310.00	1376.60	1146.48	66.60
*LS3	1376.60	1378.00	1079.88	1.40
	1378.00	1422.90	1078.48	44.90
*UH2	1422.90	1424.00	1033.58	1.10
	1424.00	1441.80	1032.48	17.80
*UH3	1441.80	1442.90	1014.68	1.10
	1442.90	1474.20	1013.58	31.30
*MH1	1474.20	1475.50	982.28	1.30
	1475.50	1543.00	980.98	67.50
*MH2	1543.00	1544.00	913.48	1.00
	1544.00	1587.00	912.48	43.00
*P11	1587.00	1587.80	869.48	0.80
	1587.80	1587.90	868.68	0.10
*P11	1587.90	1589.00	868.58	1.10
	1589.00	1600.40	867.48	11.40
*P10	1600.40	1601.40	856.08	1.00
	1601.40	1624.50	855.08	23.10
*LH1	1624.50	1626.00	831.98	1.50
	1626.00	1651.90	830.48	25.90
*LH3	1651.90	1652.40	804.58	0.50
	1652.40	1680.00	804.08	27.60
*P91	1680.00	1681.90	776.48	1.90
	1681.90	1730.50	774.58	48.60
*P81	1730.50	1731.70	725.98	1.20
	1731.70	1731.90	724.78	0.20
*P81	1731.90	1732.10	724.58	0.20
	1732.10	1732.20	724.38	0.10
*P81	1732.20	1732.80	724.28	0.60
	1732.80	1741.40	723.68	8.60
*P82	1741.40	1741.90	715.08	0.50
	1741.90	1780.70	714.58	38.80
*COAL	1780.70	1781.20	675.78	0.50
	1781.20	1783.10	675.28	1.90
*COAL	1783.10	1783.80	673.38	0.70
	1783.80	1906.10	672.68	122.30
*COAL	1906.10	1906.30	550.38	0.20
	1906.30	1907.00	550.18	0.70
*P61	1907.00	1907.60	549.48	0.60
	1907.60	1916.40	548.88	8.80
*P62	1916.40	1917.10	540.08	0.70
	1917.10	2086.00	539.38	168.90
*P41	2086.00	2089.40	370.48	3.40
	2089.40	2187.60	367.08	98.20
*P31	2187.60	2188.00	268.88	0.40
	2188.00	2192.70	268.48	4.70
*P32	2192.70	2193.00	263.78	0.30
	2193.00	2236.40	263.48	43.40
*P34	2236.40	2236.80	220.08	0.40

2236.80	2496.69	219.68	259.89

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO WHITE BRANCH AND WATER WELL BC100-3.
GAMMA-CALIPER LOG FROM 0 TO 219.50
GAMMA-DENSITY LOG FROM 219.50 TO TD.

FILE: C:\VP\GAS\BD100.CMP
DATE: 11/16/04

Exhibit A

Well Name: 03-PGP-BD-101
SURFACE ELEV: 2224.81 EASTING: 970230.22 NORTHING: 293632.46

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
AL2	206.10	208.00	2018.71	1.90	
	208.00	249.40	2016.81	41.40	
COAL	249.40	249.70	1975.41	0.30	
	249.70	286.40	1975.11	36.70	
RA2	286.40	288.00	1938.41	1.60	
	288.00	359.50	1936.81	71.50	
COAL	359.50	360.00	1865.31	0.50	
	360.00	460.40	1864.81	100.40	
JB1	460.40	462.40	1764.41	2.00	
	462.40	463.10	1762.41	0.70	
JB2	463.10	463.40	1761.71	0.30	
	463.40	482.00	1761.41	18.60	
JB3	482.00	483.00	1742.81	1.00	
	483.00	560.30	1741.81	77.30	
T2	560.30	561.00	1664.51	0.70	
	561.00	569.20	1663.81	8.20	
T1	569.20	570.10	1655.61	0.90	
	570.10	610.20	1654.71	40.10	
TI	610.20	611.00	1614.61	0.80	
	611.00	613.00	1613.81	2.00	
COAL	613.00	613.50	1611.81	0.50	
	613.50	733.60	1611.31	120.10	
US1	733.60	734.60	1491.21	1.00	
	734.60	757.70	1490.21	23.10	
LC2	757.70	758.00	1467.11	0.30	
	758.00	759.00	1466.81	1.00	
LC3	759.00	759.90	1465.81	0.90	
LC4	759.90	761.60	1464.91	1.70	
	761.60	902.40	1463.21	140.80	
*COAL	902.40	902.70	1322.41	0.30	
	902.70	903.60	1322.11	0.90	
*GC1	903.60	904.10	1321.21	0.50	
	904.10	1001.00	1320.71	96.90	
*SE1	1001.00	1001.20	1223.81	0.20	
	1001.20	1029.50	1223.61	28.30	
*SE2	1029.50	1030.00	1195.31	0.50	
	1030.00	1070.50	1194.81	40.50	
*LS1	1070.50	1070.60	1154.31	0.10	
	1070.60	1083.10	1154.21	12.50	
*LS2	1083.10	1084.60	1141.71	1.50	
	1084.60	1147.10	1140.21	62.50	
*LS3	1147.10	1149.90	1077.71	2.80	
	1149.90	1198.40	1074.91	48.50	
*UH2	1198.40	1200.00	1026.41	1.60	
	1200.00	1220.50	1024.81	20.50	
*UH3	1220.50	1221.20	1004.31	0.70	
	1221.20	1252.00	1003.61	30.80	

*MH1	1252.00	1253.50	972.81	1.50
	1253.50	1334.20	971.31	80.70
*MH2	1334.20	1334.50	890.61	0.30
	1334.50	1352.30	890.31	17.80
*COAL	1352.30	1352.60	872.51	0.30
	1352.60	1387.10	872.21	34.50
*P11	1387.10	1390.00	837.71	2.90
	1390.00	1399.00	834.81	9.00
*P10	1399.00	1399.30	825.81	0.30
	1399.30	1416.90	825.51	17.60
*LH1	1416.90	1418.90	807.91	2.00
	1418.90	1431.70	805.91	12.80
*LH2	1431.70	1432.00	793.11	0.30
	1432.00	1465.00	792.81	33.00
*P91	1465.00	1466.70	759.81	1.70
	1466.70	1515.30	758.11	48.60
*P81	1515.30	1516.40	709.51	1.10
	1516.40	1517.70	708.41	1.30
*P82	1517.70	1518.00	707.11	0.30
	1518.00	1527.70	706.81	9.70
*P71	1527.70	1528.20	697.11	0.50
	1528.20	1573.00	696.61	44.80
*COAL	1573.00	1575.60	651.81	2.60
	1575.60	1649.70	649.21	74.10
*COAL	1649.70	1651.00	575.11	1.30
	1651.00	1692.10	573.81	41.10
*COAL	1692.10	1692.50	532.71	0.40
	1692.50	1705.00	532.31	12.50
*COAL	1705.00	1705.90	519.81	0.90
	1705.90	1840.40	518.91	134.50
*P41	1840.40	1840.80	384.41	0.40
	1840.80	2000.50	384.01	159.70
*P31	2000.50	2001.30	224.31	0.80
	2001.30	2039.60	223.51	38.30
*P34	2039.60	2040.10	185.21	0.50
	2040.10	2261.89	184.71	221.79

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO BALL CREEK AND WATER WELL BE100-2.
GAMMA-CALIPER LOG FROM 0 TO 238.00
GAMMA-DENSITY LOG FROM 238.00 TO TD.

FILE: C:\VP\GAS\BD101.CMP
DATE: 05/12/03

Exhibit A

Well Name: 04-CNX-BE-97
SURFACE ELEV: 2408.47 EASTING: 963599.08 NORTHING: 292904.02

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
LB1	69.90	72.50	2338.57	2.60	
	72.50	251.00	2335.97	178.50	
KN2	251.00	254.90	2157.47	3.90	MINED OUT
	254.90	268.80	2153.57	13.90	
COAL	268.80	269.00	2139.67	0.20	
	269.00	432.00	2139.47	163.00	
AL2	432.00	434.00	1976.47	2.00	
	434.00	486.90	1974.47	52.90	
RA1	486.90	487.00	1921.57	0.10	
	487.00	526.00	1921.47	39.00	
RA2	526.00	528.10	1882.47	2.10	
	528.10	583.00	1880.37	54.90	
COAL	583.00	583.40	1825.47	0.40	
	583.40	681.00	1825.07	97.60	
JB1	681.00	683.00	1727.47	2.00	
	683.00	684.50	1725.47	1.50	
COAL	684.50	684.80	1723.97	0.30	
	684.80	711.00	1723.67	26.20	
JB3	711.00	711.90	1697.47	0.90	
	711.90	783.50	1696.57	71.60	
T1	783.50	784.40	1624.97	0.90	
	784.40	788.50	1624.07	4.10	
COAL	788.50	789.90	1619.97	1.40	
	789.90	830.00	1618.57	40.10	
TI	830.00	830.80	1578.47	0.80	
	830.80	831.60	1577.67	0.80	
COAL	831.60	831.90	1576.87	0.30	
	831.90	953.00	1576.57	121.10	
US1	953.00	954.00	1455.47	1.00	
	954.00	1138.60	1454.47	184.60	
*COAL	1138.60	1138.80	1269.87	0.20	
	1138.80	1139.40	1269.67	0.60	
*GC2	1139.40	1140.00	1269.07	0.60	
	1140.00	1243.00	1268.47	103.00	
*SE1	1243.00	1243.90	1165.47	0.90	
	1243.90	1274.00	1164.57	30.10	
*SE2	1274.00	1275.00	1134.47	1.00	
	1275.00	1319.90	1133.47	44.90	
*LS1	1319.90	1321.00	1088.57	1.10	
*LS2	1321.00	1321.90	1087.47	0.90	
	1321.90	1379.50	1086.57	57.60	
*LS3	1379.50	1380.00	1028.97	0.50	
	1380.00	1390.00	1028.47	10.00	
*UH1	1390.00	1391.30	1018.47	1.30	
	1391.30	1425.00	1017.17	33.70	
*UH2	1425.00	1425.80	983.47	0.80	
	1425.80	1426.00	982.67	0.20	

*UH2	1426.00	1427.00	982.47	1.00
	1427.00	1441.60	981.47	14.60
*UH3	1441.60	1443.10	966.87	1.50
	1443.10	1471.00	965.37	27.90
*MH1	1471.00	1473.00	937.47	2.00
	1473.00	1592.40	935.47	119.40
*COAL	1592.40	1593.10	816.07	0.70
	1593.10	1594.90	815.37	1.80
*P11	1594.90	1596.40	813.57	1.50
	1596.40	1609.50	812.07	13.10
*P10	1609.50	1611.00	798.97	1.50
	1611.00	1619.80	797.47	8.80
*LH1	1619.80	1621.20	788.67	1.40
	1621.20	1639.70	787.27	18.50
*LH2	1639.70	1640.90	768.77	1.20
	1640.90	1669.10	767.57	28.20
*P91	1669.10	1671.00	739.37	1.90
	1671.00	1726.50	737.47	55.50
*P81	1726.50	1729.00	681.97	2.50
	1729.00	1729.70	679.47	0.70
*P82	1729.70	1730.00	678.77	0.30
	1730.00	1771.90	678.47	41.90
*COAL	1771.90	1774.00	636.57	2.10
	1774.00	1910.90	634.47	136.90
*COAL	1910.90	1911.40	497.57	0.50
	1911.40	2036.00	497.07	124.60
*P41	2036.00	2036.40	372.47	0.40
	2036.40	2051.20	372.07	14.80
*P42	2051.20	2051.80	357.27	0.60
	2051.80	2180.80	356.67	129.00
*P34	2180.80	2182.00	227.67	1.20
	2182.00	2229.40	226.47	47.40
*P21	2229.40	2230.00	179.07	0.60
	2230.00	2403.20	178.47	173.20
*SJ3	2403.20	2403.90	5.27	0.70
	2403.90	2437.89	4.57	33.99

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO TOPOGRAPHY
AND DUE TO THE WELL'S PROXIMITY TO A WATER WELL OF
UNKNOWN DEPTH (100 FT WAS ASSUMED FOR BF98-4).
GAMMA-CALIPER LOG FROM 0 TO 308.00
GAMMA-DENSITY LOG FROM 308.00 TO TD.

FILE: C:\VP\GAS\BE97.CMP

DATE: 08/04/04

Exhibit A

Well Name: 04-CNX-BE-98
SURFACE ELEV: 2348.30 EASTING: 964807.94 NORTHING: 292920.75

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
LB2	55.50	55.60	2292.80	0.10	
	55.60	145.90	2292.70	90.30	
KN1	145.90	146.00	2202.40	0.10	
	146.00	179.00	2202.30	33.00	
KN2	179.00	182.00	2169.30	3.00	
	182.00	367.40	2166.30	185.40	
AL2	367.40	369.10	1980.90	1.70	
	369.10	423.90	1979.20	54.80	
RA1	423.90	424.10	1924.40	0.20	
	424.10	472.80	1924.20	48.70	
RA2	472.80	475.00	1875.50	2.20	
	475.00	483.10	1873.30	8.10	
RA3	483.10	483.90	1865.20	0.80	
	483.90	526.60	1864.40	42.70	
COAL	526.60	527.00	1821.70	0.40	
	527.00	622.30	1821.30	95.30	
JB1	622.30	624.00	1726.00	1.70	
	624.00	625.70	1724.30	1.70	
COAL	625.70	626.10	1722.60	0.40	
	626.10	650.20	1722.20	24.10	
JB3	650.20	651.30	1698.10	1.10	
	651.30	725.90	1697.00	74.60	
T1	725.90	727.00	1622.40	1.10	
	727.00	729.00	1621.30	2.00	
COAL	729.00	730.20	1619.30	1.20	
	730.20	771.90	1618.10	41.70	
TI	771.90	772.80	1576.40	0.90	
	772.80	773.50	1575.50	0.70	
TI	773.50	774.50	1574.80	1.00	
	774.50	884.60	1573.80	110.10	
US1	884.60	885.50	1463.70	0.90	
	885.50	1072.70	1462.80	187.20	
*COAL	1072.70	1073.90	1275.60	1.20	
	1073.90	1074.80	1274.40	0.90	
*GC2	1074.80	1075.90	1273.50	1.10	
	1075.90	1174.90	1272.40	99.00	
*SE1	1174.90	1175.00	1173.40	0.10	
	1175.00	1205.80	1173.30	30.80	
*SE2	1205.80	1206.90	1142.50	1.10	
	1206.90	1255.60	1141.40	48.70	
*LS1	1255.60	1257.40	1092.70	1.80	
	1257.40	1257.80	1090.90	0.40	
*LS2	1257.80	1258.00	1090.50	0.20	
	1258.00	1323.90	1090.30	65.90	
*LS3	1323.90	1324.20	1024.40	0.30	
	1324.20	1326.00	1024.10	1.80	
*UH1	1326.00	1328.50	1022.30	2.50	

	1328.50	1365.00	1019.80	36.50
*UH2	1365.00	1366.60	983.30	1.60
	1366.60	1378.50	981.70	11.90
*UH3	1378.50	1379.30	969.80	0.80
	1379.30	1408.20	969.00	28.90
*MH1	1408.20	1410.00	940.10	1.80
	1410.00	1478.90	938.30	68.90
*MH2	1478.90	1479.20	869.40	0.30
	1479.20	1527.70	869.10	48.50
*COAL	1527.70	1528.10	820.60	0.40
	1528.10	1529.00	820.20	0.90
*P11	1529.00	1530.60	819.30	1.60
	1530.60	1531.50	817.70	0.90
*113	1531.50	1531.60	816.80	0.10
	1531.60	1542.50	816.70	10.90
*P10	1542.50	1543.50	805.80	1.00
	1543.50	1565.30	804.80	21.80
*LH1	1565.30	1567.10	783.00	1.80
	1567.10	1587.60	781.20	20.50
*LH2	1587.60	1588.90	760.70	1.30
	1588.90	1612.90	759.40	24.00
*P91	1612.90	1614.90	735.40	2.00
	1614.90	1666.10	733.40	51.20
*P81	1666.10	1667.70	682.20	1.60
	1667.70	1668.00	680.60	0.30
*P81	1668.00	1668.40	680.30	0.40
	1668.40	1673.70	679.90	5.30
*P82	1673.70	1674.00	674.60	0.30
	1674.00	1718.20	674.30	44.20
*COAL	1718.20	1720.50	630.10	2.30
	1720.50	1860.50	627.80	140.00
*COAL	1860.50	1861.40	487.80	0.90
	1861.40	1981.00	486.90	119.60
*P41	1981.00	1981.30	367.30	0.30
	1981.30	1999.80	367.00	18.50
*P42	1999.80	1999.90	348.50	0.10
	1999.90	2074.50	348.40	74.60
*P31	2074.50	2074.60	273.80	0.10
	2074.60	2133.30	273.70	58.70
*P34	2133.30	2135.10	215.00	1.80
	2135.10	2177.90	213.20	42.80
*P21	2177.90	2178.40	170.40	0.50
	2178.40	2189.00	169.90	10.60
*P22	2189.00	2189.60	159.30	0.60
	2189.60	2195.00	158.70	5.40
*COAL	2195.00	2195.10	153.30	0.10
	2195.10	2375.28	153.20	180.18

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO GRISSOM CREEK AND WATER WELL BE99-3.
GAMMA-CALIPER LOG FROM 0 TO 223.00
GAMMA-DENSITY LOG FROM 223.00 TO TD.

FILE: C:\VP\GAS\BE98.CMP
DATE: 08/04/04

Exhibit A

Well Name: 04-CNX-BE-99
SURFACE ELEV: 1936.79 EASTING: 966625.42 NORTHING: 292333.31

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
RA2	68.90	71.60	1867.89	2.70	
	71.60	226.90	1865.19	155.30	
JB1	226.90	229.90	1709.89	3.00	
	229.90	247.00	1706.89	17.10	
JB3	247.00	248.00	1689.79	1.00	
	248.00	309.90	1688.79	61.90	
T2	309.90	310.00	1626.89	0.10	
	310.00	327.00	1626.79	17.00	
T1	327.00	328.40	1609.79	1.40	
	328.40	374.30	1608.39	45.90	
TI	374.30	375.90	1562.49	1.60	
	375.90	376.50	1560.89	0.60	
TI	376.50	377.30	1560.29	0.80	
	377.30	479.70	1559.49	102.40	
US1	479.70	480.10	1457.09	0.40	
	480.10	482.20	1456.69	2.10	
COAL	482.20	482.80	1454.59	0.60	
	482.80	657.40	1453.99	174.60	
GC1	657.40	657.60	1279.39	0.20	
	657.60	672.80	1279.19	15.20	
GC2	672.80	673.30	1263.99	0.50	
	673.30	769.30	1263.49	96.00	
*SE1	769.30	769.80	1167.49	0.50	
	769.80	795.60	1166.99	25.80	
*SE2	795.60	796.30	1141.19	0.70	
	796.30	842.60	1140.49	46.30	
*LS1	842.60	843.00	1094.19	0.40	
*LS2	843.00	844.10	1093.79	1.10	
	844.10	908.90	1092.69	64.80	
*LS3	908.90	910.00	1027.89	1.10	
	910.00	953.00	1026.79	43.00	
*UH2	953.00	954.00	983.79	1.00	
	954.00	974.60	982.79	20.60	
*UH3	974.60	975.10	962.19	0.50	
	975.10	1006.90	961.69	31.80	
*MH1	1006.90	1007.50	929.89	0.60	
	1007.50	1075.90	929.29	68.40	
*MH2	1075.90	1076.00	860.89	0.10	
	1076.00	1137.50	860.79	61.50	
*COAL	1137.50	1138.00	799.29	0.50	
	1138.00	1138.80	798.79	0.80	
*P11	1138.80	1141.60	797.99	2.80	
	1141.60	1147.10	795.19	5.50	
*P10	1147.10	1149.10	789.69	2.00	
	1149.10	1159.90	787.69	10.80	
*LH1	1159.90	1161.70	776.89	1.80	
	1161.70	1218.00	775.09	56.30	

*P91	1218.00	1219.80	718.79	1.80
	1219.80	1274.00	716.99	54.20
*P81	1274.00	1276.70	662.79	2.70
	1276.70	1280.50	660.09	3.80
*P82	1280.50	1281.00	656.29	0.50
	1281.00	1323.90	655.79	42.90
*COAL	1323.90	1326.20	612.89	2.30
	1326.20	1454.50	610.59	128.30
*COAL	1454.50	1455.00	482.29	0.50
	1455.00	1619.10	481.79	164.10
*P41	1619.10	1621.80	317.69	2.70
	1621.80	1646.90	314.99	25.10
*P42	1646.90	1647.00	289.89	0.10
	1647.00	1741.00	289.79	94.00
*COAL	1741.00	1741.40	195.79	0.40
	1741.40	1752.00	195.39	10.60
*P31	1752.00	1753.20	184.79	1.20
*P32	1753.20	1754.10	183.59	0.90
	1754.10	1785.70	182.69	31.60
*P34	1785.70	1786.00	151.09	0.30
	1786.00	1796.40	150.79	10.40
*COAL	1796.40	1796.50	140.39	0.10
	1796.50	2003.23	140.29	206.73

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO GRISSOM CREEK AND WATER WELL BE99-4.
GAMMA-CALIPER LOG FROM 0 TO 354.50
GAMMA-DENSITY LOG FROM 354.50 TO TD.

FILE: C:\VP\GAS\BE99.CMP
DATE: 07/19/04

Exhibit A

Well Name: 05-CNX-BE-100
SURFACE ELEV: 2361.32 EASTING: 967743.41 NORTHING: 293023.81

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
KN1	133.00	133.20	2228.32	0.20	
	133.20	170.00	2228.12	36.80	
KN2	170.00	174.00	2191.32	4.00	
	174.00	369.20	2187.32	195.20	
AL2	369.20	371.00	1992.12	1.80	
	371.00	417.00	1990.32	46.00	
COAL	417.00	417.10	1944.32	0.10	
	417.10	480.10	1944.22	63.00	
RA2	480.10	482.90	1881.22	2.80	
	482.90	487.80	1878.42	4.90	
RA3	487.80	488.00	1873.52	0.20	
	488.00	634.00	1873.32	146.00	
JB1	634.00	636.40	1727.32	2.40	
	636.40	653.40	1724.92	17.00	
JB2	653.40	653.90	1707.92	0.50	
	653.90	655.80	1707.42	1.90	
JB3	655.80	657.00	1705.52	1.20	
	657.00	735.20	1704.32	78.20	
T2	735.20	736.30	1626.12	1.10	
	736.30	740.90	1625.02	4.60	
T1	740.90	742.00	1620.42	1.10	
	742.00	783.40	1619.32	41.40	
TI	783.40	783.80	1577.92	0.40	
	783.80	785.50	1577.52	1.70	
COAL	785.50	786.10	1575.82	0.60	
	786.10	904.80	1575.22	118.70	
US1	904.80	905.00	1456.52	0.20	
	905.00	907.70	1456.32	2.70	
LC1	907.70	908.00	1453.62	0.30	
	908.00	929.70	1453.32	21.70	
LC3	929.70	930.00	1431.62	0.30	
	930.00	931.00	1431.32	1.00	
LC4	931.00	934.20	1430.32	3.20	
	934.20	1054.90	1427.12	120.70	
*GC1	1054.90	1055.00	1306.42	0.10	
	1055.00	1077.60	1306.32	22.60	
*GC2	1077.60	1078.00	1283.72	0.40	
	1078.00	1180.00	1283.32	102.00	
*SE1	1180.00	1180.50	1181.32	0.50	
	1180.50	1202.30	1180.82	21.80	
*SE2	1202.30	1203.00	1159.02	0.70	
	1203.00	1251.90	1158.32	48.90	
*LS2	1251.90	1254.00	1109.42	2.10	
	1254.00	1318.90	1107.32	64.90	
*LS3	1318.90	1320.00	1042.42	1.10	
	1320.00	1364.00	1041.32	44.00	
*UH2	1364.00	1365.10	997.32	1.10	

	1365.10	1380.00	996.22	14.90
*UH3	1380.00	1381.00	981.32	1.00
	1381.00	1413.90	980.32	32.90
*MH1	1413.90	1415.00	947.42	1.10
	1415.00	1483.00	946.32	68.00
*MH2	1483.00	1483.10	878.32	0.10
	1483.10	1540.90	878.22	57.80
*COAL	1540.90	1541.30	820.42	0.40
	1541.30	1541.80	820.02	0.50
*P11	1541.80	1543.10	819.52	1.30
	1543.10	1544.70	818.22	1.60
COAL	1544.70	1544.80	816.62	0.10
	1544.80	1552.40	816.52	7.60
*P10	1552.40	1553.50	808.92	1.10
	1553.50	1567.50	807.82	14.00
*LH1	1567.50	1569.50	793.82	2.00
	1569.50	1623.00	791.82	53.50
*P91	1623.00	1625.00	738.32	2.00
	1625.00	1678.30	736.32	53.30
*P81	1678.30	1679.10	683.02	0.80
	1679.10	1679.40	682.22	0.30
*P81	1679.40	1679.80	681.92	0.40
	1679.80	1680.10	681.52	0.30
*P82	1680.10	1680.80	681.22	0.70
	1680.80	1681.90	680.52	1.10
*P71	1681.90	1682.40	679.42	0.50
	1682.40	1730.00	678.92	47.60
*COAL	1730.00	1730.30	631.32	0.30
	1730.30	1731.30	631.02	1.00
*COAL	1731.30	1732.00	630.02	0.70
	1732.00	1732.70	629.32	0.70
*COAL	1732.70	1732.90	628.62	0.20
	1732.90	1808.70	628.42	75.80
*COAL	1808.70	1808.90	552.62	0.20
	1808.90	1845.00	552.42	36.10
*COAL	1845.00	1845.50	516.32	0.50
	1845.50	1855.00	515.82	9.50
*COAL	1855.00	1855.20	506.32	0.20
	1855.20	2015.00	506.12	159.80
*P41	2015.00	2017.00	346.32	2.00
	2017.00	2164.90	344.32	147.90
*P31	2164.90	2165.80	196.42	0.90
	2165.80	2166.50	195.52	0.70
*P32	2166.50	2166.60	194.82	0.10
	2166.60	2200.30	194.72	33.70
*P34	2200.30	2200.90	161.02	0.60
	2200.90	2244.90	160.42	44.00
*P22	2244.90	2245.00	116.42	0.10
	2245.00	2463.44	116.32	218.44

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO BALL CREEK AND WATER WELL BE100-8.
GAMMA-CALIPER LOG FROM 0 TO 310.50
GAMMA-DENSITY LOG FROM 310.50 TO TD.

FILE: C:\VP\GAS\BE100.CMP
DATE: 05/25/05

Exhibit A

Well Name: 03-PGP-BE-101
SURFACE ELEV: 2199.11 EASTING: 969365.20 NORTHING: 292761.15

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
AL2	206.90	209.00	1992.21	2.10	
	209.00	252.40	1990.11	43.40	
COAL	252.40	252.80	1946.71	0.40	
	252.80	296.20	1946.31	43.40	
RA2	296.20	298.20	1902.91	2.00	
	298.20	319.50	1900.91	21.30	
RA3	319.50	319.60	1879.61	0.10	
	319.60	338.90	1879.51	19.30	
COAL	338.90	339.00	1860.21	0.10	
	339.00	363.90	1860.11	24.90	
COAL	363.90	364.10	1835.21	0.20	
	364.10	468.90	1835.01	104.80	
JB1	468.90	471.00	1730.21	2.10	
	471.00	477.40	1728.11	6.40	
JB2	477.40	477.70	1721.71	0.30	
	477.70	486.40	1721.41	8.70	
JB3	486.40	486.80	1712.71	0.40	
	486.80	563.30	1712.31	76.50	
T2	563.30	564.10	1635.81	0.80	
	564.10	570.00	1635.01	5.90	
T1	570.00	571.00	1629.11	1.00	
	571.00	616.10	1628.11	45.10	
TI	616.10	616.60	1583.01	0.50	
	616.60	619.20	1582.51	2.60	
COAL	619.20	619.70	1579.91	0.50	
	619.70	744.90	1579.41	125.20	
US1	744.90	746.00	1454.21	1.10	
	746.00	764.90	1453.11	18.90	
LC2	764.90	765.00	1434.21	0.10	
	765.00	765.60	1434.11	0.60	
LC3	765.60	766.40	1433.51	0.80	
LC4	766.40	768.50	1432.71	2.10	
	768.50	906.70	1430.61	138.20	
GC1	906.70	907.00	1292.41	0.30	
	907.00	908.30	1292.11	1.30	
COAL	908.30	908.90	1290.81	0.60	
	908.90	1010.60	1290.21	101.70	
*SE1	1010.60	1010.90	1188.51	0.30	
	1010.90	1035.50	1188.21	24.60	
*SE2	1035.50	1036.20	1163.61	0.70	
	1036.20	1089.60	1162.91	53.40	
*COAL	1089.60	1089.90	1109.51	0.30	
	1089.90	1090.40	1109.21	0.50	
*LS2	1090.40	1091.90	1108.71	1.50	
	1091.90	1156.00	1107.21	64.10	
*LS3	1156.00	1159.10	1043.11	3.10	
	1159.10	1206.50	1040.01	47.40	

*UH2	1206.50	1207.80	992.61	1.30
	1207.80	1226.50	991.31	18.70
*UH3	1226.50	1227.50	972.61	1.00
	1227.50	1259.90	971.61	32.40
*MH1	1259.90	1261.20	939.21	1.30
	1261.20	1339.60	937.91	78.40
*MH2	1339.60	1340.10	859.51	0.50
	1340.10	1357.50	859.01	17.40
*P11	1357.50	1357.70	841.61	0.20
	1357.70	1382.10	841.41	24.40
*P10	1382.10	1384.10	817.01	2.00
	1384.10	1400.00	815.01	15.90
*LH1	1400.00	1400.80	799.11	0.80
	1400.80	1418.00	798.31	17.20
*LH2	1418.00	1419.60	781.11	1.60
	1419.60	1467.30	779.51	47.70
*P91	1467.30	1468.50	731.81	1.20
	1468.50	1522.00	730.61	53.50
*P81	1522.00	1523.20	677.11	1.20
	1523.20	1524.60	675.91	1.40
*P82	1524.60	1524.80	674.51	0.20
	1524.80	1530.60	674.31	5.80
*P71	1530.60	1531.00	668.51	0.40
	1531.00	1570.90	668.11	39.90
*COAL	1570.90	1571.20	628.21	0.30
	1571.20	1572.50	627.91	1.30
*COAL	1572.50	1572.60	626.61	0.10
	1572.60	1573.60	626.51	1.00
*COAL	1573.60	1573.70	625.51	0.10
	1573.70	1647.50	625.41	73.80
*COAL	1647.50	1649.00	551.61	1.50
	1649.00	1688.90	550.11	39.90
*COAL	1688.90	1689.00	510.21	0.10
	1689.00	1709.40	510.11	20.40
*COAL	1709.40	1710.70	489.71	1.30
	1710.70	1855.40	488.41	144.70
*P41	1855.40	1858.00	343.71	2.60
	1858.00	1915.80	341.11	57.80
*P42	1915.80	1915.90	283.31	0.10
	1915.90	1977.00	283.21	61.10
*COAL	1977.00	1977.20	222.11	0.20
	1977.20	1999.00	221.91	21.80
*P31	1999.00	2000.10	200.11	1.10
	2000.10	2004.50	199.01	4.40
*P32	2004.50	2004.70	194.61	0.20
	2004.70	2041.30	194.41	36.60
*P34	2041.30	2041.80	157.81	0.50
	2041.80	2087.80	157.31	46.00
*P22	2087.80	2088.00	111.31	0.20
	2088.00	2199.20	111.11	111.20
*SJ3	2199.20	2199.30	-0.09	0.10
	2199.30	2265.69	-0.19	66.39

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO BALL CREEK AND WATER WELL BF100-8.
GAMMA-CALIPER LOG FROM 0 TO 242.50

GAMMA-DENSITY LOG FROM 242.50 TO TD.
FILE: C:\VP\GAS\BE101.CMP
DATE: 05/08/03

Exhibit A

Well Name: 07 CBM BE101A
SURFACE ELEV: 2388.18 EASTING: 970244.32 NORTHING: 292883.43

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
KN1	151.10	151.60	2237.08	0.50	
	151.60	186.70	2236.58	35.10	
KN2	186.70	189.70	2201.48	3.00	MINED OUT
	189.70	334.80	2198.48	145.10	
AL1	334.80	336.10	2053.38	1.30	
	336.10	389.30	2052.08	53.20	
AL2	389.30	391.20	1998.88	1.90	
	391.20	436.30	1996.98	45.10	
RA1	436.30	436.60	1951.88	0.30	
	436.60	481.60	1951.58	45.00	
RA2	481.60	483.90	1906.58	2.30	
	483.90	513.10	1904.28	29.20	
RA3	513.10	513.50	1875.08	0.40	
	513.50	544.50	1874.68	31.00	
COAL	544.50	545.00	1843.68	0.50	
	545.00	642.80	1843.18	97.80	
JB1	642.80	644.50	1745.38	1.70	
	644.50	670.60	1743.68	26.10	
JB3	670.60	671.90	1717.58	1.30	
	671.90	745.70	1716.28	73.80	
T2	745.70	746.50	1642.48	0.80	
	746.50	754.10	1641.68	7.60	
T1	754.10	755.50	1634.08	1.40	
	755.50	795.90	1632.68	40.40	
TI	795.90	796.80	1592.28	0.90	
	796.80	797.80	1591.38	1.00	
COAL	797.80	798.20	1590.38	0.40	
	798.20	936.80	1589.98	138.60	
LC2	936.80	938.00	1451.38	1.20	
	938.00	940.00	1450.18	2.00	
LC3	940.00	940.50	1448.18	0.50	
LC4	940.50	941.50	1447.68	1.00	
	941.50	1083.90	1446.68	142.40	
*COAL	1083.90	1084.30	1304.28	0.40	
	1084.30	1085.00	1303.88	0.70	
*GC1	1085.00	1086.00	1303.18	1.00	
	1086.00	1188.80	1302.18	102.80	
*SE1	1188.80	1189.10	1199.38	0.30	
	1189.10	1214.90	1199.08	25.80	
*SE2	1214.90	1215.70	1173.28	0.80	
	1215.70	1272.20	1172.48	56.50	
*LS2	1272.20	1273.70	1115.98	1.50	
	1273.70	1338.50	1114.48	64.80	
*LS3	1338.50	1340.50	1049.68	2.00	
	1340.50	1390.70	1047.68	50.20	
*UH2	1390.70	1391.20	997.48	0.50	
	1391.20	1419.00	996.98	27.80	

*UH3	1419.00	1419.80	969.18	0.80
	1419.80	1449.90	968.38	30.10
*MH1	1449.90	1450.90	938.28	1.00
	1450.90	1530.80	937.28	79.90
*COAL	1530.80	1531.00	857.38	0.20
	1531.00	1531.60	857.18	0.60
*MH2	1531.60	1532.00	856.58	0.40
	1532.00	1532.90	856.18	0.90
*COAL	1532.90	1533.10	855.28	0.20
	1533.10	1573.90	855.08	40.80
*P10	1573.90	1575.10	814.28	1.20
	1575.10	1591.50	813.08	16.40
*LH1	1591.50	1592.30	796.68	0.80
	1592.30	1614.30	795.88	22.00
*LH2	1614.30	1616.60	773.88	2.30
	1616.60	1625.10	771.58	8.50
*LH3	1625.10	1626.10	763.08	1.00
	1626.10	1655.80	762.08	29.70
*P91	1655.80	1658.20	732.38	2.40
	1658.20	1705.10	729.98	46.90
*P81	1705.10	1706.90	683.08	1.80
	1706.90	1707.50	681.28	0.60
*P82	1707.50	1707.70	680.68	0.20
	1707.70	1720.00	680.48	12.30
*P71	1720.00	1720.80	668.18	0.80
	1720.80	1756.00	667.38	35.20
*COAL	1756.00	1757.80	632.18	1.80
	1757.80	1833.50	630.38	75.70
*COAL	1833.50	1835.10	554.68	1.60
	1835.10	1880.80	553.08	45.70
*COAL	1880.80	1880.90	507.38	0.10
	1880.90	1916.30	507.28	35.40
*COAL	1916.30	1918.10	471.88	1.80
	1918.10	2033.70	470.08	115.60
*COAL	2033.70	2034.20	354.48	0.50
	2034.20	2051.10	353.98	16.90
*P41	2051.10	2051.30	337.08	0.20
	2051.30	2191.90	336.88	140.60
*P31	2191.90	2193.80	196.28	1.90
	2193.80	2239.20	194.38	45.40
*P34	2239.20	2239.90	148.98	0.70
	2239.90	2250.20	148.28	10.30
*P35	2250.20	2250.50	137.98	0.30
	2250.50	2495.00	137.68	244.50

COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO BALL CREEK AND WATER WELL BD101-1.
GAMMA-CALIPER LOG FROM 0 TO 265.00
GAMMA-DENSITY LOG FROM 265.00 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: H:\JIMHAZ~1\PROJECTS\GAS\BE101A.CMP
DATE: 09/07/07

Exhibit A

Well Name: 05-CNX-BF-98
SURFACE ELEV: 2371.69 EASTING: 965175.62 NORTHING: 291813.42

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
LB1	49.60	52.00	2322.09	2.40	
	52.00	79.00	2319.69	27.00	
LB2	79.00	79.10	2292.69	0.10	
	79.10	169.70	2292.59	90.60	
KN1	169.70	170.00	2201.99	0.30	
	170.00	218.00	2201.69	48.00	
KN2	218.00	221.70	2153.69	3.70	
	221.70	391.00	2149.99	169.30	
AL2	391.00	391.10	1980.69	0.10	
	391.10	499.50	1980.59	108.40	
COAL	499.50	500.60	1872.19	1.10	
	500.60	502.90	1871.09	2.30	
RA2	502.90	505.10	1868.79	2.20	
	505.10	515.90	1866.59	10.80	
RA3	515.90	516.10	1855.79	0.20	
	516.10	673.00	1855.59	156.90	
JB1	673.00	675.00	1698.69	2.00	
	675.00	688.10	1696.69	13.10	
JB2	688.10	688.80	1683.59	0.70	
	688.80	691.70	1682.89	2.90	
JB3	691.70	693.00	1679.99	1.30	
	693.00	765.40	1678.69	72.40	
COAL	765.40	766.00	1606.29	0.60	
	766.00	768.00	1605.69	2.00	
T1	768.00	768.30	1603.69	0.30	
	768.30	770.00	1603.39	1.70	
COAL	770.00	771.10	1601.69	1.10	
	771.10	809.90	1600.59	38.80	
TI	809.90	810.80	1561.79	0.90	
	810.80	812.00	1560.89	1.20	
COAL	812.00	812.80	1559.69	0.80	
	812.80	928.50	1558.89	115.70	
US1	928.50	929.30	1443.19	0.80	
	929.30	995.90	1442.39	66.60	
COAL	995.90	996.00	1375.79	0.10	
	996.00	996.50	1375.69	0.50	
US2	996.50	997.60	1375.19	1.10	
	997.60	1111.70	1374.09	114.10	
*COAL	1111.70	1112.00	1259.99	0.30	
	1112.00	1116.60	1259.69	4.60	
*GC1	1116.60	1117.50	1255.09	0.90	
	1117.50	1213.00	1254.19	95.50	
*SE1	1213.00	1213.10	1158.69	0.10	
	1213.10	1222.00	1158.59	8.90	
*COAL	1222.00	1222.10	1149.69	0.10	
	1222.10	1245.60	1149.59	23.50	
*SE2	1245.60	1246.70	1126.09	1.10	

	1246.70	1292.50	1124.99	45.80
*LS1	1292.50	1294.10	1079.19	1.60
	1294.10	1295.20	1077.59	1.10
*LS2	1295.20	1295.30	1076.49	0.10
	1295.30	1349.00	1076.39	53.70
*LS3	1349.00	1349.60	1022.69	0.60
	1349.60	1361.00	1022.09	11.40
*UH1	1361.00	1363.00	1010.69	2.00
	1363.00	1411.90	1008.69	48.90
*UH2	1411.90	1412.30	959.79	0.40
	1412.30	1412.50	959.39	0.20
*UH2	1412.50	1413.70	959.19	1.20
	1413.70	1430.00	957.99	16.30
*UH3	1430.00	1431.00	941.69	1.00
	1431.00	1459.00	940.69	28.00
*MH1	1459.00	1460.60	912.69	1.60
	1460.60	1530.90	911.09	70.30
*MH2	1530.90	1531.00	840.79	0.10
	1531.00	1584.00	840.69	53.00
*COAL	1584.00	1585.00	787.69	1.00
	1585.00	1587.00	786.69	2.00
*P11	1587.00	1588.30	784.69	1.30
	1588.30	1589.70	783.39	1.40
*113	1589.70	1590.00	781.99	0.30
	1590.00	1605.80	781.69	15.80
*P10	1605.80	1607.00	765.89	1.20
	1607.00	1617.30	764.69	10.30
*LH1	1617.30	1619.10	754.39	1.80
	1619.10	1637.80	752.59	18.70
*LH2	1637.80	1638.90	733.89	1.10
	1638.90	1664.60	732.79	25.70
*P91	1664.60	1665.00	707.09	0.40
	1665.00	1665.40	706.69	0.40
*P91	1665.40	1666.70	706.29	1.30
	1666.70	1723.00	704.99	56.30
*P81	1723.00	1724.00	648.69	1.00
	1724.00	1724.60	647.69	0.60
*COAL	1724.60	1725.00	647.09	0.40
	1725.00	1730.40	646.69	5.40
*P82	1730.40	1731.00	641.29	0.60
	1731.00	1776.90	640.69	45.90
*COAL	1776.90	1778.90	594.79	2.00
	1778.90	1779.00	592.79	0.10
*COAL	1779.00	1779.50	592.69	0.50
	1779.50	1918.50	592.19	139.00
*COAL	1918.50	1918.60	453.19	0.10
	1918.60	1921.40	453.09	2.80
*COAL	1921.40	1922.00	450.29	0.60
	1922.00	1924.90	449.69	2.90
*COAL	1924.90	1925.20	446.79	0.30
	1925.20	1985.00	446.49	59.80
*COAL	1985.00	1985.20	386.69	0.20
	1985.20	2048.00	386.49	62.80
*P41	2048.00	2048.90	323.69	0.90
	2048.90	2050.00	322.79	1.10
*COAL	2050.00	2050.20	321.69	0.20
	2050.20	2053.50	321.49	3.30

*P42	2053.50	2054.10	318.19	0.60
	2054.10	2132.40	317.59	78.30
*COAL	2132.40	2132.50	239.29	0.10
	2132.50	2155.00	239.19	22.50
*COAL	2155.00	2155.10	216.69	0.10
	2155.10	2186.00	216.59	30.90
*P31	2186.00	2186.90	185.69	0.90
	2186.90	2237.00	184.79	50.10
*P34	2237.00	2237.40	134.69	0.40
	2237.40	2248.70	134.29	11.30
*P35	2248.70	2249.00	122.99	0.30
	2249.00	2254.30	122.69	5.30
*COAL	2254.30	2254.40	117.39	0.10
	2254.40	2386.20	117.29	131.80
*SJ3	2386.20	2386.30	-14.51	0.10
	2386.30	2402.30	-14.61	16.00
*COAL	2402.30	2403.60	-30.61	1.30
	2403.60	2458.45	-31.91	54.85

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO BALL CREEK AND WATER WELL BE99-4.
GAMMA-CALIPER LOG FROM 0 TO 221.00
GAMMA-DENSITY LOG FROM 221.00 TO TD.

FILE: C:\VP\GAS\BF98.CMP
DATE: 05/03/05

Exhibit A

Well Name: 06-CNX-BF-99
SURFACE ELEV: 2345.96 EASTING: 965996.74 NORTHING: 290754.26

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
COAL	85.00	86.40	2260.96	1.40	
	86.40	106.60	2259.56	20.20	
COAL	106.60	107.50	2239.36	0.90	
	107.50	198.50	2238.46	91.00	
KN1	198.50	199.80	2147.46	1.30	
	199.80	407.50	2146.16	207.70	
AL2	407.50	408.50	1938.46	1.00	
	408.50	499.60	1937.46	91.10	
RA2	499.60	502.40	1846.36	2.80	MINED OUT
	502.40	600.60	1843.56	98.20	
COAL	600.60	600.90	1745.36	0.30	
	600.90	653.60	1745.06	52.70	
JB1	653.60	655.20	1692.36	1.60	
	655.20	675.00	1690.76	19.80	
JB3	675.00	676.10	1670.96	1.10	
	676.10	756.90	1669.86	80.80	
T1	756.90	757.60	1589.06	0.70	
	757.60	758.60	1588.36	1.00	
COAL	758.60	758.80	1587.36	0.20	
	758.80	762.00	1587.16	3.20	
COAL	762.00	762.80	1583.96	0.80	
	762.80	805.40	1583.16	42.60	
TI	805.40	806.20	1540.56	0.80	
	806.20	807.50	1539.76	1.30	
COAL	807.50	808.00	1538.46	0.50	
	808.00	920.40	1537.96	112.40	
US1	920.40	920.60	1425.56	0.20	
	920.60	923.20	1425.36	2.60	
COAL	923.20	923.70	1422.76	0.50	
	923.70	1093.80	1422.26	170.10	
COAL	1093.80	1094.00	1252.16	0.20	
	1094.00	1111.10	1251.96	17.10	
GC1	1111.10	1112.00	1234.86	0.90	
	1112.00	1238.80	1233.96	126.80	
*SE2	1238.80	1239.50	1107.16	0.70	
	1239.50	1284.80	1106.46	45.30	
*LS1	1284.80	1286.10	1061.16	1.30	
	1286.10	1353.95	1059.86	67.85	
*UH1	1353.95	1355.35	992.01	1.40	
	1355.35	1402.40	990.61	47.05	
*UH2	1402.40	1403.40	943.56	1.00	
	1403.40	1424.30	942.56	20.90	
*UH3	1424.30	1424.70	921.66	0.40	
	1424.70	1456.00	921.26	31.30	
*MH1	1456.00	1457.30	889.96	1.30	
	1457.30	1530.80	888.66	73.50	
*MH2	1530.80	1531.00	815.16	0.20	

	1531.00	1579.10	814.96	48.10
*COAL	1579.10	1579.60	766.86	0.50
	1579.60	1584.30	766.36	4.70
*P11	1584.30	1585.40	761.66	1.10
	1585.40	1611.00	760.56	25.60
*P10	1611.00	1612.40	734.96	1.40
	1612.40	1617.30	733.56	4.90
*LH1	1617.30	1619.70	728.66	2.40
	1619.70	1630.40	726.26	10.70
*LH2	1630.40	1630.80	715.56	0.40
	1630.80	1661.00	715.16	30.20
*P91	1661.00	1662.50	684.96	1.50
	1662.50	1716.00	683.46	53.50
*P81	1716.00	1716.80	629.96	0.80
	1716.80	1722.00	629.16	5.20
*P82	1722.00	1722.10	623.96	0.10
	1722.10	1773.00	623.86	50.90
*COAL	1773.00	1775.00	572.96	2.00
	1775.00	1837.00	570.96	62.00
*P71	1837.00	1837.40	508.96	0.40
	1837.40	1838.70	508.56	1.30
*P71	1838.70	1838.90	507.26	0.20
	1838.90	1892.70	507.06	53.80
*COAL	1892.70	1892.90	453.26	0.20
	1892.90	2038.80	453.06	145.90
*P41	2038.80	2039.20	307.16	0.40
	2039.20	2042.30	306.76	3.10
*P42	2042.30	2042.40	303.66	0.10
	2042.40	2043.20	303.56	0.80
*P42	2043.20	2043.30	302.76	0.10
	2043.30	2186.20	302.66	142.90
*P31	2186.20	2186.50	159.76	0.30
	2186.50	2227.80	159.46	41.30
*P34	2227.80	2228.20	118.16	0.40
	2228.20	2514.96	117.76	286.76

COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO TOPOGRAPHY
AND DUE TO THE WELL'S PROXIMITY TO WATER WELL LF-419.
GAMMA-CALIPER LOG FROM 0 TO 580.00
GAMMA-DENSITY LOG FROM 580.00 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: D:\PROJECTS\VP_JJK\GAS\BF99.CMP
DATE: 01/25/07

Exhibit A

Well Name: 05-CNX-BF-100
SURFACE ELEV: 2282.70 EASTING: 967450.73 NORTHING: 291762.84

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
KN1	91.00	91.20	2191.70	0.20	
	91.20	125.40	2191.50	34.20	
KN2	125.40	129.00	2157.30	3.60	
	129.00	330.10	2153.70	201.10	
AL2	330.10	332.20	1952.60	2.10	
	332.20	370.60	1950.50	38.40	
COAL	370.60	370.70	1912.10	0.10	
	370.70	426.00	1912.00	55.30	
RA2	426.00	428.10	1856.70	2.10	
	428.10	438.00	1854.60	9.90	
RA3	438.00	438.50	1844.70	0.50	
	438.50	590.00	1844.20	151.50	
JB1	590.00	592.00	1692.70	2.00	
	592.00	626.00	1690.70	34.00	
JB3	626.00	628.00	1656.70	2.00	
	628.00	687.00	1654.70	59.00	
T2	687.00	688.00	1595.70	1.00	
	688.00	693.00	1594.70	5.00	
T1	693.00	694.00	1589.70	1.00	
	694.00	735.80	1588.70	41.80	
TI	735.80	736.60	1546.90	0.80	
	736.60	738.00	1546.10	1.40	
COAL	738.00	738.60	1544.70	0.60	
	738.60	739.00	1544.10	0.40	
COAL	739.00	739.10	1543.70	0.10	
	739.10	855.40	1543.60	116.30	
US1	855.40	855.60	1427.30	0.20	
	855.60	858.80	1427.10	3.20	
LC1	858.80	859.00	1423.90	0.20	
	859.00	861.00	1423.70	2.00	
COAL	861.00	861.10	1421.70	0.10	
	861.10	876.70	1421.60	15.60	
LC2	876.70	876.90	1406.00	0.20	
	876.90	882.00	1405.80	5.10	
LC3	882.00	883.30	1400.70	1.30	
LC4	883.30	885.00	1399.40	1.70	
	885.00	1008.80	1397.70	123.80	
GC1	1008.80	1009.00	1273.90	0.20	
	1009.00	1028.00	1273.70	19.00	
GC2	1028.00	1028.20	1254.70	0.20	
	1028.20	1128.90	1254.50	100.70	
*SE1	1128.90	1129.30	1153.80	0.40	
	1129.30	1157.50	1153.40	28.20	
*SE2	1157.50	1158.30	1125.20	0.80	
	1158.30	1206.50	1124.40	48.20	
*LS2	1206.50	1208.20	1076.20	1.70	
	1208.20	1272.90	1074.50	64.70	

*LS3	1272.90	1274.80	1009.80	1.90
	1274.80	1323.10	1007.90	48.30
*UH2	1323.10	1324.50	959.60	1.40
	1324.50	1342.50	958.20	18.00
*UH3	1342.50	1347.30	940.20	4.80
	1347.30	1369.10	935.40	21.80
*MH1	1369.10	1370.70	913.60	1.60
	1370.70	1445.50	912.00	74.80
*MH2	1445.50	1446.00	837.20	0.50
	1446.00	1496.90	836.70	50.90
*COAL	1496.90	1497.20	785.80	0.30
	1497.20	1497.70	785.50	0.50
*P11	1497.70	1499.30	785.00	1.60
	1499.30	1501.00	783.40	1.70
*P10	1501.00	1501.10	781.70	0.10
	1501.10	1517.50	781.60	16.40
*LH1	1517.50	1518.70	765.20	1.20
	1518.70	1525.00	764.00	6.30
*LH2	1525.00	1527.30	757.70	2.30
	1527.30	1577.50	755.40	50.20
*P91	1577.50	1580.00	705.20	2.50
	1580.00	1633.10	702.70	53.10
*P81	1633.10	1634.20	649.60	1.10
	1634.20	1634.40	648.50	0.20
*P81	1634.40	1635.00	648.30	0.60
	1635.00	1635.50	647.70	0.50
*P82	1635.50	1636.00	647.20	0.50
	1636.00	1637.10	646.70	1.10
*P71	1637.10	1637.80	645.60	0.70
	1637.80	1685.00	644.90	47.20
*COAL	1685.00	1685.80	597.70	0.80
	1685.80	1686.70	596.90	0.90
*COAL	1686.70	1687.00	596.00	0.30
	1687.00	1687.40	595.70	0.40
*COAL	1687.40	1688.00	595.30	0.60
	1688.00	1753.70	594.70	65.70
*COAL	1753.70	1754.00	529.00	0.30
	1754.00	1754.80	528.70	0.80
*COAL	1754.80	1755.20	527.90	0.40
	1755.20	1810.30	527.50	55.10
*COAL	1810.30	1810.90	472.40	0.60
	1810.90	1813.50	471.80	2.60
*COAL	1813.50	1813.60	469.20	0.10
	1813.60	1963.90	469.10	150.30
*P41	1963.90	1964.40	318.80	0.50
	1964.40	2083.70	318.30	119.30
*COAL	2083.70	2083.80	199.00	0.10
	2083.80	2120.20	198.90	36.40
*P31	2120.20	2121.10	162.50	0.90
	2121.10	2121.80	161.60	0.70
*P32	2121.80	2122.10	160.90	0.30
	2122.10	2157.10	160.60	35.00
*P34	2157.10	2157.20	125.60	0.10
	2157.20	2372.94	125.50	215.74

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS

WELL'S PROXIMITY TO BALL CREEK AND WATER WELL BF99-1.
GAMMA-CALIPER LOG FROM 0 TO 221.00
GAMMA-DENSITY LOG FROM 221.00 TO TD.
FILE: C:\VP\GAS\BF100.CMP
DATE: 05/24/05

Exhibit A

Well Name: 06-CNX-BG-98
SURFACE ELEV: 1864.59 EASTING: 965310.12 NORTHING: 290074.95

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
JB1	156.30	159.00	1708.29	2.70	
	159.00	177.60	1705.59	18.60	
JB3	177.60	180.80	1686.99	3.20	
	180.80	266.20	1683.79	85.40	
T1	266.20	267.40	1598.39	1.20	
	267.40	308.60	1597.19	41.20	
TI	308.60	309.30	1555.99	0.70	
	309.30	424.10	1555.29	114.80	
US1	424.10	424.30	1440.49	0.20	
	424.30	608.80	1440.29	184.50	
COAL	608.80	609.20	1255.79	0.40	
	609.20	614.00	1255.39	4.80	
GC1	614.00	614.60	1250.59	0.60	
	614.60	708.90	1249.99	94.30	
SE1	708.90	709.00	1155.69	0.10	
	709.00	742.00	1155.59	33.00	
*SE2	742.00	742.80	1122.59	0.80	
	742.80	788.00	1121.79	45.20	
*LS1	788.00	789.50	1076.59	1.50	
	789.50	847.60	1075.09	58.10	
*LS3	847.60	847.70	1016.99	0.10	
	847.70	861.10	1016.89	13.40	
*UH1	861.10	862.60	1003.49	1.50	
	862.60	917.80	1001.99	55.20	
*COAL	917.80	918.00	946.79	0.20	
	918.00	919.00	946.59	1.00	
*UH2	919.00	920.00	945.59	1.00	
	920.00	935.40	944.59	15.40	
*UH3	935.40	936.20	929.19	0.80	
	936.20	966.40	928.39	30.20	
*MH1	966.40	967.70	898.19	1.30	
	967.70	1046.50	896.89	78.80	
*MH2	1046.50	1047.00	818.09	0.50	
	1047.00	1094.00	817.59	47.00	
*P11	1094.00	1095.00	770.59	1.00	
	1095.00	1118.20	769.59	23.20	
*P10	1118.20	1119.80	746.39	1.60	
	1119.80	1123.70	744.79	3.90	
*LH1	1123.70	1125.50	740.89	1.80	
	1125.50	1145.00	739.09	19.50	
*LH2	1145.00	1146.10	719.59	1.10	
	1146.10	1171.00	718.49	24.90	
*P91	1171.00	1173.10	693.59	2.10	
	1173.10	1225.40	691.49	52.30	
*P81	1225.40	1227.40	639.19	2.00	
	1227.40	1228.00	637.19	0.60	
*COAL	1228.00	1228.20	636.59	0.20	

	1228.20	1243.40	636.39	15.20
*P82	1243.40	1244.00	621.19	0.60
	1244.00	1282.20	620.59	38.20
*COAL	1282.20	1284.60	582.39	2.40
	1284.60	1349.00	579.99	64.40
*COAL	1349.00	1349.40	515.59	0.40
	1349.40	1350.00	515.19	0.60
*P71	1350.00	1350.50	514.59	0.50
	1350.50	1414.00	514.09	63.50
*COAL	1414.00	1414.10	450.59	0.10
	1414.10	1415.50	450.49	1.40
*COAL	1415.50	1415.90	449.09	0.40
	1415.90	1420.10	448.69	4.20
*COAL	1420.10	1420.20	444.49	0.10
	1420.20	1554.70	444.39	134.50
*P41	1554.70	1555.20	309.89	0.50
	1555.20	1556.50	309.39	1.30
*COAL	1556.50	1557.70	308.19	1.20
	1557.70	1558.80	306.99	1.10
*P42	1558.80	1559.00	305.79	0.20
	1559.00	1731.10	305.59	172.10
*P34	1731.10	1731.60	133.49	0.50
	1731.60	2041.38	132.99	309.78

NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO BALL CREEK.
GAMMA-CALIPER LOG FROM 0 TO 308.00
GAMMA-DENSITY LOG FROM 308.00 TO TD.

FILE: C:\VP\GAS\BG98.CMP
DATE: 12/15/06

Exhibit A

Well Name: 07 CBM BG99
SURFACE ELEV: 1813.56 EASTING: 966196.63 NORTHING: 289737.26

SEAM	DEPTH FROM (FT)	DEPTH TO (FT)	ELEVATION (TOSE)	THK. (FT)	REMARKS
JB1	109.50	110.60	1703.50	1.10	
	110.60	129.40	1702.40	18.80	
JB3	129.40	129.80	1683.60	0.40	
	129.80	213.00	1683.20	83.20	
T1	213.00	214.10	1600.00	1.10	
	214.10	217.50	1598.90	3.40	
COAL	217.50	218.10	1595.50	0.60	
	218.10	259.10	1594.90	41.00	
TI	259.10	260.20	1553.90	1.10	
	260.20	261.50	1552.80	1.30	
TI	261.50	262.50	1551.50	1.00	
	262.50	570.80	1550.50	308.30	
GC1	570.80	571.10	1242.20	0.30	
	571.10	664.30	1241.90	93.20	
*SE1	664.30	664.40	1148.70	0.10	
	664.40	692.90	1148.60	28.50	
*SE2	692.90	693.20	1120.10	0.30	
	693.20	740.40	1119.80	47.20	
*LS1	740.40	741.80	1072.60	1.40	
	741.80	809.30	1071.20	67.50	
*UH1	809.30	810.90	1003.70	1.60	
	810.90	857.60	1002.10	46.70	
*UH2	857.60	859.00	955.40	1.40	
	859.00	879.00	954.00	20.00	
*UH3	879.00	879.50	934.00	0.50	
	879.50	912.00	933.50	32.50	
*MH1	912.00	913.00	901.00	1.00	
	913.00	993.00	900.00	80.00	
*MH2	993.00	993.50	820.00	0.50	
	993.50	1040.80	819.50	47.30	
*P11	1040.80	1041.90	772.20	1.10	
	1041.90	1064.50	771.10	22.60	
*P10	1064.50	1065.70	748.50	1.20	
	1065.70	1069.40	747.30	3.70	
*LH1	1069.40	1070.30	743.60	0.90	
	1070.30	1091.00	742.70	20.70	
*LH2	1091.00	1091.90	722.00	0.90	
	1091.90	1120.90	721.10	29.00	
*P91	1120.90	1122.10	692.10	1.20	
	1122.10	1179.00	690.90	56.90	
*P81	1179.00	1180.00	634.00	1.00	
	1180.00	1181.00	633.00	1.00	
*COAL	1181.00	1181.10	632.00	0.10	
	1181.10	1184.20	631.90	3.10	
*P82	1184.20	1184.30	628.80	0.10	
	1184.30	1232.10	628.70	47.80	
*COAL	1232.10	1234.00	580.90	1.90	

	1234.00	1298.00	579.00	64.00
*P71	1298.00	1299.00	515.00	1.00
	1299.00	1350.40	514.00	51.40
*COAL	1350.40	1350.80	462.60	0.40
	1350.80	1506.80	462.20	156.00
*P41	1506.80	1508.20	306.20	1.40
	1508.20	1709.90	304.80	201.70
*P35	1709.90	1710.30	103.10	0.40
	1710.30	1921.90	102.70	211.60

COAL SEAMS TO BE STIMULATED WERE ADJUSTED DUE TO THE GAS WELL'S PROXIMITY TO BALL CREEK.
GAMMA-CALIPER LOG FROM 0 TO 311.00
GAMMA-DENSITY LOG FROM 311.00 TO TD.
NOTE: FOOTAGE NOT ADJUSTED FOR DEVIATION
FILE: D:\PROJECTS\VP_JJK\GAS\BG99.CMP
DATE: 02/05/07

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CONSOLIDATION COAL COMPANY
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*** GEOLOGIST LOG ***
HOLE NO = 01-BP-C -1

STATE = VIRGINIA COUNTY = BUCHANAN TWP = RANGE = SECT =

S ELEV = 1903.27 HOW DET = EDM USGS QUAD = USGS SIZE = 71/2 MIN

N-COOR = 293967. E-COOR = 965311. SOURCE = STATE LOC CODE = SURVEYED ELOG = 1235A

MERIDIAN = SECT-NUM = CONTR = DRILLER = DRILL CODE = ROTARY

FLUID = WATER FLOW = GAS CEMENTED = NO WRAPPING = UNKNOWN CONTAINER = UNKNOWN

CORE COND. = UNKNOWN UNITS = ENGLISH SURFACE AZIMUTH DEG = .00 SURFACE DIP DEG = .00

INSPECTOR = M. ORLICH DATE DRILLED = TO 030901 DATA SOURCE =

COMMENTS = CONVENTIONAL GAS WELL

*** DATA ENTERED IN TO-DEPTHS ***

STRATA ELEV (TOP)	STRATA DEPTH FROM	TO	STRATA THICK	SEAM CODE	CHARACTERISTICS LITHOLOGY AND COMMENTS
1903.27	.00	83.90	83.90		INTERVAL
1819.37	83.90	86.00	2.10		COAL
1817.27	86.00	134.70	48.70		INTERVAL
1768.57	134.70	135.00	.30		COAL
1768.27	135.00	160.00	25.00		INTERVAL
1743.27	160.00	161.90	1.90	JB1	COAL
1741.37	161.90	180.00	18.10		INTERVAL
1723.27	180.00	181.10	1.10	JB2	COAL
1722.17	181.10	190.50	9.40		INTERVAL
1712.77	190.50	191.50	1.00	JB3	COAL
1711.77	191.50	238.90	47.40		INTERVAL
1664.37	238.90	240.00	1.10	T2	COAL
1663.27	240.00	307.50	67.50		INTERVAL
1595.77	307.50	308.20	.70	TI	COAL
1595.07	308.20	617.90	309.70		INTERVAL
1285.37	617.90	618.50	.60	GC1	COAL

1284.77	618.50	712.30	93.80		INTERVAL
1190.97	712.30	713.00	.70	SE1	COAL
1190.27	713.00	743.70	30.70		INTERVAL
1159.57	743.70	745.00	1.30	SE2	COAL
1158.27	745.00	795.90	50.90		INTERVAL
1107.37	795.90	796.70	.80	LS1	COAL
1106.57	796.70	798.00	1.30	LS2	COAL
1105.27	798.00	864.50	66.50		INTERVAL
1038.77	864.50	866.80	2.30	UH1	COAL
1036.47	866.80	903.90	37.10		INTERVAL
999.37	903.90	905.50	1.60	UH2	COAL
997.77	905.50	915.50	10.00		INTERVAL
987.77	915.50	916.40	.90	UH3	COAL
986.87	916.40	947.30	30.90		INTERVAL
955.97	947.30	948.90	1.60	MH1	COAL
954.37	948.90	1014.30	65.40		INTERVAL
888.97	1014.30	1015.10	.80	MH2	COAL
888.17	1015.10	1063.60	48.50		INTERVAL
839.67	1063.60	1065.00	1.40	P11	COAL
838.27	1065.00	1083.50	18.50		INTERVAL
819.77	1083.50	1085.40	1.90	P10	COAL
817.87	1085.40	1095.50	10.10		INTERVAL
807.77	1095.50	1097.50	2.00	LH1	COAL
805.77	1097.50	1149.70	52.20		INTERVAL
753.57	1149.70	1152.00	2.30	LH3	COAL

CONSOLIDATION COAL COMPANY
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HOLE NO = 01-BP-C -1

DRILL CONTR =

STRATA ELEV (TOP)	STRATA DEPTH FROM	TO	STRATA THICK	SEAM CODE	LITHOLOGY CHARACTERISTICS AND COMMENTS
751.27	1152.00	1207.50	55.50		INTERVAL
695.77	1207.50	1209.00	1.50	P91	COAL
694.27	1209.00	1209.60	.60		INTERVAL
693.67	1209.60	1210.40	.80	P91	COAL
692.87	1210.40	1214.80	4.40		INTERVAL
688.47	1214.80	1215.50	.70	P92	COAL
687.77	1215.50	1260.80	45.30		INTERVAL
642.47	1260.80	1263.50	2.70	P81	COAL
639.77	1263.50	1322.30	58.80		INTERVAL
580.97	1322.30	1323.00	.70	P71	COAL
580.27	1323.00	1392.70	69.70		INTERVAL
510.57	1392.70	1393.30	.60		COAL
509.97	1393.30	1402.90	9.60		INTERVAL
500.37	1402.90	1403.60	.70		COAL
499.67	1403.60	1524.80	121.20		INTERVAL
378.47	1524.80	1525.60	.80	P61	COAL
377.67	1525.60	1535.00	9.40		INTERVAL
368.27	1535.00	1535.50	.50	P62	COAL
367.77	1535.50	1646.50	111.00		INTERVAL
256.77	1646.50	1647.00	.50	P31	COAL
256.27	1647.00	1667.40	20.40		INTERVAL
235.87	1667.40	1668.00	.60	P34	COAL
235.27	1668.00	1713.40	45.40		INTERVAL
189.87	1713.40	1714.00	.60	P21	COAL
189.27	1714.00	1728.20	14.20		INTERVAL
175.07	1728.20	1729.00	.80	P22	COAL
174.27	1729.00	2064.00	335.00		INTERVAL
-160.73	2064.00	2185.30	121.30	URD	SHALE,RED
-282.03	2185.30	2261.90	76.60		INTERVAL
-358.63	2261.90	2486.10	224.20	PRD	SHALE
-582.83	2486.10	2492.00	5.90		INTERVAL
-588.73	2492.00	2494.00	2.00		LIMESTONE
-590.73	2494.00	2514.50	20.50		INTERVAL
-611.23	2514.50	2518.20	3.70		LIMESTONE
-614.93	2518.20	2526.00	7.80		INTERVAL
-622.73	2526.00	2536.50	10.50		SANDSTONE
-633.23	2536.50	2563.20	26.70		INTERVAL
-659.93	2563.20	2569.80	6.60		SANDSTONE

-666.53	2569.80	2636.00	66.20		INTERVAL
-732.73	2636.00	2658.00	22.00	RVC	SANDSTONE WITH SHALE STREAKS
-754.73	2658.00	2728.00	70.00	RVC	SANDSTONE
-824.73	2728.00	2792.00	64.00	AVS	LIMESTONE
-888.73	2792.00	2895.20	103.20	LRD	SHALE,RED
-991.93	2895.20	2991.00	95.80		INTERVAL
-1087.73	2991.00	3038.00	47.00	RD	SHALE,RED
-1134.73	3038.00	3070.80	32.80	UMX	SANDSTONE
-1167.53	3070.80	3176.00	105.20		INTERVAL
-1272.73	3176.00	3179.50	3.50		SANDSTONE
-1276.23	3179.50	3242.00	62.50		INTERVAL
-1338.73	3242.00	3256.00	14.00		SANDSTONE
-1352.73	3256.00	3395.50	139.50		INTERVAL
-1492.23	3395.50	3452.50	57.00	MMX	SANDSTONE
-1549.23	3452.50	3465.50	13.00		INTERVAL

CONSOLIDATION COAL COMPANY
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HOLE NO = 01-BP-C -1

DRILL CONTR =

STRATA ELEV (TOP)	STRATA DEPTH FROM	TO	STRATA THICK	SEAM CODE	LITHOLOGY	CHARACTERISTICS AND COMMENTS
-1562.23	3465.50	3471.20	5.70		SANDSTONE	
-1567.93	3471.20	3476.00	4.80		INTERVAL	
-1572.73	3476.00	3482.00	6.00		LIMESTONE	
-1578.73	3482.00	3513.00	31.00		INTERVAL	
-1609.73	3513.00	3547.50	34.50	SMX	SANDSTONE	
-1644.23	3547.50	3561.50	14.00	SMX	SANDSTONE	
-1658.23	3561.50	3566.00	4.50		INTERVAL	
-1662.73	3566.00	3570.00	4.00		LIMESTONE	
-1666.73	3570.00	3603.00	33.00		INTERVAL	
-1699.73	3603.00	3640.10	37.10		CARBONATE CEMENTED SANDSTONE	
-1736.83	3640.10	3660.20	20.10		INTERVAL	
-1756.93	3660.20	3746.00	85.80	LMX	SANDSTONE	
-1842.73	3746.00	3830.90	84.90		INTERVAL	
-1927.63	3830.90	3853.00	22.10	LLM	LIMESTONE	
-1949.73	3853.00	3873.80	20.80	LLM	INTERVAL	
-1970.53	3873.80	3902.00	28.20	LLM	LIMESTONE	
-1998.73	3902.00	3983.30	81.30		INTERVAL	
-2080.03	3983.30	4626.00	642.70	BLM	LIMESTONE	
-2722.73	4626.00	4655.50	29.50		INTERVAL	
-2752.23	4655.50	4674.00	18.50		LIMESTONE	
-2770.73	4674.00	4820.00	146.00		INTERVAL	
-2916.73	4820.00	4834.30	14.30	WER	SANDSTONE WITH SHALE STREAKS	
-2931.03	4834.30	4848.00	13.70	WER	LIMESTONE	
-2944.73	4848.00	4863.30	15.30	WER	SANDSTONE WITH SHALE STREAKS	
-2960.03	4863.30	4865.70	2.40	WER	SANDSTONE WITH SHALE STREAKS	
-2962.43	4865.70	4879.30	13.60	WER	SANDSTONE WITH SHALE STREAKS	
-2976.03	4879.30	4930.00	50.70		INTERVAL	
-3026.73	4930.00	5236.00	306.00	SUN	SHALE	
-3332.73	5236.00	5268.00	32.00	SUN	SHALE	
-3364.73	5268.00	5293.00	25.00	COF	BLACK SHALE	
-3389.73	5293.00	5299.50	6.50	BER	SANDSTONE	
-3396.23	5299.50	5307.00	7.50	BER	SANDSTONE	
-3403.73	5307.00	5309.00	2.00	BER	SANDSTONE	
-3405.73	5309.00	5624.00	315.00	DSH	SHALE	
				BOTTOM HOLE		
-3720.73			5624.00			

CONSOLIDATION COAL COMPANY
UNKNOWN
BUCHANAN/VP - GS (475)

*** GEOLOGIST LOG ***
HOLE NO = VA- -203-

STATE = VIRGINIA COUNTY = BUCHANAN TWP = RANGE = SECT = 00

S ELEV = 1979.80 HOW DET = EDM USGS QUAD = BIG A MT. USGS SIZE = UNKNOWN

N-COOR = 294133. E-COOR = 970266. SOURCE = STATE LOC CODE = TELMETER ELOG = 8

MERIDIAN = 999 SECT-NUM = CONTR = SEXTON BROS. DRILLER = BILL SEXTON DRILL CODE = UNKNOWN

FLUID = UNKNOWN FLOW = NONE CEMENTED = UNKNOWN WRAPPING = UNKNOWN CONTAINER = UNKNOWN

CORE COND. = UNKNOWN UNITS = ENGLISH SURFACE AZIMUTH DEG = .00 SURFACE DIP DEG = .00

INSPECTOR = DATE DRILLED = TO 100178 DATA SOURCE =

COMMENTS =

*** DATA ENTERED IN TO-DEPTHS ***

STRATA ELEV (TOP)	STRATA DEPTH FROM	TO	STRATA THICK	SEAM CODE	LITHOLOGY	CHARACTERISTICS AND COMMENTS
1979.80	.00	30.00	30.00		SURFACE CASING,OVERBURDEN	
1949.80	30.00	33.80	3.80		SHALE W/SS STK,DRK GRY	IPY IKY SPC
1946.00	33.80	34.95	1.15	RA2	COAL	BOS BKN CRH NTP NBM
1944.85	34.95	35.90	.95	RA2	COAL	NRC
1943.90	35.90	36.40	.50		FIRECLAY,DARK GRAY	
1943.40	36.40	36.90	.50		SANDY SHALE,DARK GRAY,MASSIVE	SPC
1942.90	36.90	69.20	32.30		SANDSTONE,GRAY	FUP FLT COS NBM SPC
1910.60	69.20	72.10	2.90		SHALE,DARK GRAY	IPY IKY PLT
1907.70	72.10	77.00	4.90		SANDY SHALE,DARK GRAY,MASSIVE	GLC IPY

1902.80	77.00	81.15	4.15		SHALE,DARK GRAY
SSS PLT SPC					
1898.65	81.15	81.60	.45		IMPURE COAL
NRC					
1898.20	81.60	81.80	.20		SANDY SHALE,DARK GRAY,MASSIVE
1898.00	81.80	93.00	11.20		SANDSTONE,GRAY,W/SHALE STREAKS
MGR FLT SPC					
1886.80	93.00	94.70	1.70		SANDY SHALE,DARK GRAY,MASSIVE
SPC					
1885.10	94.70	95.50	.80		BLACK SHALE
1884.30	95.50	96.75	1.25		SHALE,DARK GRAY
PLT					
1883.05	96.75	97.30	.55	RA3	IMPURE COAL
1882.50	97.30	100.00	2.70		SANDY SHALE,DARK GRAY,MASSIVE
RTD BUR PLT SPC					
1879.80	100.00	109.00	9.00		SANDSTONE,GRAY,W/SHALE STREAKS
MGR FLT					
1870.80	109.00	111.60	2.60		SANDY SHALE,DARK GRAY,MASSIVE
GLC					
1868.20	111.60	115.40	3.80		SHALE W/SS STK,DRK GRY
RTD BUR IPY IKY					
1864.40	115.40	135.60	20.20		SHALE,DARK GRAY
SSS SKD RTD BUR PLT					
1844.20	135.60	136.00	.40		IMPURE COAL
NRC					
1843.80	136.00	140.60	4.60		SHALE,DARK GRAY
SSS RTD BUR PLT SKD					
1839.20	140.60	141.00	.40		IMPURE COAL
NRC					
1838.80	141.00	149.20	8.20		SANDY SHALE,DARK GRAY,MASSIVE
RTD BUR GLC					
1830.60	149.20	159.90	10.70		SHALE W/SS STK,DRK GRY
RTD BUR IPY IKY					
1819.90	159.90	191.00	31.10		SHALE,DARK GRAY
SSS RTD BUR SKD PLT COS					
1788.80	191.00	194.00	3.00		SANDY SHALE,DARK GRAY,MASSIVE
SKD COM SPC					
1785.80	194.00	198.80	4.80		SHALE,DARK GRAY
SKD PLT					
1781.00	198.80	198.92	.12		FIRECLAY,DARK GRAY
COS					
1780.88	198.92	200.35	1.43	JB1	COAL
BOS MID					
1779.45	200.35	203.70	3.35		SANDY SHALE,DARK GRAY,MASSIVE
SPC					
1776.10	203.70	207.10	3.40		SHALE W/SS STK,DRK GRY
1772.70	207.10	208.50	1.40		SHALE,DARK GRAY
SSS					
1771.30	208.50	212.30	3.80		SANDY SHALE,DARK GRAY,MASSIVE
GLC					
1767.50	212.30	232.25	19.95		SANDSTONE,GRAY,W/SHALE STREAKS
FUP COS NBM SPC					
1747.55	232.25	233.15	.90	JB3	COAL
1746.65	233.15	233.40	.25		SHALE,DARK GRAY
1746.40	233.40	286.00	52.60		SANDSTONE,GRAY
QZP SEP ISP COS COM MGR					
1693.80	286.00	287.00	1.00		SANDY SHALE MUDFLOW

CONSOLIDATION COAL COMPANY
UNKNOWN
BUCHANAN/VP - GS (475)

HOLE NO = VA- -203-

DRILL CONTR = SEXTON BROS.

STRATA ELEV (TOP)	STRATA DEPTH FROM	TO	STRATA THICK	SEAM CODE	LITHOLOGY	CHARACTERISTICS AND COMMENTS
1692.80	287.00	301.00	14.00		SANDSTONE,GRAY,W/SHALE STREAKS	QZP SEP ISP COM SPC
1678.80	301.00	304.00	3.00		SHALE,DARK GRAY	SKD IPY PLT SPC RAD
1675.80	304.00	305.00	1.00	T2	COAL	SHY
1674.80	305.00	310.00	5.00		SHALE,DARK GRAY	BLK NBM COS
1669.80	310.00	310.10	.10		IMPURE COAL	
1669.70	310.10	314.10	4.00		SHALE,DARK GRAY	SKD COS
1665.70	314.10	314.60	.50		BLACK SHALE	BKN CRH
1665.20	314.60	315.20	.60		SHALE,DARK GRAY	COS SPC
1664.60	315.20	316.05	.85		COAL	BOS
1663.75	316.05	316.20	.15		COAL	NRC
1663.60	316.20	321.20	5.00		SHALE,DARK GRAY	RTD BUR SDY NBM PLT
1658.60	321.20	324.20	3.00		SHALE W/SS STK,DRK GRY	
1655.60	324.20	335.70	11.50		SANDSTONE,GRAY,W/SHALE STREAKS	ISP IPY FUP
1644.10	335.70	337.00	1.30		SANDY SHALE,DARK GRAY,MASSIVE	
1642.80	337.00	347.40	10.40		SANDSTONE,GRAY	SPC MGR
1632.40	347.40	357.80	10.40		SHALE W/SS STK,DRK GRY	IPY
1622.00	357.80	358.15	.35	TI	BLACK SHALE	
1621.65	358.15	359.10	.95	TI	COAL	BOS BKN NBM
1620.70	359.10	359.60	.50	TI	SHALE,DARK GRAY	SKD
1620.20	359.60	360.06	.46	TI	COAL	
1619.74	360.06	360.50	.44	TI	SHALE,DARK GRAY	
1619.30	360.50	360.70	.20	TI	IMPURE COAL	NRC

1619.10	360.70	361.70	1.00		FIRECLAY,DARK GRAY
SKD					
1618.10	361.70	362.50	.80		SHALE,DARK GRAY
SKD SPC					
1617.30	362.50	398.40	35.90		SANDSTONE,GRAY,W/SHALE STREAKS
MGR SEP ISP COS NBM SPC					
1581.40	398.40	399.60	1.20		SHALE,DARK GRAY
SDY					
1580.20	399.60	422.00	22.40		SHALE W/SS STK,DRK GRY
IPY					
1557.80	422.00	432.70	10.70		SANDY SHALE,DARK GRAY,MASSIVE
FGR					
1547.10	432.70	443.40	10.70		SHALE W/SS STK,DRK GRY
IPY RTD					
1536.40	443.40	450.00	6.60		SANDY SHALE,DARK GRAY,MASSIVE
IPY					
1529.80	450.00	473.00	23.00		SHALE W/SS STK,DRK GRY
IPY SKD NBM					
1506.80	473.00	473.85	.85	US1	COAL
1505.95	473.85	475.00	1.15		SHALE,DARK GRAY
SKD					
1504.80	475.00	476.80	1.80		SANDY SHALE,DARK GRAY,MASSIVE
GLC					
1503.00	476.80	482.00	5.20		SANDSTONE,GRAY
MGR					
1497.80	482.00	485.00	3.00		SANDY SHALE,DARK GRAY,MASSIVE
SDY					
1494.80	485.00	508.70	23.70		SANDSTONE,GRAY
FUP COS NBM					
1471.10	508.70	509.00	.30	LC3	COAL WITH SHALE LAYERS
1470.80	509.00	509.80	.80		SANDY SHALE,DARK GRAY,MASSIVE
1470.00	509.80	512.48	2.68	LC4	COAL
1467.32	512.48	512.58	.10	LC4	COAL
NRC					
1467.22	512.58	513.25	.67		SHALE,DARK GRAY
GLC					
1466.55	513.25	514.50	1.25		SANDY SHALE,DARK GRAY,MASSIVE
GLC					
1465.30	514.50	543.50	29.00		SANDSTONE,GRAY,W/SHALE STREAKS
MGR FLT GLC					
1436.30	543.50	577.10	33.60		INTBD SANDSTONE & SHALE,DRK GRY
1402.70	577.10	581.70	4.60		SHALE W/SS STK,DRK GRY
SDY ABT NTP IPY					
1398.10	581.70	590.40	8.70		SHALE,DARK GRAY
SSS IPY					
1389.40	590.40	600.20	9.80		INTBD SANDSTONE & SHALE,DRK GRY
1379.60	600.20	610.00	9.80		SANDSTONE,GRAY,W/SHALE STREAKS
SHY NTP SPC MGR					
1369.80	610.00	613.60	3.60		SHALE W/SS STK,DRK GRY
IPY PLT					
1366.20	613.60	618.40	4.80		INTBD SANDSTONE & SHALE,DRK GRY
SPC					
1361.40	618.40	621.10	2.70		SHALE W/SS STK,DRK GRY
IPY RTD BUR SPC					
1358.70	621.10	631.20	10.10		SANDSTONE,GRAY,W/SHALE STREAKS
MGR					

CONSOLIDATION COAL COMPANY
UNKNOWN
BUCHANAN/VP - GS (475)

HOLE NO = VA- -203-

DRILL CONTR = SEXTON BROS.

STRATA ELEV (TOP)	STRATA DEPTH FROM	TO	STRATA THICK	SEAM CODE	LITHOLOGY	CHARACTERISTICS AND COMMENTS
1348.60	631.20	640.40	9.20		INTBD SANDSTONE & SHALE,DRK GRY	RTD BUR GLC
1339.40	640.40	643.20	2.80		SHALE W/SS STK,DRK GRY	
1336.60	643.20	647.40	4.20		SHALE,DARK GRAY	SSS NTP
1332.40	647.40	647.43	.03		IMPURE COAL	BNY SHY
1332.37	647.43	647.75	.32		COAL	BKN
1332.05	647.75	648.69	.94		SHALE,DARK GRAY	SSS SKD
1331.11	648.69	648.72	.03		COAL WITH SHALE LAYERS	
1331.08	648.72	649.00	.28		SHALE,DARK GRAY	IPY SKD COS
1330.80	649.00	649.65	.65	GC1	COAL	BOS
1330.15	649.65	649.80	.15		BLACK SHALE	
1330.00	649.80	651.10	1.30		SHALE,DARK GRAY	PLT SKD SSS IPY RTD BUR
1328.70	651.10	652.40	1.30		SANDY SHALE,DARK GRAY,MASSIVE	IPY RTD BUR SPC
1327.40	652.40	713.30	60.90		SANDSTONE,GRAY	CUP SHY SEP ISP NBM SPC
1266.50	713.30	715.30	2.00		SHALE W/SS STK,DRK GRY	GLC
1264.50	715.30	716.80	1.50		SANDY SHALE,DARK GRAY,MASSIVE	GLC
1263.00	716.80	718.10	1.30		SANDSTONE,GRAY,W/SHALE STREAKS	MGR SPC
1261.70	718.10	742.00	23.90		SHALE W/SS STK,DRK GRY	IPY RTD BUR PLT
1237.80	742.00	745.00	3.00		SANDSTONE,GRAY,W/SHALE STREAKS	MGR SPC
1234.80	745.00	747.80	2.80		SANDY SHALE,DARK GRAY,MASSIVE	GLC
1232.00	747.80	752.00	4.20		SANDSTONE,GRAY,W/SHALE STREAKS	MGR SPC
1227.80	752.00	753.00	1.00		SANDY SHALE,DARK GRAY,MASSIVE	

1226.80	753.00	753.80	.80		SHALE,DARK GRAY
PLT SKD					
1226.00	753.80	754.10	.30	SE1	COAL
BOS					
1225.70	754.10	755.00	.90	SE1	COAL
NRC					
1224.80	755.00	756.00	1.00		SHALE,DARK GRAY
SKD PLT					
1223.80	756.00	756.30	.30		FIRECLAY,DARK GRAY
1223.50	756.30	756.60	.30		SHALE,DARK GRAY
SKD					
1223.20	756.60	764.20	7.60		SHALE W/SS STK,DRK GRY
IPY					
1215.60	764.20	767.70	3.50		SANDY FIRECLAY,DARK GRAY
IPY GLC					
1212.10	767.70	779.70	12.00		SHALE W/SS STK,DRK GRY
IPY					
1200.10	779.70	780.18	.48	SE2	IMPURE COAL
BKN CRH					
1199.62	780.18	780.28	.10	SE2	SHALE,DARK GRAY
PLT SKD					
1199.52	780.28	780.37	.09	SE2	IMPURE COAL
BKN CRH					
1199.43	780.37	782.90	2.53	SE2	COAL
BNY SHY NRC					
1196.90	782.90	784.50	1.60		SHALE,DARK GRAY
COS NBM PLT ABT SKD GLC					
1195.30	784.50	808.10	23.60		SHALE W/SS STK,DRK GRY
IPY IKY RTD BUR PLT					
1171.70	808.10	809.90	1.80		SANDY SHALE,DARK GRAY,MASSIVE
PLT RTD BUR					
1169.90	809.90	812.00	2.10		SHALE,DARK GRAY
SSS NTP PLT RTD BUR					
1167.80	812.00	812.27	.27	LS1	IMPURE COAL
BNY SHY					
1167.53	812.27	817.00	4.73		SHALE W/SS STK,DRK GRY
PLT RTD BUR IPY					
1162.80	817.00	820.90	3.90		SANDY SHALE,DARK GRAY,MASSIVE
PLT RTD BUR IPY					
1158.90	820.90	828.00	7.10		SHALE W/SS STK,DRK GRY
COS RTD BUR PLT IPY SKD					
1151.80	828.00	828.19	.19	LS2	IMPURE COAL
BNY					
1151.61	828.19	829.53	1.34	LS2	COAL
BOS					
1150.27	829.53	829.76	.23	LS2	COAL WITH SHALE LAYERS
1150.04	829.76	830.20	.44		SHALE,DARK GRAY
PLT					
1149.60	830.20	836.00	5.80		SANDY SHALE,DARK GRAY,MASSIVE
RTD BUR PLT IPY IKY					
1143.80	836.00	838.60	2.60		SANDSTONE,GRAY,W/SHALE STREAKS
MGR LFS					
1141.20	838.60	840.80	2.20		SANDY SHALE,DARK GRAY,MASSIVE
IPY RTD BUR PLT					
1139.00	840.80	849.00	8.20		INTBD SANDSTONE & SHALE,DRK GRY
RIP IPY RTD BUR XBD					

1130.80	849.00	860.80	11.80		SHALE W/SS STK,DRK GRY
IPY RTD BUR					
1119.00	860.80	862.60	1.80		SANDSTONE,GRAY,W/SHALE STREAKS
MGR					
1117.20	862.60	891.50	28.90		SANDY SHALE,DARK GRAY,MASSIVE
IPY IKY					

CONSOLIDATION COAL COMPANY
UNKNOWN
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HOLE NO = VA- -203-

DRILL CONTR = SEXTON BROS.

STRATA ELEV (TOP)	STRATA DEPTH FROM	TO	STRATA THICK	SEAM CODE	LITHOLOGY
CHARACTERISTICS AND COMMENTS					
1088.30	891.50	892.62	1.12	LS3	IMPURE COAL
BKN CRH					
1087.18	892.62	893.70	1.08	LS3	COAL
NRC					
1086.10	893.70	895.00	1.30		SHALE,DARK GRAY
1084.80	895.00	897.80	2.80		SANDY SHALE,DARK GRAY,MASSIVE
IPY SPC					
1082.00	897.80	907.40	9.60		SANDSTONE,GRAY,W/SHALE STREAKS
MGR SHY NBM					
1072.40	907.40	911.30	3.90		SANDY SHALE,DARK GRAY,MASSIVE
IPY SPC					
1068.50	911.30	936.90	25.60		SANDSTONE,GRAY
COS MID SEP NBM CGR					
1042.90	936.90	944.55	7.65		SHALE W/SS STK,DRK GRY
IPY SKD PLT					
1035.25	944.55	945.10	.55	UH2	COAL
BNY BKN					
1034.70	945.10	945.45	.35	UH2	BONE
BKN					
1034.35	945.45	945.88	.43		SANDY FIRECLAY,DARK GRAY
1033.92	945.88	951.50	5.62		SANDY SHALE,DARK GRAY,MASSIVE
PLT GLC					
1028.30	951.50	959.70	8.20		SANDSTONE,GRAY,W/SHALE STREAKS
MGR COS IPY					
1020.10	959.70	963.00	3.30		SHALE W/SS STK,DRK GRY
IPY COS					
1016.80	963.00	963.38	.38	UH3	COAL
BNY BKN CRH					
1016.42	963.38	963.70	.32	UH3	COAL
NRC					

1016.10	963.70	975.00	11.30		SANDSTONE,GRAY,W/SHALE STREAKS
RIP SHY SPC					
1004.80	975.00	985.00	10.00		SHALE W/SS STK,DRK GRY
IPY PLT					
994.80	985.00	993.10	8.10		INTBD SANDSTONE & SHALE,DRK GRY
IPY ISP SPC					
986.70	993.10	994.05	.95		SHALE,DARK GRAY
COS					
985.75	994.05	995.81	1.76	MH1	COAL WITH SHALE STREAKS
983.99	995.81	998.50	2.69		SANDY SHALE,DARK GRAY,MASSIVE
COS NTP					
981.30	998.50	1009.00	10.50		SANDSTONE,GRAY,W/SHALE STREAKS
MGR SPC					
970.80	1009.00	1026.60	17.60		INTBD SANDSTONE & SHALE,DRK GRY
RTD BUR IPY PLT					
953.20	1026.60	1030.10	3.50		SANDSTONE,GRAY,W/SHALE STREAKS
MGR SHY					
949.70	1030.10	1036.90	6.80		SANDY SHALE,DARK GRAY,MASSIVE
942.90	1036.90	1040.00	3.10		SHALE W/SS STK,DRK GRY
IPY					
939.80	1040.00	1048.10	8.10		INTBD SANDSTONE & SHALE,DRK GRY
IPY					
931.70	1048.10	1070.50	22.40		SHALE W/SS STK,DRK GRY
IPY					
909.30	1070.50	1070.90	.40		IMPURE COAL
NRC					
908.90	1070.90	1071.80	.90		SHALE,DARK GRAY
COS NRC					
908.00	1071.80	1072.80	1.00	MH2	COAL
NRC					
907.00	1072.80	1080.20	7.40		SANDY SHALE,DARK GRAY,MASSIVE
899.60	1080.20	1084.00	3.80		SHALE W/SS STK,DRK GRY
CLS MID					
895.80	1084.00	1114.30	30.30		SANDSTONE,GRAY,W/SHALE STREAKS
MGR COS NBM					
865.50	1114.30	1117.00	2.70		SANDY SHALE,DARK GRAY,MASSIVE
IPY					
862.80	1117.00	1117.40	.40		BLACK SHALE
862.40	1117.40	1119.56	2.16	P11	COAL WITH SHALE STREAKS
BKN					
860.24	1119.56	1119.89	.33		SHALE,DARK GRAY
COS BKN					
859.91	1119.89	1119.94	.05		BONE
BKN					
859.86	1119.94	1120.46	.52		SHALE,DARK GRAY
COS BKN					
859.34	1120.46	1121.15	.69	113	BONE WITH SHALE LAYERS
858.65	1121.15	1125.00	3.85		SANDY SHALE,DARK GRAY,MASSIVE
SPC					
854.80	1125.00	1130.00	5.00		SANDSTONE,GRAY,W/SHALE STREAKS
MGR LFS					
849.80	1130.00	1131.00	1.00		SANDY SHALE,DARK GRAY,MASSIVE
848.80	1131.00	1132.90	1.90		SANDSTONE,GRAY,W/SHALE STREAKS
MGR GLC					
846.90	1132.90	1135.00	2.10		SANDY SHALE,DARK GRAY,MASSIVE
IPY					
844.80	1135.00	1135.20	.20		BLACK SHALE

844.60	1135.20	1135.80	.60	P10	IMPURE COAL
844.00	1135.80	1141.00	5.20		SANDY SHALE,DARK GRAY,MASSIVE PLT RTD BUR
838.80	1141.00	1141.20	.20		IMPURE COAL
838.60	1141.20	1144.00	2.80		SHALE W/SS STK,DRK GRY IPY
835.80	1144.00	1148.70	4.70		SANDSTONE,GRAY,W/SHALE STREAKS MGR GLC

CONSOLIDATION COAL COMPANY
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HOLE NO = VA- -203-

DRILL CONTR = SEXTON BROS.

STRATA ELEV (TOP)	STRATA DEPTH FROM	TO	STRATA THICK	SEAM CODE	LITHOLOGY CHARACTERISTICS AND COMMENTS
831.10	1148.70	1150.00	1.30		SHALE W/SS STK,DRK GRY
829.80	1150.00	1152.00	2.00		SANDSTONE,GRAY,W/SHALE STREAKS MGR
827.80	1152.00	1153.00	1.00		SANDY SHALE,DARK GRAY,MASSIVE
826.80	1153.00	1155.00	2.00		SANDSTONE,GRAY,W/SHALE STREAKS MGR
824.80	1155.00	1156.80	1.80		SHALE W/SS STK,DRK GRY IPY
823.00	1156.80	1158.15	1.35	LH1	COAL
821.65	1158.15	1158.30	.15	LH1	SHALE,DARK GRAY
821.50	1158.30	1159.38	1.08	LH1	COAL BNY SHY
820.42	1159.38	1167.10	7.72		SHALE W/SS STK,DRK GRY IPY PLT
812.70	1167.10	1173.10	6.00		SANDY SHALE,DARK GRAY,MASSIVE IPY
806.70	1173.10	1174.80	1.70		SHALE W/SS STK,DRK GRY IPY GLC
805.00	1174.80	1175.60	.80		SHALE,DARK GRAY GLC
804.20	1175.60	1177.00	1.40		SANDY SHALE,DARK GRAY,MASSIVE
802.80	1177.00	1204.60	27.60		SANDSTONE,GRAY,W/SHALE STREAKS MGR
775.20	1204.60	1213.00	8.40		SANDY SHALE,DARK GRAY,MASSIVE IPY SKD PLT
766.80	1213.00	1221.00	8.00		SANDSTONE,GRAY,W/SHALE STREAKS GLC MGR
758.80	1221.00	1247.30	26.30		SANDY SHALE,DARK GRAY,MASSIVE RTD BUR IPY GLC

732.50	1247.30	1260.00	12.70		SHALE W/SS STK,DRK GRY
IPY GLC					
719.80	1260.00	1266.00	6.00		SHALE,DARK GRAY
IPY SKD PLT SPC					
713.80	1266.00	1267.80	1.80		BLACK SHALE
712.00	1267.80	1269.25	1.45	P91	COAL
BOS SHY MID					
710.55	1269.25	1269.45	.20	P91	SHALE,DARK GRAY
710.35	1269.45	1270.10	.65	P91	COAL
BNY					
709.70	1270.10	1274.60	4.50		SHALE,DARK GRAY
RTD PLT					
705.20	1274.60	1275.50	.90	P92	COAL
704.30	1275.50	1275.80	.30	P92	BONE
704.00	1275.80	1276.60	.80	P92	SHALE,DARK GRAY
PLT					
703.20	1276.60	1277.10	.50	P92	IMPURE COAL
702.70	1277.10	1277.50	.40		BLACK SHALE
702.30	1277.50	1278.00	.50		SANDY SHALE,DARK GRAY,MASSIVE
701.80	1278.00	1308.30	30.30		SANDSTONE,GRAY,W/SHALE STREAKS
CUP SPC					
671.50	1308.30	1313.80	5.50		SHALE W/SS STK,DRK GRY
IPY SPC					
666.00	1313.80	1314.44	.64		COAL
BOS BKN					
665.36	1314.44	1315.20	.76		SHALE,DARK GRAY
COL SKD					
664.60	1315.20	1315.70	.50		COAL
BNY SHY					
664.10	1315.70	1316.15	.45		SHALE,DARK GRAY
SKD COS					
663.65	1316.15	1316.64	.49	P81	COAL
663.16	1316.64	1320.50	3.86		SANDY SHALE,DARK GRAY,MASSIVE
SHY NTP PLT IPY IKY					
659.30	1320.50	1322.80	2.30		SANDSTONE,GRAY,W/SHALE STREAKS
MGR GLC					
657.00	1322.80	1327.20	4.40		SHALE W/SS STK,DRK GRY
IPY SKD PLT					
652.60	1327.20	1330.30	3.10		SANDSTONE,GRAY,W/SHALE STREAKS
MGR GLC					
649.50	1330.30	1332.00	1.70		SHALE W/SS STK,DRK GRY
GLC					
647.80	1332.00	1333.70	1.70		SANDY SHALE,DARK GRAY,MASSIVE
SPC					
646.10	1333.70	1384.00	50.30		SANDSTONE,GRAY,W/SHALE STREAKS
MGR SEP ISP COS ABT NBM					
595.80	1384.00	1386.00	2.00		SHALE W/SS STK,DRK GRY
IPY ISP SPC					
593.80	1386.00	1386.70	.70		BLACK SHALE
593.10	1386.70	1387.10	.40	P72	IMPURE COAL
592.70	1387.10	1388.10	1.00	P72	COAL WITH SHALE LAYERS
BNY NRC					
591.70	1388.10	1392.10	4.00		SHALE W/SS STK,DRK GRY
SKD PLT ABT SPC					
587.70	1392.10	1423.00	30.90		SANDSTONE,GRAY,W/SHALE STREAKS
MGR SPC					

556.80 1423.00 1424.30 1.30 SANDY SHALE,DARK GRAY,MASSIVE
SPC
555.50 1424.30 1427.00 2.70 SANDSTONE,GRAY,W/SHALE STREAKS
MGR SHY NBM SPC
552.80 1427.00 1427.06 .06 IMPURE COAL

CONSOLIDATION COAL COMPANY
UNKNOWN
BUCHANAN/VP - GS (475)

HOLE NO = VA- -203-

DRILL CONTR = SEXTON BROS.

STRATA STRATA DEPTH STRATA SEAM
CHARACTERISTICS
ELEV (TOP) FROM TO THICK CODE LITHOLOGY
AND COMMENTS
552.74 1427.06 1427.61 .55 SHALE,DARK GRAY
SKD PLT
552.19 1427.61 1428.40 .79 IMPURE COAL
BNY
551.40 1428.40 1430.00 1.60 SHALE W/SS STK,DRK GRY
PLT IPY IKY
549.80 1430.00 1430.50 .50 SANDY SHALE,DARK GRAY,MASSIVE
GLC IPY
549.30 1430.50 1433.00 2.50 SANDSTONE,GRAY,W/SHALE STREAKS
MGR GLC
546.80 1433.00 1437.00 4.00 SANDY SHALE,DARK GRAY,MASSIVE
IPY PLT
542.80 1437.00 1437.60 .60 IMPURE COAL
542.20 1437.60 1443.00 5.40 SHALE,DARK GRAY
SSS COS NTP
536.80 1443.00 1449.50 6.50 SANDY SHALE,DARK GRAY,MASSIVE
IPY GLC
530.30 1449.50 1473.00 23.50 SANDSTONE,GRAY
MGR SPC
506.80 1473.00 1475.00 2.00 SHALE,DARK GRAY
RTD BUR IPY
504.80 1475.00 1480.30 5.30 SANDSTONE,GRAY,W/SHALE STREAKS
MGR FGR HRD
499.50 1480.30 1560.00 79.70 HARD SANDSTONE,MASSIVE
MGR FGR QZP SEP RKP NBM
419.80 1560.00 1563.40 3.40 SHALE W/SS STK,DRK GRY
PLT IPY SKD
416.40 1563.40 1579.40 16.00 SANDY SHALE,DARK GRAY,MASSIVE
SKD PLT IPY
400.40 1579.40 1579.60 .20 IMPURE COAL
400.20 1579.60 1580.60 1.00 COAL
NRC

399.20	1580.60	1581.70	1.10		SHALE W/SS STK,DRK GRY
SKD ABT					
398.10	1581.70	1581.90	.20		IMPURE COAL
NRC					
397.90	1581.90	1584.40	2.50		SANDY SHALE,DARK GRAY,MASSIVE
IPY SKD PLT					
395.40°	1584.40	1584.50	.10		IMPURE COAL
NRC					
395.30	1584.50	1585.50	1.00		SANDY SHALE,DARK GRAY,MASSIVE
394.30	1585.50	1585.60	.10		IMPURE COAL
NRC					
394.20	1585.60	1593.40	7.80		SANDY SHALE,DARK GRAY,MASSIVE
IPY PLT					
386.40	1593.40	1593.70	.30	P62	IMPURE COAL
NRC					
386.10	1593.70	1606.00	12.30		SANDY SHALE,DARK GRAY,MASSIVE
IPY SPC					
373.80	1606.00	1660.00	54.00		SANDSTONE,GRAY,W/SHALE STREAKS
CUP SPC					
319.80	1660.00	1666.00	6.00		SANDY SHALE,DARK GRAY,MASSIVE
SPC					
313.80	1666.00	1705.00	39.00		SANDSTONE,GRAY,W/SHALE STREAKS
CUP SPC					
274.80	1705.00	1713.30	8.30		SHALE W/SS STK,DRK GRY
SKD PLT IPY					
266.50	1713.30	1719.00	5.70		SANDY SHALE,DARK GRAY,MASSIVE
IPY					
260.80	1719.00	1720.60	1.60		SANDSTONE,GRAY,W/SHALE STREAKS
MGR					
259.20	1720.60	1743.20	22.60		SANDY SHALE,DARK GRAY,MASSIVE
SKD PLT BLK NBM					
236.60	1743.20	1743.35	.15	P31	IMPURE COAL
236.45	1743.35	1744.00	.65	P31	COAL
BNY SHY					
235.80	1744.00	1745.05	1.05		SHALE,DARK GRAY
IPY SKD PLT NBM					
234.75	1745.05	1745.60	.55	P32	IMPURE COAL
234.20	1745.60	1746.00	.40		SANDY SHALE,DARK GRAY,MASSIVE
IPY SKD PLT GLC					
233.80	1746.00	1772.30	26.30		SANDSTONE,GRAY,W/SHALE STREAKS
MGR COS ABT HRD SPC					
207.50	1772.30	1774.20	1.90		SANDY SHALE,DARK GRAY,MASSIVE
205.60	1774.20	1777.05	2.85		SANDSTONE,GRAY,W/SHALE STREAKS
MGR HRD SPC					
202.75	1777.05	1777.20	.15	P21	IMPURE COAL
202.60	1777.20	1779.00	1.80		SANDY FIRECLAY,DARK GRAY
RTD BUR PLT GLC					
200.80	1779.00	1779.10	.10		IMPURE COAL
NRC					
200.70	1779.10	1788.00	8.90		SANDY SHALE,DARK GRAY,MASSIVE
IPY RTD BUR PLT					
191.80	1788.00	1789.00	1.00	P22	COAL
NRC					
190.80	1789.00	1789.30	.30	P22	FIRECLAY,DARK GRAY
RTD BUR PLT					
190.50	1789.30	1789.60	.30	P22	COAL
NRC					

399.20	1580.60	1581.70	1.10		SHALE W/SS STK,DRK GRY
SKD ABT					
398.10	1581.70	1581.90	.20		IMPURE COAL
NRC					
397.90	1581.90	1584.40	2.50		SANDY SHALE,DARK GRAY,MASSIVE
IPY SKD PLT					
395.40	1584.40	1584.50	.10		IMPURE COAL
NRC					
395.30	1584.50	1585.50	1.00		SANDY SHALE,DARK GRAY,MASSIVE
394.30	1585.50	1585.60	.10		IMPURE COAL
NRC					
394.20	1585.60	1593.40	7.80		SANDY SHALE,DARK GRAY,MASSIVE
IPY PLT					
386.40	1593.40	1593.70	.30	P62	IMPURE COAL
NRC					
386.10	1593.70	1606.00	12.30		SANDY SHALE,DARK GRAY,MASSIVE
IPY SPC					
373.80	1606.00	1660.00	54.00		SANDSTONE,GRAY,W/SHALE STREAKS
CUP SPC					
319.80	1660.00	1666.00	6.00		SANDY SHALE,DARK GRAY,MASSIVE
SPC					
313.80	1666.00	1705.00	39.00		SANDSTONE,GRAY,W/SHALE STREAKS
CUP SPC					
274.80	1705.00	1713.30	8.30		SHALE W/SS STK,DRK GRY
SKD PLT IPY					
266.50	1713.30	1719.00	5.70		SANDY SHALE,DARK GRAY,MASSIVE
IPY					
260.80	1719.00	1720.60	1.60		SANDSTONE,GRAY,W/SHALE STREAKS
MGR					
259.20	1720.60	1743.20	22.60		SANDY SHALE,DARK GRAY,MASSIVE
SKD PLT BLK NBM					
236.60	1743.20	1743.35	.15	P31	IMPURE COAL
236.45	1743.35	1744.00	.65	P31	COAL
BNY SHY					
235.80	1744.00	1745.05	1.05		SHALE,DARK GRAY
IPY SKD PLT NBM					
234.75	1745.05	1745.60	.55	P32	IMPURE COAL
234.20	1745.60	1746.00	.40		SANDY SHALE,DARK GRAY,MASSIVE
IPY SKD PLT GLC					
233.80	1746.00	1772.30	26.30		SANDSTONE,GRAY,W/SHALE STREAKS
MGR COS ABT HRD SPC					
207.50	1772.30	1774.20	1.90		SANDY SHALE,DARK GRAY,MASSIVE
205.60	1774.20	1777.05	2.85		SANDSTONE,GRAY,W/SHALE STREAKS
MGR HRD SPC					
202.75	1777.05	1777.20	.15	P21	IMPURE COAL
202.60	1777.20	1779.00	1.80		SANDY FIRECLAY,DARK GRAY
RTD BUR PLT GLC					
200.80	1779.00	1779.10	.10		IMPURE COAL
NRC					
200.70	1779.10	1788.00	8.90		SANDY SHALE,DARK GRAY,MASSIVE
IPY RTD BUR PLT					
191.80	1788.00	1789.00	1.00	P22	COAL
NRC					
190.80	1789.00	1789.30	.30	P22	FIRECLAY,DARK GRAY
RTD BUR PLT					
190.50	1789.30	1789.60	.30	P22	COAL
NRC					

399.20	1580.60	1581.70	1.10		SHALE W/SS STK,DRK GRY
SKD ABT					
398.10	1581.70	1581.90	.20		IMPURE COAL
NRC					
397.90	1581.90	1584.40	2.50		SANDY SHALE,DARK GRAY,MASSIVE
IPY SKD PLT					
395.40	1584.40	1584.50	.10		IMPURE COAL
NRC					
395.30	1584.50	1585.50	1.00		SANDY SHALE,DARK GRAY,MASSIVE
394.30	1585.50	1585.60	.10		IMPURE COAL
NRC					
394.20	1585.60	1593.40	7.80		SANDY SHALE,DARK GRAY,MASSIVE
IPY PLT					
386.40	1593.40	1593.70	.30	P62	IMPURE COAL
NRC					
386.10	1593.70	1606.00	12.30		SANDY SHALE,DARK GRAY,MASSIVE
IPY SPC					
373.80	1606.00	1660.00	54.00		SANDSTONE,GRAY,W/SHALE STREAKS
CUP SPC					
319.80	1660.00	1666.00	6.00		SANDY SHALE,DARK GRAY,MASSIVE
SPC					
313.80	1666.00	1705.00	39.00		SANDSTONE,GRAY,W/SHALE STREAKS
CUP SPC					
274.80	1705.00	1713.30	8.30		SHALE W/SS STK,DRK GRY
SKD PLT IPY					
266.50	1713.30	1719.00	5.70		SANDY SHALE,DARK GRAY,MASSIVE
IPY					
260.80	1719.00	1720.60	1.60		SANDSTONE,GRAY,W/SHALE STREAKS
MGR					
259.20	1720.60	1743.20	22.60		SANDY SHALE,DARK GRAY,MASSIVE
SKD PLT BLK NBM					
236.60	1743.20	1743.35	.15	P31	IMPURE COAL
236.45	1743.35	1744.00	.65	P31	COAL
BNY SHY					
235.80	1744.00	1745.05	1.05		SHALE,DARK GRAY
IPY SKD PLT NBM					
234.75	1745.05	1745.60	.55	P32	IMPURE COAL
234.20	1745.60	1746.00	.40		SANDY SHALE,DARK GRAY,MASSIVE
IPY SKD PLT GLC					
233.80	1746.00	1772.30	26.30		SANDSTONE,GRAY,W/SHALE STREAKS
MGR COS ABT HRD SPC					
207.50	1772.30	1774.20	1.90		SANDY SHALE,DARK GRAY,MASSIVE
205.60	1774.20	1777.05	2.85		SANDSTONE,GRAY,W/SHALE STREAKS
MGR HRD SPC					
202.75	1777.05	1777.20	.15	P21	IMPURE COAL
202.60	1777.20	1779.00	1.80		SANDY FIRECLAY,DARK GRAY
RTD BUR PLT GLC					
200.80	1779.00	1779.10	.10		IMPURE COAL
NRC					
200.70	1779.10	1788.00	8.90		SANDY SHALE,DARK GRAY,MASSIVE
IPY RTD BUR PLT					
191.80	1788.00	1789.00	1.00	P22	COAL
NRC					
190.80	1789.00	1789.30	.30	P22	FIRECLAY,DARK GRAY
RTD BUR PLT					
190.50	1789.30	1789.60	.30	P22	COAL
NRC					

399.20	1580.60	1581.70	1.10		SHALE W/SS STK,DRK GRY
SKD ABT					
398.10	1581.70	1581.90	.20		IMPURE COAL
NRC					
397.90	1581.90	1584.40	2.50		SANDY SHALE,DARK GRAY,MASSIVE
IPY SKD PLT					
395.40	1584.40	1584.50	.10		IMPURE COAL
NRC					
395.30	1584.50	1585.50	1.00		SANDY SHALE,DARK GRAY,MASSIVE
394.30	1585.50	1585.60	.10		IMPURE COAL
NRC					
394.20	1585.60	1593.40	7.80		SANDY SHALE,DARK GRAY,MASSIVE
IPY PLT					
386.40	1593.40	1593.70	.30	P62	IMPURE COAL
NRC					
386.10	1593.70	1606.00	12.30		SANDY SHALE,DARK GRAY,MASSIVE
IPY SPC					
373.80	1606.00	1660.00	54.00		SANDSTONE,GRAY,W/SHALE STREAKS
CUP SPC					
319.80	1660.00	1666.00	6.00		SANDY SHALE,DARK GRAY,MASSIVE
SPC					
313.80	1666.00	1705.00	39.00		SANDSTONE,GRAY,W/SHALE STREAKS
CUP SPC					
274.80	1705.00	1713.30	8.30		SHALE W/SS STK,DRK GRY
SKD PLT IPY					
266.50	1713.30	1719.00	5.70		SANDY SHALE,DARK GRAY,MASSIVE
IPY					
260.80	1719.00	1720.60	1.60		SANDSTONE,GRAY,W/SHALE STREAKS
MGR					
259.20	1720.60	1743.20	22.60		SANDY SHALE,DARK GRAY,MASSIVE
SKD PLT BLK NBM					
236.60	1743.20	1743.35	.15	P31	IMPURE COAL
236.45	1743.35	1744.00	.65	P31	COAL
BNY SHY					
235.80	1744.00	1745.05	1.05		SHALE,DARK GRAY
IPY SKD PLT NBM					
234.75	1745.05	1745.60	.55	P32	IMPURE COAL
234.20	1745.60	1746.00	.40		SANDY SHALE,DARK GRAY,MASSIVE
IPY SKD PLT GLC					
233.80	1746.00	1772.30	26.30		SANDSTONE,GRAY,W/SHALE STREAKS
MGR COS ABT HRD SPC					
207.50	1772.30	1774.20	1.90		SANDY SHALE,DARK GRAY,MASSIVE
205.60	1774.20	1777.05	2.85		SANDSTONE,GRAY,W/SHALE STREAKS
MGR HRD SPC					
202.75	1777.05	1777.20	.15	P21	IMPURE COAL
202.60	1777.20	1779.00	1.80		SANDY FIRECLAY,DARK GRAY
RTD BUR PLT GLC					
200.80	1779.00	1779.10	.10		IMPURE COAL
NRC					
200.70	1779.10	1788.00	8.90		SANDY SHALE,DARK GRAY,MASSIVE
IPY RTD BUR PLT					
191.80	1788.00	1789.00	1.00	P22	COAL
NRC					
190.80	1789.00	1789.30	.30	P22	FIRECLAY,DARK GRAY
RTD BUR PLT					
190.50	1789.30	1789.60	.30	P22	COAL
NRC					

399.20	1580.60	1581.70	1.10		SHALE W/SS STK,DRK GRY
SKD ABT					
398.10	1581.70	1581.90	.20		IMPURE COAL
NRC					
397.90	1581.90	1584.40	2.50		SANDY SHALE,DARK GRAY,MASSIVE
IPY SKD PLT					
395.40	1584.40	1584.50	.10		IMPURE COAL
NRC					
395.30	1584.50	1585.50	1.00		SANDY SHALE,DARK GRAY,MASSIVE
394.30	1585.50	1585.60	.10		IMPURE COAL
NRC					
394.20	1585.60	1593.40	7.80		SANDY SHALE,DARK GRAY,MASSIVE
IPY PLT					
386.40	1593.40	1593.70	.30	P62	IMPURE COAL
NRC					
386.10	1593.70	1606.00	12.30		SANDY SHALE,DARK GRAY,MASSIVE
IPY SPC					
373.80	1606.00	1660.00	54.00		SANDSTONE,GRAY,W/SHALE STREAKS
CUP SPC					
319.80	1660.00	1666.00	6.00		SANDY SHALE,DARK GRAY,MASSIVE
SPC					
313.80	1666.00	1705.00	39.00		SANDSTONE,GRAY,W/SHALE STREAKS
CUP SPC					
274.80	1705.00	1713.30	8.30		SHALE W/SS STK,DRK GRY
SKD PLT IPY					
266.50	1713.30	1719.00	5.70		SANDY SHALE,DARK GRAY,MASSIVE
IPY					
260.80	1719.00	1720.60	1.60		SANDSTONE,GRAY,W/SHALE STREAKS
MGR					
259.20	1720.60	1743.20	22.60		SANDY SHALE,DARK GRAY,MASSIVE
SKD PLT BLK NBM					
236.60	1743.20	1743.35	.15	P31	IMPURE COAL
236.45	1743.35	1744.00	.65	P31	COAL
BNY SHY					
235.80	1744.00	1745.05	1.05		SHALE,DARK GRAY
IPY SKD PLT NBM					
234.75	1745.05	1745.60	.55	P32	IMPURE COAL
234.20	1745.60	1746.00	.40		SANDY SHALE,DARK GRAY,MASSIVE
IPY SKD PLT GLC					
233.80	1746.00	1772.30	26.30		SANDSTONE,GRAY,W/SHALE STREAKS
MGR COS ABT HRD SPC					
207.50	1772.30	1774.20	1.90		SANDY SHALE,DARK GRAY,MASSIVE
205.60	1774.20	1777.05	2.85		SANDSTONE,GRAY,W/SHALE STREAKS
MGR HRD SPC					
202.75	1777.05	1777.20	.15	P21	IMPURE COAL
202.60	1777.20	1779.00	1.80		SANDY FIRECLAY,DARK GRAY
RTD BUR PLT GLC					
200.80	1779.00	1779.10	.10		IMPURE COAL
NRC					
200.70	1779.10	1788.00	8.90		SANDY SHALE,DARK GRAY,MASSIVE
IPY RTD BUR PLT					
191.80	1788.00	1789.00	1.00	P22	COAL
NRC					
190.80	1789.00	1789.30	.30	P22	FIRECLAY,DARK GRAY
RTD BUR PLT					
190.50	1789.30	1789.60	.30	P22	COAL
NRC					

399.20	1580.60	1581.70	1.10		SHALE W/SS STK,DRK GRY
SKD ABT					
398.10	1581.70	1581.90	.20		IMPURE COAL
NRC					
397.90	1581.90	1584.40	2.50		SANDY SHALE,DARK GRAY,MASSIVE
IPY SKD PLT					
395.40	1584.40	1584.50	.10		IMPURE COAL
NRC					
395.30	1584.50	1585.50	1.00		SANDY SHALE,DARK GRAY,MASSIVE
394.30	1585.50	1585.60	.10		IMPURE COAL
NRC					
394.20	1585.60	1593.40	7.80		SANDY SHALE,DARK GRAY,MASSIVE
IPY PLT					
386.40	1593.40	1593.70	.30	P62	IMPURE COAL
NRC					
386.10	1593.70	1606.00	12.30		SANDY SHALE,DARK GRAY,MASSIVE
IPY SPC					
373.80	1606.00	1660.00	54.00		SANDSTONE,GRAY,W/SHALE STREAKS
CUP SPC					
319.80	1660.00	1666.00	6.00		SANDY SHALE,DARK GRAY,MASSIVE
SPC					
313.80	1666.00	1705.00	39.00		SANDSTONE,GRAY,W/SHALE STREAKS
CUP SPC					
274.80	1705.00	1713.30	8.30		SHALE W/SS STK,DRK GRY
SKD PLT IPY					
266.50	1713.30	1719.00	5.70		SANDY SHALE,DARK GRAY,MASSIVE
IPY					
260.80	1719.00	1720.60	1.60		SANDSTONE,GRAY,W/SHALE STREAKS
MGR					
259.20	1720.60	1743.20	22.60		SANDY SHALE,DARK GRAY,MASSIVE
SKD PLT BLK NBM					
236.60	1743.20	1743.35	.15	P31	IMPURE COAL
236.45	1743.35	1744.00	.65	P31	COAL
BNY SHY					
235.80	1744.00	1745.05	1.05		SHALE,DARK GRAY
IPY SKD PLT NBM					
234.75	1745.05	1745.60	.55	P32	IMPURE COAL
234.20	1745.60	1746.00	.40		SANDY SHALE,DARK GRAY,MASSIVE
IPY SKD PLT GLC					
233.80	1746.00	1772.30	26.30		SANDSTONE,GRAY,W/SHALE STREAKS
MGR COS ABT HRD SPC					
207.50	1772.30	1774.20	1.90		SANDY SHALE,DARK GRAY,MASSIVE
205.60	1774.20	1777.05	2.85		SANDSTONE,GRAY,W/SHALE STREAKS
MGR HRD SPC					
202.75	1777.05	1777.20	.15	P21	IMPURE COAL
202.60	1777.20	1779.00	1.80		SANDY FIRECLAY,DARK GRAY
RTD BUR PLT GLC					
200.80	1779.00	1779.10	.10		IMPURE COAL
NRC					
200.70	1779.10	1788.00	8.90		SANDY SHALE,DARK GRAY,MASSIVE
IPY RTD BUR PLT					
191.80	1788.00	1789.00	1.00	P22	COAL
NRC					
190.80	1789.00	1789.30	.30	P22	FIRECLAY,DARK GRAY
RTD BUR PLT					
190.50	1789.30	1789.60	.30	P22	COAL
NRC					

399.20	1580.60	1581.70	1.10		SHALE W/SS STK,DRK GRY
SKD ABT					
398.10	1581.70	1581.90	.20		IMPURE COAL
NRC					
397.90	1581.90	1584.40	2.50		SANDY SHALE,DARK GRAY,MASSIVE
IPY SKD PLT					
395.40	1584.40	1584.50	.10		IMPURE COAL
NRC					
395.30	1584.50	1585.50	1.00		SANDY SHALE,DARK GRAY,MASSIVE
394.30	1585.50	1585.60	.10		IMPURE COAL
NRC					
394.20	1585.60	1593.40	7.80		SANDY SHALE,DARK GRAY,MASSIVE
IPY PLT					
386.40	1593.40	1593.70	.30	P62	IMPURE COAL
NRC					
386.10	1593.70	1606.00	12.30		SANDY SHALE,DARK GRAY,MASSIVE
IPY SPC					
373.80	1606.00	1660.00	54.00		SANDSTONE,GRAY,W/SHALE STREAKS
CUP SPC					
319.80	1660.00	1666.00	6.00		SANDY SHALE,DARK GRAY,MASSIVE
SPC					
313.80	1666.00	1705.00	39.00		SANDSTONE,GRAY,W/SHALE STREAKS
CUP SPC					
274.80	1705.00	1713.30	8.30		SHALE W/SS STK,DRK GRY
SKD PLT IPY					
266.50	1713.30	1719.00	5.70		SANDY SHALE,DARK GRAY,MASSIVE
IPY					
260.80	1719.00	1720.60	1.60		SANDSTONE,GRAY,W/SHALE STREAKS
MGR					
259.20	1720.60	1743.20	22.60		SANDY SHALE,DARK GRAY,MASSIVE
SKD PLT BLK NBM					
236.60	1743.20	1743.35	.15	P31	IMPURE COAL
236.45	1743.35	1744.00	.65	P31	COAL
BNY SHY					
235.80	1744.00	1745.05	1.05		SHALE,DARK GRAY
IPY SKD PLT NBM					
234.75	1745.05	1745.60	.55	P32	IMPURE COAL
234.20	1745.60	1746.00	.40		SANDY SHALE,DARK GRAY,MASSIVE
IPY SKD PLT GLC					
233.80	1746.00	1772.30	26.30		SANDSTONE,GRAY,W/SHALE STREAKS
MGR COS ABT HRD SPC					
207.50	1772.30	1774.20	1.90		SANDY SHALE,DARK GRAY,MASSIVE
205.60	1774.20	1777.05	2.85		SANDSTONE,GRAY,W/SHALE STREAKS
MGR HRD SPC					
202.75	1777.05	1777.20	.15	P21	IMPURE COAL
202.60	1777.20	1779.00	1.80		SANDY FIRECLAY,DARK GRAY
RTD BUR PLT GLC					
200.80	1779.00	1779.10	.10		IMPURE COAL
NRC					
200.70	1779.10	1788.00	8.90		SANDY SHALE,DARK GRAY,MASSIVE
IPY RTD BUR PLT					
191.80	1788.00	1789.00	1.00	P22	COAL
NRC					
190.80	1789.00	1789.30	.30	P22	FIRECLAY,DARK GRAY
RTD BUR PLT					
190.50	1789.30	1789.60	.30	P22	COAL
NRC					

399.20	1580.60	1581.70	1.10		SHALE W/SS STK,DRK GRY
SKD ABT					
398.10	1581.70	1581.90	.20		IMPURE COAL
NRC					
397.90	1581.90	1584.40	2.50		SANDY SHALE,DARK GRAY,MASSIVE
IPY SKD PLT					
395.40	1584.40	1584.50	.10		IMPURE COAL
NRC					
395.30	1584.50	1585.50	1.00		SANDY SHALE,DARK GRAY,MASSIVE
394.30	1585.50	1585.60	.10		IMPURE COAL
NRC					
394.20	1585.60	1593.40	7.80		SANDY SHALE,DARK GRAY,MASSIVE
IPY PLT					
386.40	1593.40	1593.70	.30	P62	IMPURE COAL
NRC					
386.10	1593.70	1606.00	12.30		SANDY SHALE,DARK GRAY,MASSIVE
IPY SPC					
373.80	1606.00	1660.00	54.00		SANDSTONE,GRAY,W/SHALE STREAKS
CUP SPC					
319.80	1660.00	1666.00	6.00		SANDY SHALE,DARK GRAY,MASSIVE
SPC					
313.80	1666.00	1705.00	39.00		SANDSTONE,GRAY,W/SHALE STREAKS
CUP SPC					
274.80	1705.00	1713.30	8.30		SHALE W/SS STK,DRK GRY
SKD PLT IPY					
266.50	1713.30	1719.00	5.70		SANDY SHALE,DARK GRAY,MASSIVE
IPY					
260.80	1719.00	1720.60	1.60		SANDSTONE,GRAY,W/SHALE STREAKS
MGR					
259.20	1720.60	1743.20	22.60		SANDY SHALE,DARK GRAY,MASSIVE
SKD PLT BLK NBM					
236.60	1743.20	1743.35	.15	P31	IMPURE COAL
236.45	1743.35	1744.00	.65	P31	COAL
BNY SHY					
235.80	1744.00	1745.05	1.05		SHALE,DARK GRAY
IPY SKD PLT NBM					
234.75	1745.05	1745.60	.55	P32	IMPURE COAL
234.20	1745.60	1746.00	.40		SANDY SHALE,DARK GRAY,MASSIVE
IPY SKD PLT GLC					
233.80	1746.00	1772.30	26.30		SANDSTONE,GRAY,W/SHALE STREAKS
MGR COS ABT HRD SPC					
207.50	1772.30	1774.20	1.90		SANDY SHALE,DARK GRAY,MASSIVE
205.60	1774.20	1777.05	2.85		SANDSTONE,GRAY,W/SHALE STREAKS
MGR HRD SPC					
202.75	1777.05	1777.20	.15	P21	IMPURE COAL
202.60	1777.20	1779.00	1.80		SANDY FIRECLAY,DARK GRAY
RTD BUR PLT GLC					
200.80	1779.00	1779.10	.10		IMPURE COAL
NRC					
200.70	1779.10	1788.00	8.90		SANDY SHALE,DARK GRAY,MASSIVE
IPY RTD BUR PLT					
191.80	1788.00	1789.00	1.00	P22	COAL
NRC					
190.80	1789.00	1789.30	.30	P22	FIRECLAY,DARK GRAY
RTD BUR PLT					
190.50	1789.30	1789.60	.30	P22	COAL
NRC					

399.20	1580.60	1581.70	1.10		SHALE W/SS STK,DRK GRY
SKD ABT					
398.10	1581.70	1581.90	.20		IMPURE COAL
NRC					
397.90	1581.90	1584.40	2.50		SANDY SHALE,DARK GRAY,MASSIVE
IPY SKD PLT					
395.40	1584.40	1584.50	.10		IMPURE COAL
NRC					
395.30	1584.50	1585.50	1.00		SANDY SHALE,DARK GRAY,MASSIVE
394.30	1585.50	1585.60	.10		IMPURE COAL
NRC					
394.20	1585.60	1593.40	7.80		SANDY SHALE,DARK GRAY,MASSIVE
IPY PLT					
386.40	1593.40	1593.70	.30	P62	IMPURE COAL
NRC					
386.10	1593.70	1606.00	12.30		SANDY SHALE,DARK GRAY,MASSIVE
IPY SPC					
373.80	1606.00	1660.00	54.00		SANDSTONE,GRAY,W/SHALE STREAKS
CUP SPC					
319.80	1660.00	1666.00	6.00		SANDY SHALE,DARK GRAY,MASSIVE
SPC					
313.80	1666.00	1705.00	39.00		SANDSTONE,GRAY,W/SHALE STREAKS
CUP SPC					
274.80	1705.00	1713.30	8.30		SHALE W/SS STK,DRK GRY
SKD PLT IPY					
266.50	1713.30	1719.00	5.70		SANDY SHALE,DARK GRAY,MASSIVE
IPY					
260.80	1719.00	1720.60	1.60		SANDSTONE,GRAY,W/SHALE STREAKS
MGR					
259.20	1720.60	1743.20	22.60		SANDY SHALE,DARK GRAY,MASSIVE
SKD PLT BLK NBM					
236.60	1743.20	1743.35	.15	P31	IMPURE COAL
236.45	1743.35	1744.00	.65	P31	COAL
BNY SHY					
235.80	1744.00	1745.05	1.05		SHALE,DARK GRAY
IPY SKD PLT NBM					
234.75	1745.05	1745.60	.55	P32	IMPURE COAL
234.20	1745.60	1746.00	.40		SANDY SHALE,DARK GRAY,MASSIVE
IPY SKD PLT GLC					
233.80	1746.00	1772.30	26.30		SANDSTONE,GRAY,W/SHALE STREAKS
MGR COS ABT HRD SPC					
207.50	1772.30	1774.20	1.90		SANDY SHALE,DARK GRAY,MASSIVE
205.60	1774.20	1777.05	2.85		SANDSTONE,GRAY,W/SHALE STREAKS
MGR HRD SPC					
202.75	1777.05	1777.20	.15	P21	IMPURE COAL
202.60	1777.20	1779.00	1.80		SANDY FIRECLAY,DARK GRAY
RTD BUR PLT GLC					
200.80	1779.00	1779.10	.10		IMPURE COAL
NRC					
200.70	1779.10	1788.00	8.90		SANDY SHALE,DARK GRAY,MASSIVE
IPY RTD BUR PLT					
191.80	1788.00	1789.00	1.00	P22	COAL
NRC					
190.80	1789.00	1789.30	.30	P22	FIRECLAY,DARK GRAY
RTD BUR PLT					
190.50	1789.30	1789.60	.30	P22	COAL
NRC					

399.20	1580.60	1581.70	1.10		SHALE W/SS STK,DRK GRY
SKD ABT					
398.10	1581.70	1581.90	.20		IMPURE COAL
NRC					
397.90	1581.90	1584.40	2.50		SANDY SHALE,DARK GRAY,MASSIVE
IPY SKD PLT					
395.40	1584.40	1584.50	.10		IMPURE COAL
NRC					
395.30	1584.50	1585.50	1.00		SANDY SHALE,DARK GRAY,MASSIVE
394.30	1585.50	1585.60	.10		IMPURE COAL
NRC					
394.20	1585.60	1593.40	7.80		SANDY SHALE,DARK GRAY,MASSIVE
IPY PLT					
386.40	1593.40	1593.70	.30	P62	IMPURE COAL
NRC					
386.10	1593.70	1606.00	12.30		SANDY SHALE,DARK GRAY,MASSIVE
IPY SPC					
373.80	1606.00	1660.00	54.00		SANDSTONE,GRAY,W/SHALE STREAKS
CUP SPC					
319.80	1660.00	1666.00	6.00		SANDY SHALE,DARK GRAY,MASSIVE
SPC					
313.80	1666.00	1705.00	39.00		SANDSTONE,GRAY,W/SHALE STREAKS
CUP SPC					
274.80	1705.00	1713.30	8.30		SHALE W/SS STK,DRK GRY
SKD PLT IPY					
266.50	1713.30	1719.00	5.70		SANDY SHALE,DARK GRAY,MASSIVE
IPY					
260.80	1719.00	1720.60	1.60		SANDSTONE,GRAY,W/SHALE STREAKS
MGR					
259.20	1720.60	1743.20	22.60		SANDY SHALE,DARK GRAY,MASSIVE
SKD PLT BLK NBM					
236.60	1743.20	1743.35	.15	P31	IMPURE COAL
236.45	1743.35	1744.00	.65	P31	COAL
BNY SHY					
235.80	1744.00	1745.05	1.05		SHALE,DARK GRAY
IPY SKD PLT NBM					
234.75	1745.05	1745.60	.55	P32	IMPURE COAL
234.20	1745.60	1746.00	.40		SANDY SHALE,DARK GRAY,MASSIVE
IPY SKD PLT GLC					
233.80	1746.00	1772.30	26.30		SANDSTONE,GRAY,W/SHALE STREAKS
MGR COS ABT HRD SPC					
207.50	1772.30	1774.20	1.90		SANDY SHALE,DARK GRAY,MASSIVE
205.60	1774.20	1777.05	2.85		SANDSTONE,GRAY,W/SHALE STREAKS
MGR HRD SPC					
202.75	1777.05	1777.20	.15	P21	IMPURE COAL
202.60	1777.20	1779.00	1.80		SANDY FIRECLAY,DARK GRAY
RTD BUR PLT GLC					
200.80	1779.00	1779.10	.10		IMPURE COAL
NRC					
200.70	1779.10	1788.00	8.90		SANDY SHALE,DARK GRAY,MASSIVE
IPY RTD BUR PLT					
191.80	1788.00	1789.00	1.00	P22	COAL
NRC					
190.80	1789.00	1789.30	.30	P22	FIRECLAY,DARK GRAY
RTD BUR PLT					
190.50	1789.30	1789.60	.30	P22	COAL
NRC					

190.20	1789.60	1793.00	3.40		SANDY SHALE,DARK GRAY,MASSIVE RTD BUR SKD PLT GLC
186.80	1793.00	1797.10	4.10		SHALE W/SS STK,DRK GRY IPY SKD
182.70	1797.10	1812.00	14.90		SANDSTONE,GRAY,W/SHALE STREAKS COS ABT MGR SPC
167.80	1812.00	1819.30	7.30		SANDY SHALE,DARK GRAY,MASSIVE RTD BUR GLC
160.50	1819.30	1825.40	6.10		SHALE W/SS STK,DRK GRY IPY RTD

CONSOLIDATION COAL COMPANY
UNKNOWN
BUCHANAN/VP - GS (475)

HOLE NO = VA- -203-

DRILL CONTR = SEXTON BROS.

STRATA ELEV (TOP)	STRATA DEPTH FROM	TO	STRATA THICK	SEAM CODE	LITHOLOGY CHARACTERISTICS AND COMMENTS
154.40	1825.40	1827.80	2.40		SHALE,DARK GRAY IPY IKY SKD PLT SPC
152.00	1827.80	1865.20	37.40		SANDSTONE,GRAY,W/SHALE STREAKS MGR COS HRD FLT
114.60	1865.20	1885.40	20.20		SHALE W/SS STK,DRK GRY IKY RTD
94.40	1885.40	1932.40	47.00		SANDSTONE,GRAY,W/SHALE STREAKS ISP MGR SEP COM SPC
47.40	1932.40	1934.40	2.00		SANDY SHALE,DARK GRAY,MASSIVE
45.40	1934.40	1935.30	.90		SHALE,DARK GRAY SKD COS PLT
44.50	1935.30	1935.50	.20	SJ3	IMPURE COAL
44.30	1935.50	1936.60	1.10		SANDY SHALE,DARK GRAY,MASSIVE
43.20	1936.60	1943.50	6.90		SANDSTONE,GRAY,W/SHALE STREAKS MGR FLT SPC
36.30	1943.50	1950.70	7.20		SHALE W/SS STK,DRK GRY IPY
29.10	1950.70	1959.50	8.80		SANDSTONE,GRAY,W/SHALE STREAKS MGR FLT
20.30	1959.50	1964.80	5.30		SANDY SHALE,DARK GRAY,MASSIVE IPY SPC
15.00	1964.80	1977.50	12.70		SANDSTONE,GRAY,W/SHALE STREAKS MGR
2.30		1977.50		BOTTOM HOLE	

Appendix E

Results

Log Sheet 1 of 1

EMI PROFESSIONAL SERVICES

SUB-WORK REQUIRED COPY TO CLIENT

SAMPLE LOG SHEET & CHAIN OF CUSTODY

LAB USE ONLY
COC No.:
DATE RECEIVED LAB:

ENVIRONMENTAL MONITORING, INCORPORATED
ENVIRONMENTAL CONSULTANTS ▲ ANALYTICAL LABORATORIES
P.O. Box 1190 ▲ Norton, Virginia 24273 ▲ 276-679-6544

CUSTOMER INFORMATION: Shaded Areas • LAB INFORMATION: White Areas

*CLIENT: CONSOL
BILLING ADDRESS:
*CONTACT:
CITY:
STATE/ZIP
PHONE ( )
FAX ( )
Purchase Order No.

*Required Information

*COLLECTED BY (print): TERRY MEADE
COLLECTOR(S) SIGNATURE(S): Terry Meade

TURN-AROUND (circle): 2 Day (Working Days) | 3 Day (Working Days) | 5 Day (Working Days) | 10 Day (Working Days) | Regular (15 Working Days)

Additional Cost May Apply – Any TAT Not Specified Will Be Regular

*SITE ID: QUARTERLY INJECTION WELLS
CLIENT PROJ. NO.
*EMI PROJECT NO.: 743.15
EMI PROJECT MANAGER: DWP
Special Instructions / QC Requirements & Comments

SAMPLES WILL BE DISPOSED OF IN ACCORDANCE WITH EMI's TERMS & CONDITIONS OR RETURNED TO CLIENT OR Archive for _____ months

*PARAMETER (ANALYSIS REQUESTED): BF Analysis Code | Field pH | Field Temp | Lab Cond. | D.O.

*PRESERVATIVE USED: Cool < 6°C | HNO_3 | HCl | H_2SO_4 | NaOH/ZnAc | Other: | — | — | — | —

Preservation Checked By Date: 2-16-09

	EMI No.	EMI SAMPLE #	*CUSTOMER SAMPLE IDENTIFICATION	*DATE COLLECTED	*TIME COLLECTED	*SAMPLE MATRIX	*No. of CNTRS.	Cool < 6°C	HNO_3	HCl	H_2SO_4	NaOH/ZnAc	Other:	—	—	—	—		REMARKS
1.	34728	947595	N26	2-16-09	9:40	AR	4	X	22		22	7/2		7.4	70		14.29	TM	
2.																			
3.	34287	596	U7	2-16-09	10:30	AR	4	X	22		22	7/2		7.6	70		3.75	TM	
4.																			
5.	34288	597	BALL WELL	2-16-09	11:10	AR	4	X	22		22	7/2		7.0	40		5.20	TM	
6.																			
7.																			QC
8.																			
9.																			
10.																			

Check Shaded Area for Each Parameter Requested on Each Sample
White Area Lab Use Only

QA Review: FEB 16 2009
Anomaly Report Required: JLW

* Hazard Information: (circle) Non Hazard | Flammable | Skin Irritant | Poison B | Unknown

*Relinquished by (sign)	*Date/Time	*Received By (sign)	*Relinquished by (sign)	*Date/Time	*Received By (sign)
Meade	2-16-09 15:45	LAB Collen			1530 RJT 2/17/9
*Relinquished by (sign)	*Date/Time	*Received By (sign)	*Relinquished by (sign)	*Date/Time	*Received By (sign)

Report to be sent (if different than customer information):
NAME:
ADDRESS:
CITY:
STATE/ZIP FAX ( )

*METHOD OF SHIPMENT TO LAB (circle): US MAIL | UPS | FED. EX. | EMI-DIRECT | EMI PICKUP | PERSONAL DELIVERY | OTHER

Temperature of Cooler upon Receipt by Lab: 12 Ice

Customer to complete all shaded categories, use additional forms if necessary

Additional Remarks:

ENVIRONMENTAL MONITORING, INCORPORATED
ENVIRONMENTAL CONSULTANTS ▲ ANALYTICAL LABORATORIES
P.O. BOX 1190 ▲ NORTON, VIRGINIA 24273 ▲ 276/679-6544

Certificate of Analysis

Client Name: CNX GAS COMPANY
Address: 1000 CONSOL ENERGY
CANONSBURG, PA 15317

Report Date: 06/02/09
Lab Sample No.: **947595**
Client No.: 743
EMI Project No.: 15

Sample Identification: N26

Site Description:

Date Collected: 02/16/09
Time Collected: 940
Sample Matrix: AQ
Collected By: T MEADE

Parameter	Sample Result	Units	MDL	Method	Date Analyzed	Time Analyzed	Analyst
Alkalinity	549	mg/l CaCO3	1.00	SM 20TH, 2320B	3/2/2009	1045	RKT
Chloride	7,809	mg/l	2.25	300.0	3/17/2009	2053	TAY
Conductivity	22,240	umhos/cm	0.800	SM 2510B	2/23/2009	750	RKT
Dissolved Oxygen	14.3	mg/l		4500-O G	2/16/2009	940	FLD
Hardness, Total	2,160	mg/l CaCO3	4.00	SM 2340C	2/18/2009	1910	VMY
pH	7.40	STD		SM 20 4500-H+B	2/16/2009	940	FLD
Specific Gravity	1.04			SM 2710F	2/19/2009	1330	TAY
Sulfide	BDL	mg/l	1.00	SM 20 4500-S2-F	2/18/2009	2100	VMY
Total Dissolved Solids	14,420	mg/l	250	SM 2540C	2/19/2009	1330	NCC
Barium, Total	130	mg/l	0.200	200.7	2/26/2009	1056	CHP
Iron, Total	28.2	mg/l	0.013	200.7	2/19/2009	2123	DME
Magnesium, Total	106	mg/l	0.100	200.7	2/19/2009	1418	CHP
Manganese, Total	0.797	mg/l	0.0075	200.7	2/19/2009	2123	DME
Sodium, Total	3,772	mg/l	0.400	200.7	2/19/2009	1418	CHP

To the best of our knowledge and belief, the collection, preservation, and analysis of all parameters represented by this report have been determined to comply the requirements as specified in 40 CFR, Part 136.

Flow if Avaliable (GPM):
Temp. if Available (C): 7.0
Depth if Available (Ft):
Analysis Package Code: BF

Type of Sample: Grab
BDL = Below Detection Limit
FLD = Field Technician
CWOR

ISV = Insufficient Sample Volume

ENVIRONMENTAL MONITORING, INCORPORATED
ENVIRONMENTAL CONSULTANTS ▲ ANALYTICAL LABORATORIES
P.O. BOX 1190 ▲ NORTON, VIRGINIA 24273 ▲ 276/679-6544

Certificate of Analysis

Client Name: CNX GAS COMPANY
Address: 1000 CONSOL ENERGY
CANONSBURG, PA 15317

Report Date: 06/02/09
Lab Sample No.: **947596**
Client No.: 743
EMI Project No.: 15

Sample Identification: U-7

Site Description:

Date Collected: 02/16/09
Time Collected: 1030
Sample Matrix: AQ
Collected By: T MEADE

Parameter	Sample Result	Units	MDL	Method	Date Analyzed	Time Analyzed	Analyst
Alkalinity	137	mg/l CaCO3	1.00	SM 20TH, 2320B	3/2/2009	1045	RKT
Chloride	62,383	mg/l	9.00	300.0	3/19/2009	1333	TAY
Conductivity	130,800	umhos/cm	0.800	SM 2510B	2/23/2009	750	RKT
Dissolved Oxygen	3.75	mg/l		4500-O G	2/16/2009	1030	FLD
Hardness, Total	23,560	mg/l CaCO3	20.0	SM 2340C	2/18/2009	1910	VMY
[illegible]	7.10	STD		SM 20 4500-H+B	2/16/2009	1030	FL[illegible]
Specific Gravity	1.07			SM 2710F	2/19/2009	1330	TAY
Sulfide	BDL	mg/l	1.00	SM 20 4500-S2-F	2/18/2009	2100	VMY
Total Dissolved Solids	115,560	mg/l	250	SM 2540C	2/19/2009	1330	NCC
Barium, Total	1,184	mg/l	0.200	200.7	2/26/2009	1100	CHP
Iron, Total	46.4	mg/l	0.013	200.7	2/19/2009	2127	DME
Magnesium, Total	1,113	mg/l	0.100	200.7	2/19/2009	1421	CHP
Manganese, Total	1.43	mg/l	0.0075	200.7	2/19/2009	2127	DME
Sodium, Total	26,470	mg/l	0.400	200.7	2/19/2009	1421	CHP

To the best of our knowledge and belief, the collection, preservation, and analysis of all parameters represented by this report have been determined to comply the requirements as specified in 40 CFR, Part 136.

Flow if Avaliable (GPM):
Temp. if Available (C): 7.0
Depth if Available (Ft):
Analysis Package Code: BF

Type of Sample: Grab
BDL = Below Detection Limit
FLD = Field Technician
CWOR

ISV = Insufficient Sample Volume

ENVIRONMENTAL MONITORING, INCORPORATED
ENVIRONMENTAL CONSULTANTS ▲ ANALYTICAL LABORATORIES
P.O. BOX 1190 ▲ NORTON, VIRGINIA 24273 ▲ 276/679-6544

Certificate of Analysis

Client Name: CNX GAS COMPANY
Address: 1000 CONSOL ENERGY
CANONSBURG, PA 15317

Report Date: 06/02/09
Lab Sample No.: **947597**
Client No.: 743
EMI Project No.: 15

Sample Identification: BALL

Site Description:

Date Collected: 02/16/09
Time Collected: 1110
Sample Matrix: AQ
Collected By: T MEADE

Parameter	Sample Result	Units	MDL	Method	Date Analyzed	Time Analyzed	Analyst
Alkalinity	178	mg/l CaCO3	1.00	SM 20TH, 2320B	3/2/2009	1045	RKT
Chloride	73,207	mg/l	13.5	300.0	3/4/2009	1756	JLW
Conductivity	119,700	umhos/cm	0.800	SM 2510B	2/23/2009	750	RKT
Dissolved Oxygen	5.20	mg/l		4500-O G	2/16/2009	1110	FLD
Hardness, Total	21,280	mg/l CaCO3	20.0	SM 2340C	2/18/2009	1910	VMY
pH	7.00	STD		SM 20 4500-H+B	2/16/2009	1110	FLD
Specific Gravity	1.05			SM 2710F	2/19/2009	1330	TAY
Sulfide	BDL	mg/l	1.00	SM 20 4500-S2-F	2/18/2009	2100	VMY
Total Dissolved Solids	100,660	mg/l	250	SM 2540C	2/19/2009	1330	NCC
Barium, Total	1,344	mg/l	0.200	200.7	2/26/2009	1104	CHP
Iron, Total	49.9	mg/l	0.013	200.7	2/19/2009	2130	DME
Magnesium, Total	966	mg/l	0.100	200.7	2/19/2009	1424	CHP
Manganese, Total	2.16	mg/l	0.0075	200.7	2/19/2009	2130	DME
Sodium, Total	23,280	mg/l	0.400	200.7	2/19/2009	1424	CHP

To the best of our knowledge and belief, the collection, preservation, and analysis of all parameters represented by this report have been determined to comply the requirements as specified in 40 CFR, Part 136.

Flow if Avaliable (GPM):
Temp. if Available (C): 4.0
Depth if Available (Ft):
Analysis Package Code: BF

Type of Sample: Grab
BDL = Below Detection Limit
FLD = Field Technician
CWOR

ISV = Insufficient Sample Volume

HALLIBURTON

HALLIBURTON ENERGY SERVICES

Stimulation Quality Control Check List

Company: BPC
Lease: bpc bpc-1
Fluid Type: 70 Q Delta Foam Frac
MSDS Sheets given to: ON FILE

Date: 2/27/01
Ticket #: 1213502 1213503

NAME	DESCRIPTION	CHEMICAL AMOUNTS ON LOCATION REQUIRED	BEFORE	AFTER	USED
NEM	Surfactant	96	150	72	78
LGC	Gelling Agent	80	150	70	80
GBW-30	Breaker	11	50	46	4
BE-6	Scale Chek	42	4	-2	6
BC-140	Crosslinker	26	10	10	0
ACID	0.15	11	2000	0	2000
HAI-OS	Corrosion Inhibtor	2	2	1	1
FE-2	Iron Control	200	200	0	200
ClayFix II	Clay Control	75	150	37	113
FE-1A	Iron Control	10	10	0	10
FERCHEKA	Iron Control	10	10	0	10

FLUID ON LOCATION **TOTAL: gallons or bbls** 1260

Start Tank	Start Volume	Start Tank	Start Volume	Ending Tank	Ending Volume	Ending Tank	Ending Volume
1	210			1	90		
2	210			2	90		
3	210			3	90		
4	210			4	90		
5	210						
6	210						

* All frac tanks have been inspected before job? Yes X No ___ Condition GOOD
* Analysis of source water has been performed ? Yes ___ No X
* Tank fluid properties prior to the job ? Temp 40 pH 6 Color CLEAR

Proppant Analysis:

	Weight			Percentage
Total Sample:	50.4	gms		0.5
16	Sieve Number	0	gms	0.0
20	Sieve Number	0.7	gms	1.4
30	Sieve Number	25.6	gms	50.8
35	Sieve Number	14.7	gms	29.2
40	Sieve Number	6.4	gms	12.7
50	Sieve Number	2.8	gms	5.6
	Pan	0.2	gms	0.4

Gelled fluid properties:

Volume	cps	Temp	pH
	9.5	38	6
	11	38	6

Proppant on location ___ Lbs Batch ___ On-Fly X

* Weight ticket given to Co. Rep.? Yes ___ No X
* Cross-link Pilot test ? Yes X No ___
*Wet samples caught ? Yes X No ___
* Dry proppant samples caught ? Yes X No ___

Visual of proppant on loc : X
Visual of chemicals on loc: X

Comments:

Halliburton Representative: JOHN HINES
Company Representative: RICK TOOTHMAN

TICKET	1213502	1213503	PE DATA SHEET				
COMPANY	BPC	DATE	2/27/01	WELL CODE		NAME	
well	bpc-1	DAY OF WK	TUESDAY	WELL TYPE		MBU NO.	
LEASE	bpc	TIME ON LOC	0.29166667	JOB CODE		CSG OD	
FIELD	HONAKER	TIME OFF LOC	1			CSG WT	
COUNTY	RUSSELL	HR ON LOC	17:00			TBG OD	
STATE	VA	HES ON LOC	20	TOTAL MHRS	14.16667	TBG WT	
NO OF STGS	4	HHP ON LOC	1100	FRAC PLUGS			

	STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5	TOTALS	1 st Stage
FORMATION	BEREA	WEIR	MAXON	RAVEN			
TOP.PERF	5300.0	4863.0	3414.0	2670.0			
BOT. PERF	5308.0	4866.0	3558.0	2721.0			
SHOTS/ FT.							
MID . PERF	5304	4864.5	3486	2695.5	0		
PLUGS @		4890	2762				
PLUG/BAFFLE	PLUG	PLUG	PLUG				
PRE PAD	81	16	55	69			
PAD VOL.	28	15	40	27			2 nd Stage
DELTA STAGE	NO	NO	NO	NO			
STIM FLUID	FOAM	FOAM	FOAM	FOAM			
TREAT VOL	199	73	190	181	0		
CLEAN VOL	272	165	715	166			
DIRTY VOL	297	146	260	226			
DELTA FLUID	0	0	0	0	0	0	
FLUSH TYPE	H2O/ACID	H2O/ACID	H2O	FOAM			
FLUSH VOL	70	58	30	18			
TOTAL CLN VOL	342	223	745	184	0	1,494	3rd Stage
N2 VOL	477,000	166,000	456,000	395,000		1,606,000	
COOLDOWN	28,000	28,000	28,000	28,000		112,000	
Perf Balls Used	NO	NO	NO	NO		0	
Foamer Type	NEM	NEM	NEM	NEM			
Flush Fluid Type	FLUSH	FLUSH	FLUSH	FLUSH			
Any Quick Flushes?	N	N	N	N			
PROP NAME	SAND	SAND	SAND	SAND			
PROP SIZE	20/40	20/40	20/40	20/40			
PLACED	214	80	411	393		1098	4 th Stage
DESIGNED	214	75	400	386		1075	
PROP FBK?	N	N	YES	N			
MAX CONC	10.4	13.7	13.6	12.0			
AVE RATE	6.7	4.7	7.1	7.1			
BKDN PRES	1128	4019	NVB	3105			
AVE. PRES	1815	1574	3693	2839			
MAX.PRES	2315	4019	4372	3154			
ISIP PRES	1123	811	2692	1858			
5 MIN	1075	N/A	2422	1519			5 th Stage
10 MIN	1059	N/A	2349	1504			
FRAC GRAD	0.64	0.60	1.21	1.12	0.00		
AVE.RT\DOW.HL	16	10.5	7.5	27			
Max DH Sand Conc	3.9	2.3	5.3	4			
CUST.INDEX	3	3	3	3			
MECH BKD	N						
SAFETY INC	]N						
ENV INC	N						
START TIME							
END TIME							Gen.Comments
JOB TIME	0:00	0:00	0:00	0:00	0:00		
PUMP TIME	0:00	0:00	0:00	0:00	0:00		
						0	
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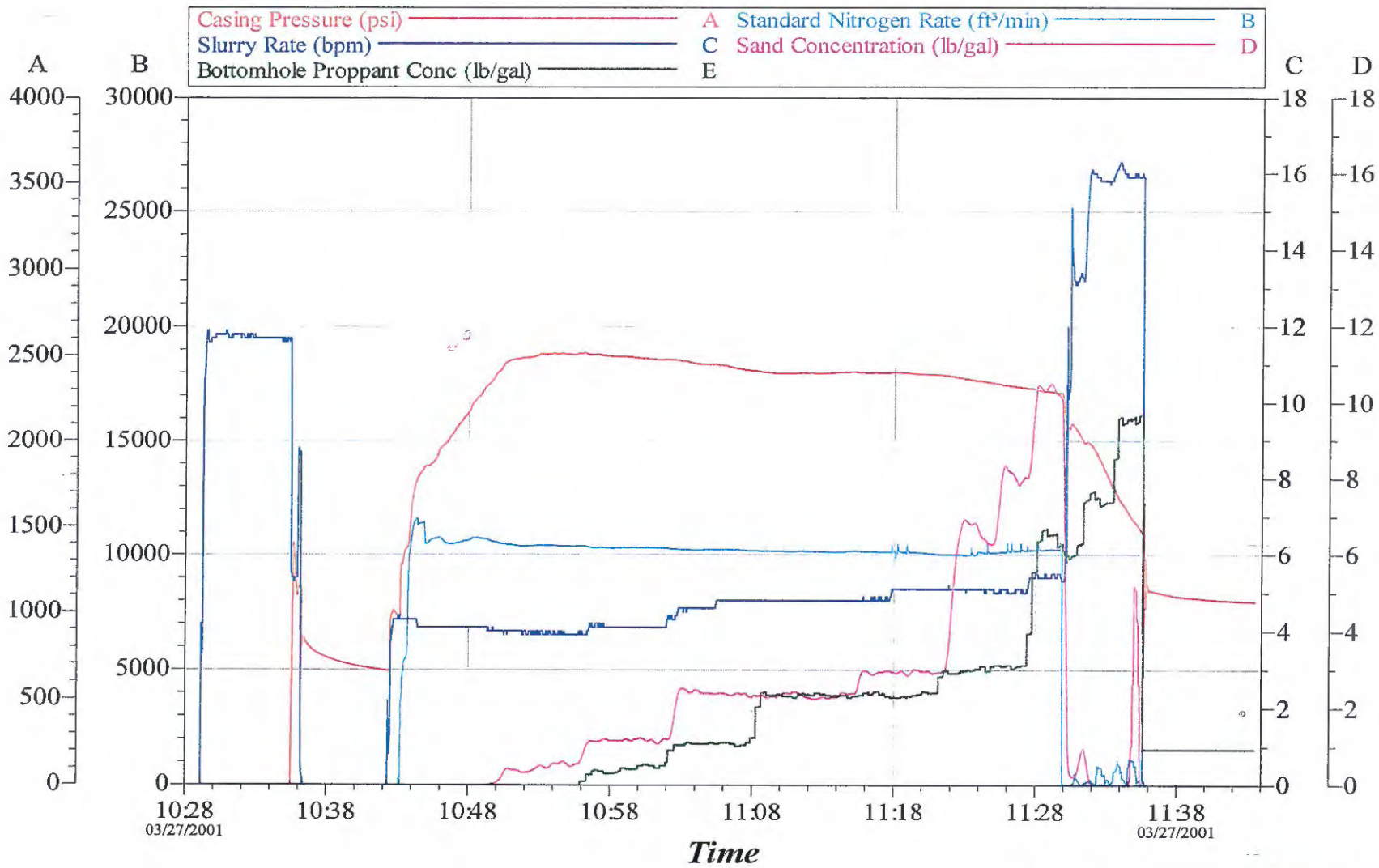


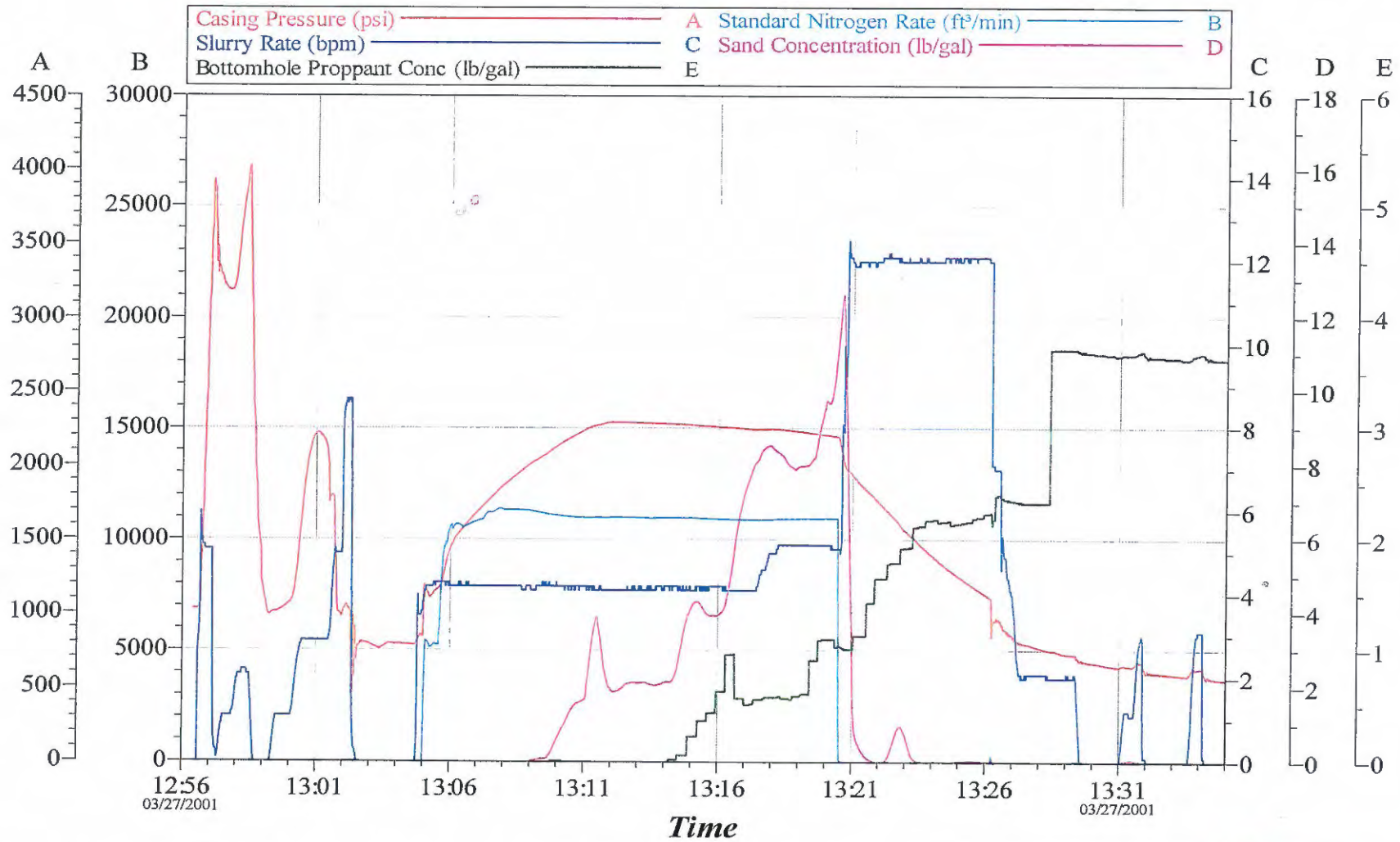
Customer: BPC Well Description: BPC-1 214 sks 20/40 Sand	Job Date: 27-MAR-2001 Formation: Berea	Ticket #: 1213502 Stage 1 of 4

HALLIBUI

TG Version G:
02-Apr-01 09

RTON

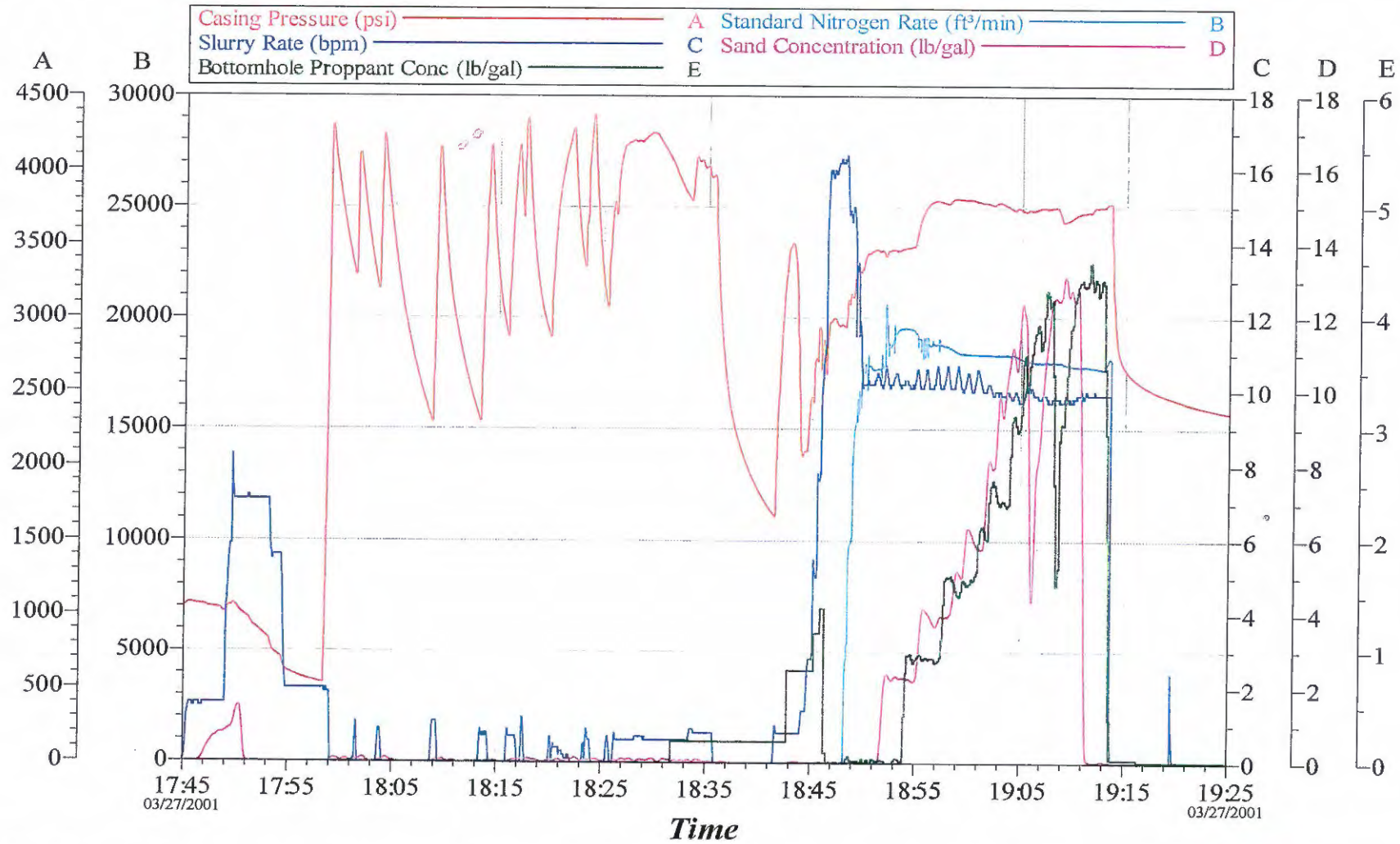
3.2.1
:25



Customer: BPC Well Description: BPC-1 80 sks 20/40 Sand	Job Date: 27-MAR-2001 Formation: Weir	Ticket #: 1213502.1 Stage 2 of 4

HALLIBURTON

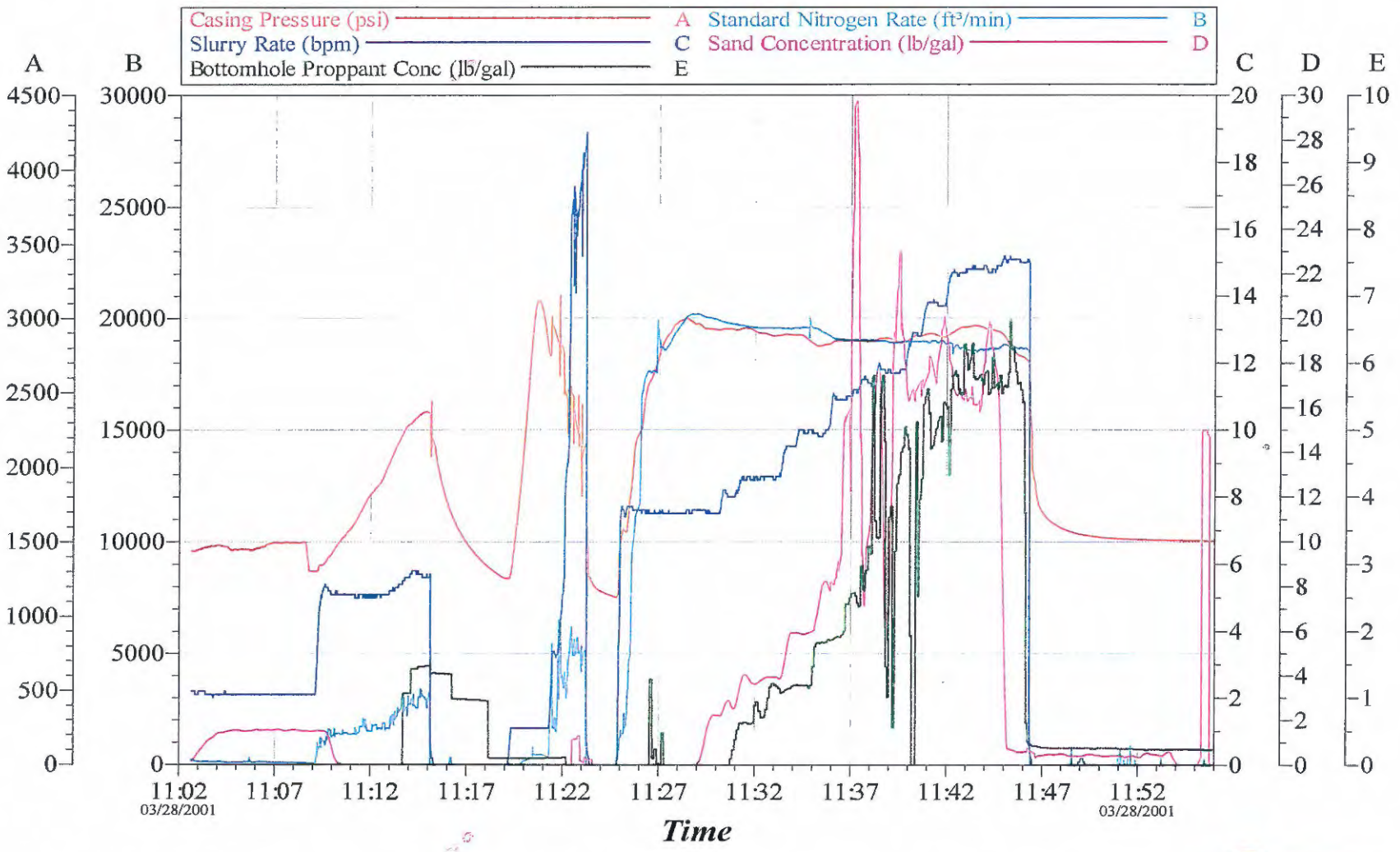
TG Version G3.2.1
02-Apr-01 09:34



Customer: BPC Well Description: BPC-1 411 sks 20/40 Sand	Job Date: 27-MAR-2001 Formation: Maxon	Ticket #: 1213502.4 Stage 3 of 4

HALLIBURTON

TG Version G3.2.1
02-Apr-01 09:36



Customer: BPC Well Description: BPC-1 393 sks 20/40 Sand	Job Date: 28-MAR-2001 Formation: Raven	Ticket #: 1213502.5 Stage 4 of 4

HALLIBURTON

TG Version G3.2.1
02-Apr-01 09:52

WELL SERVICES INC

GAMMA RAY - CEMENT BOND - CCL VDL LOG

FILING NO.

COMPANY BUCHANAN PRODUCTION COMPANY

WELL BPC BPC-01

FIELD RUSSELL

COUNTY RUSSELL STATE VA.

LOCATION:

SEC TWP RGE

OTHER SERV:

PERMANENT DATUM: ELEV:

ELEVATION:

KB.

DF.

GL.

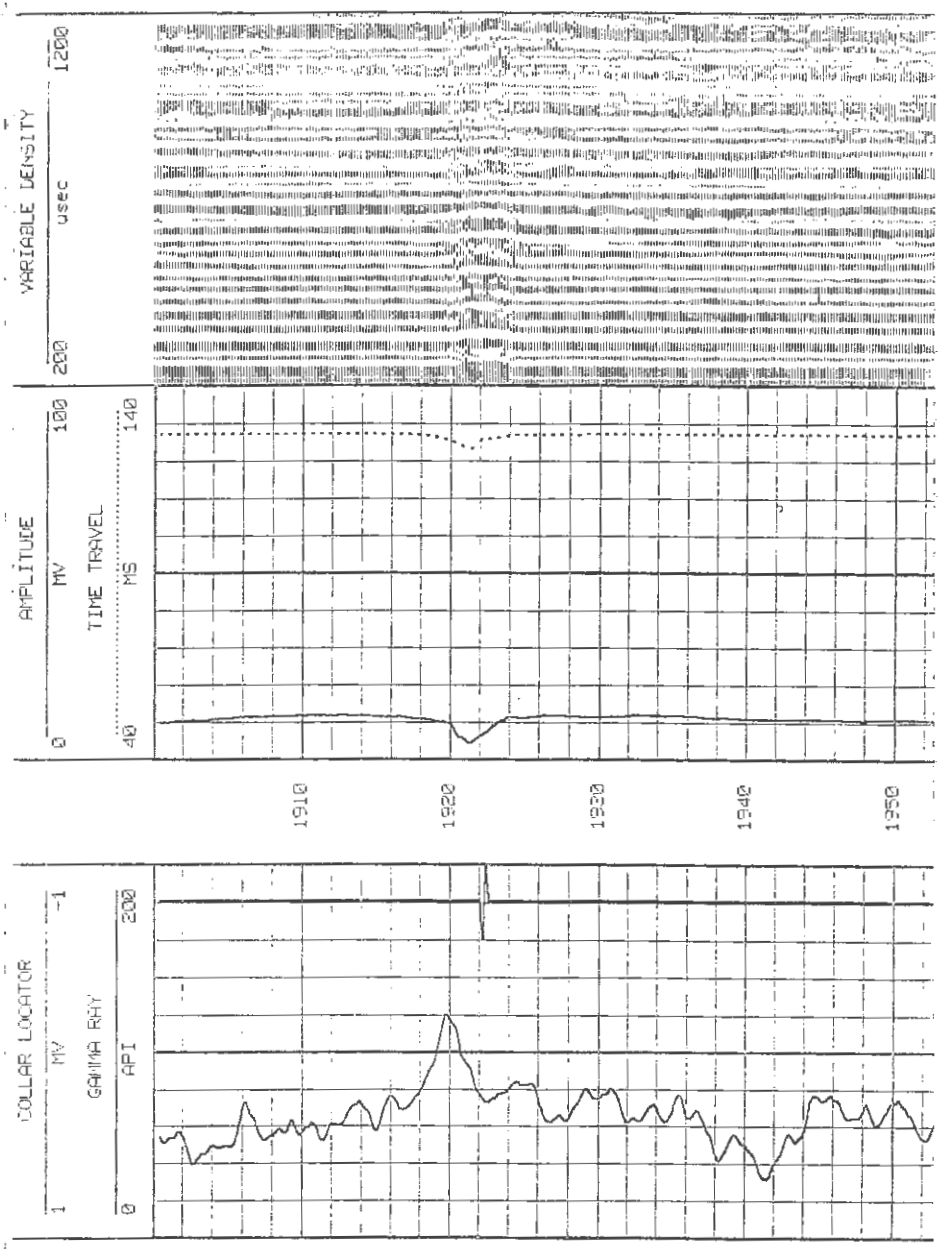
LOG MEASURED FROM FT ABOVE PERM DATUM

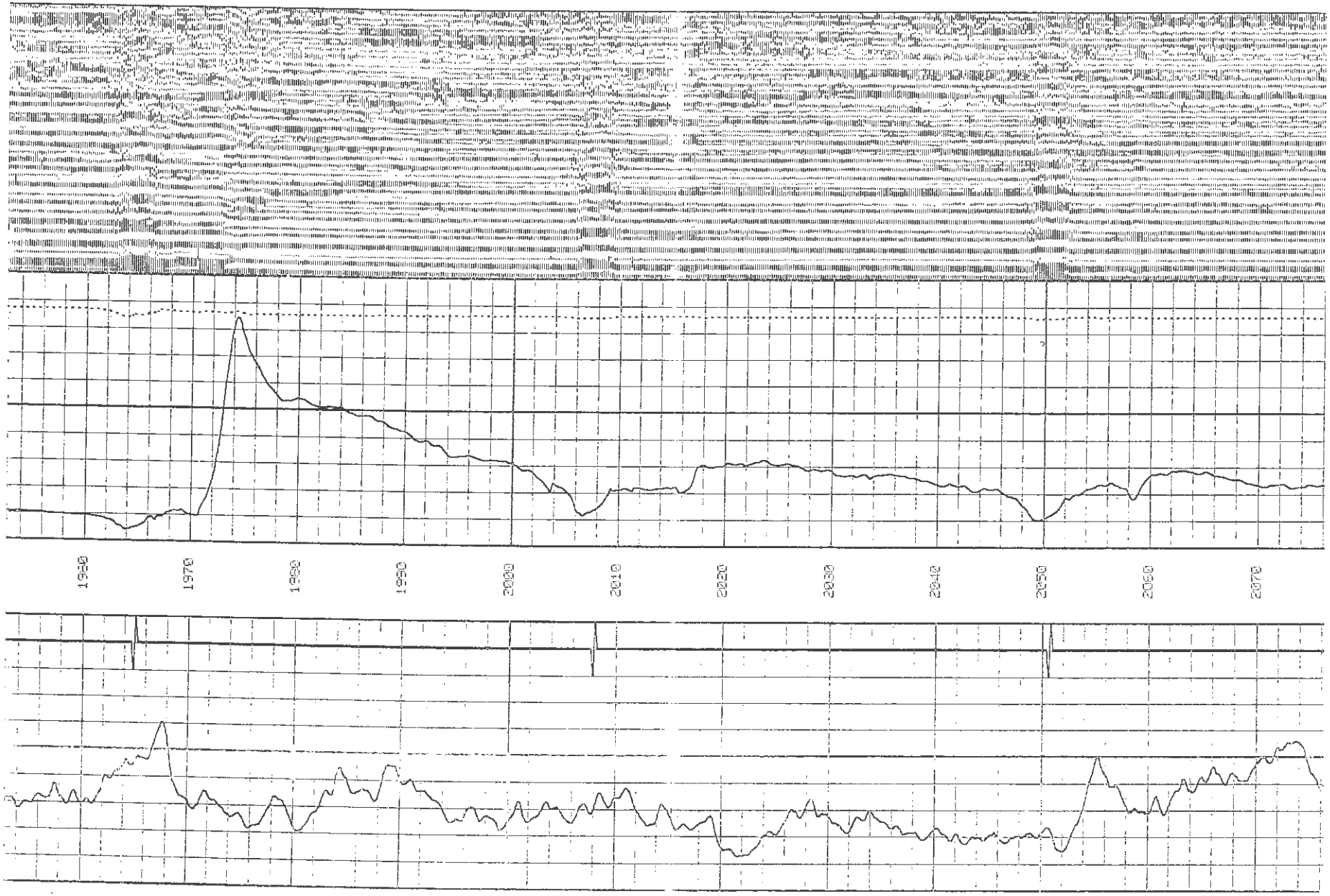
DRILLING MEASURED FROM

DATE	03-13-01		
RUN NO.	ONE		
DEPTH - DRILLER	5463'		
DEPTH - LOGGER	5455'		
BOTTOM LOGGED INT	5449'		
TOP LOGGED INT	1900'		
TYPE FLUID IN HOLE	WATER		
SALINITY PPM CL.			
DENSITY			
LEVEL	SURFACE		
MAX TEMP DEG F			
OPERATING RIG TIME	3 HOURS		
OPERATOR	R.N.MOSELEY		
WITNESSED BY	MR. WARD		

RUN	BORE HOLE RECORD			CASING RECORD			
NO.	BIT	FROM	TO	SIZE	WGT.	FROM	TO
ONE				4.5"		0	T.D

START DEPTH 1900FT DATE: 12-29-98 TIME: 7:17a FILE: BPC01 PLAYBACK PROGRAM

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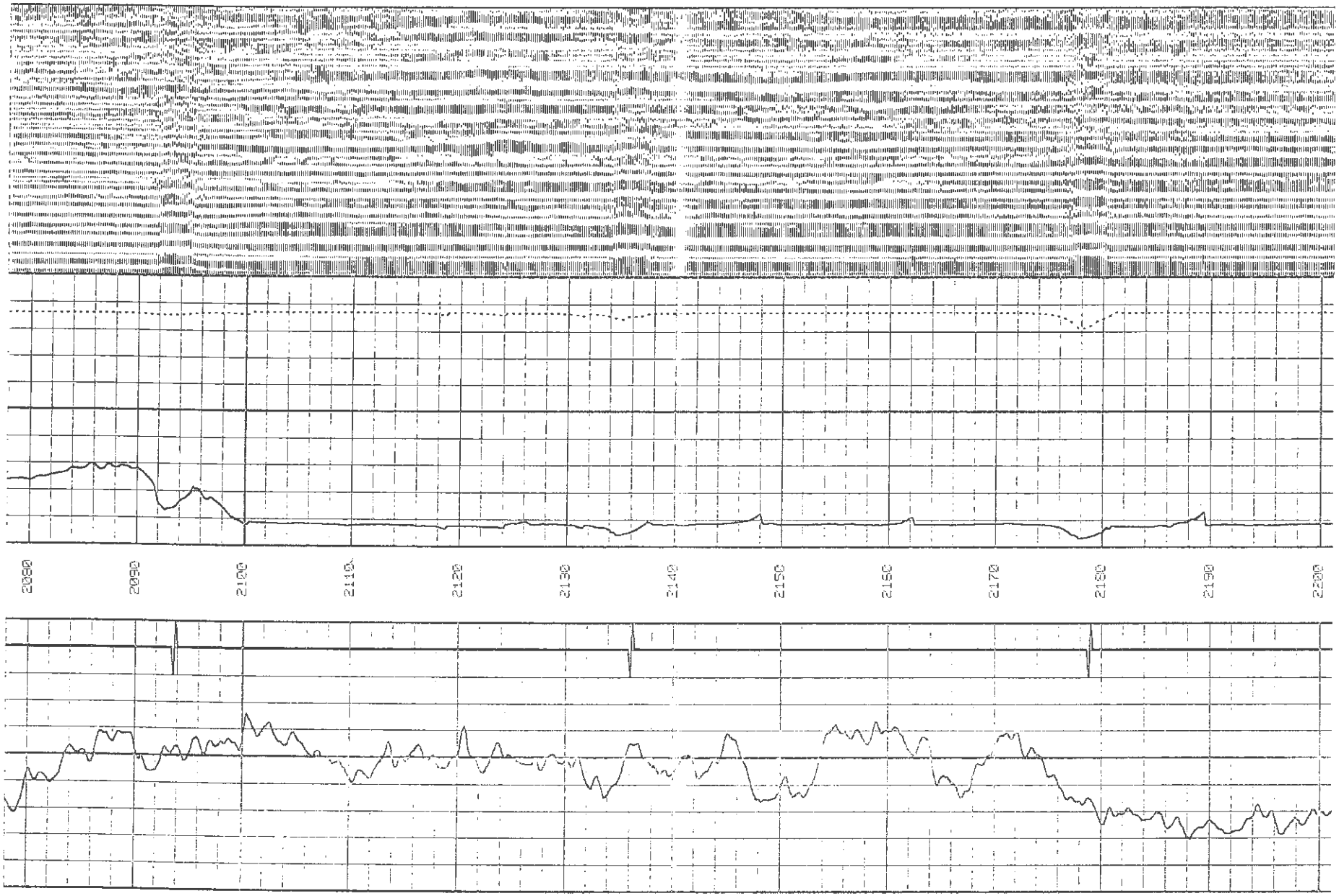
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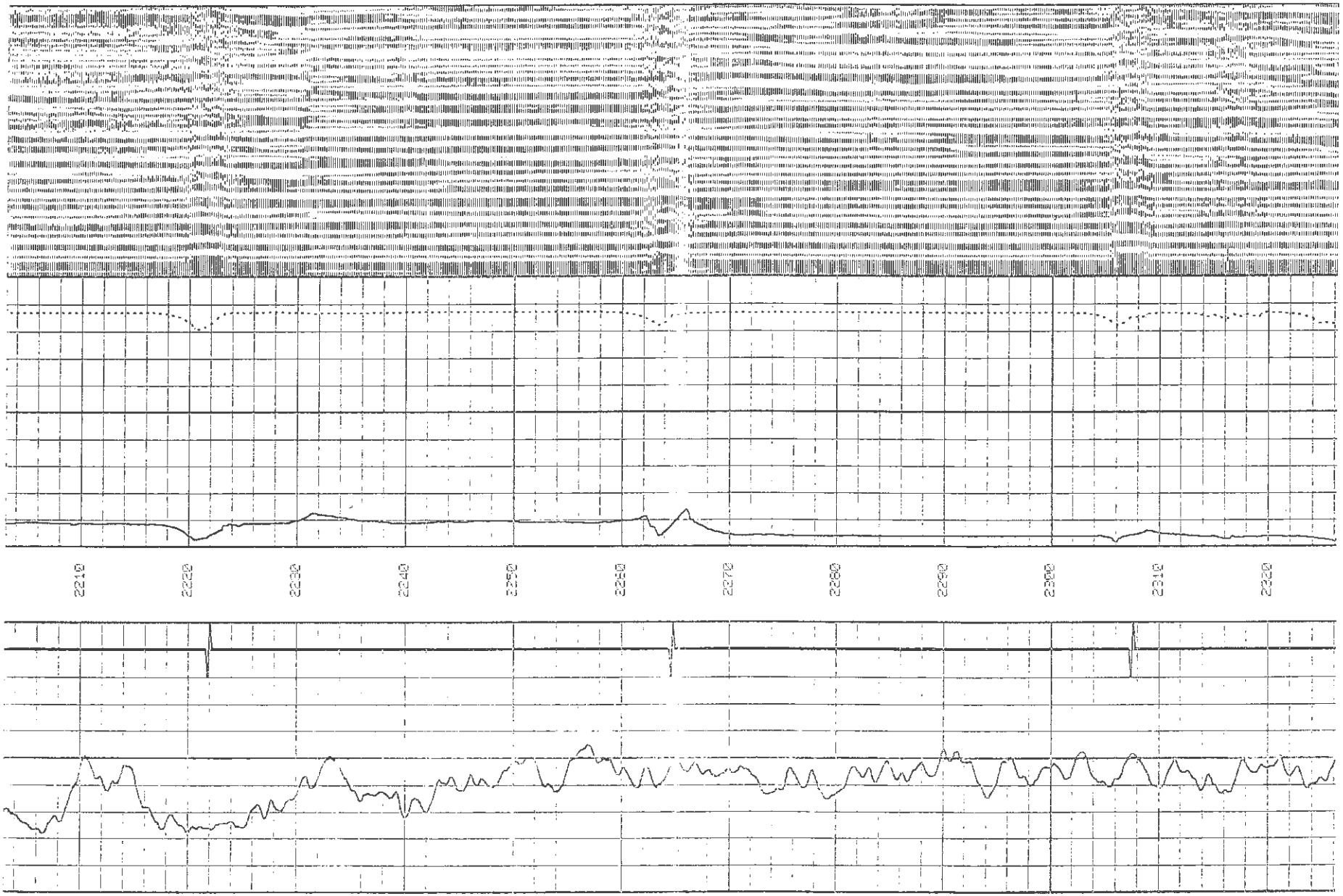
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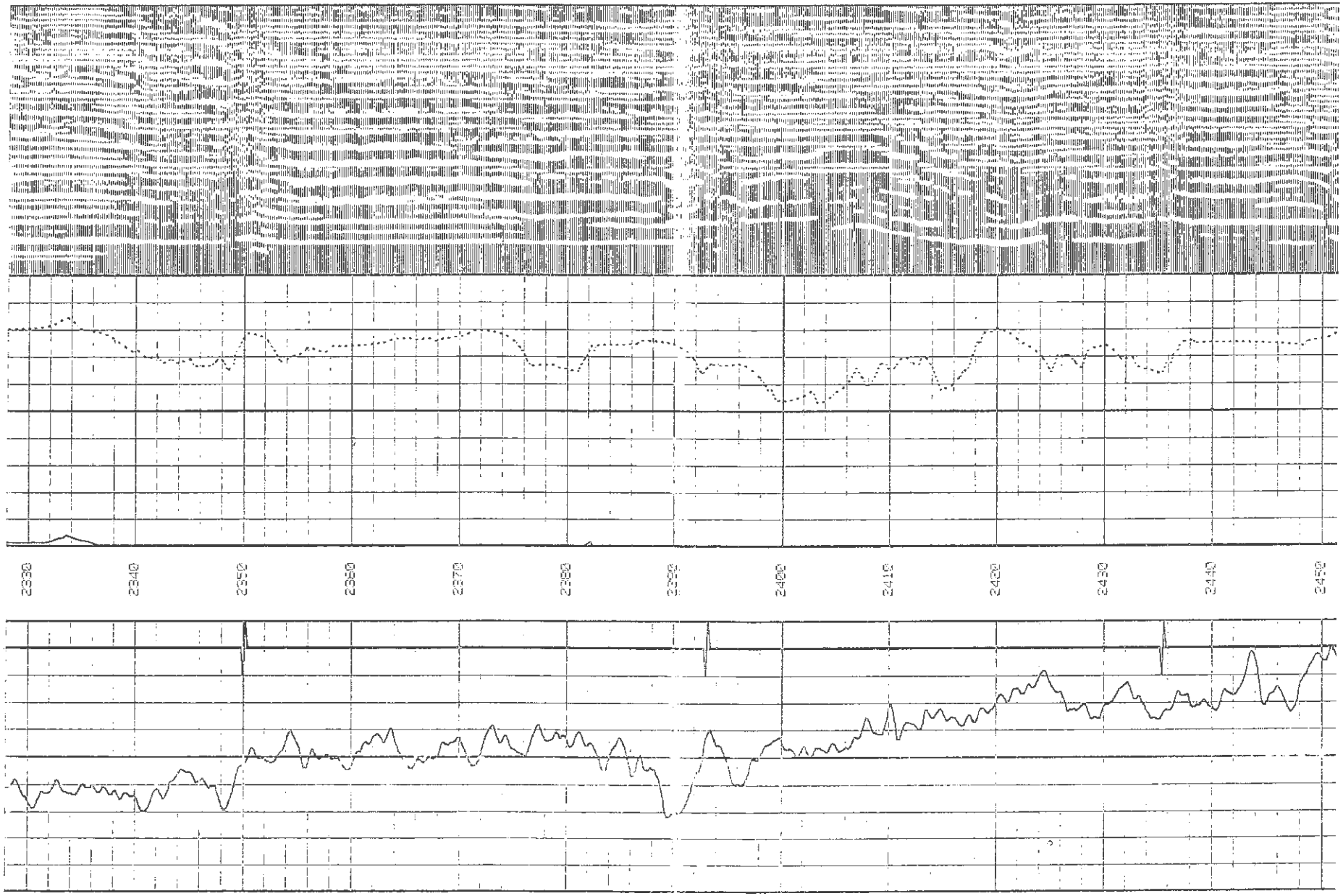
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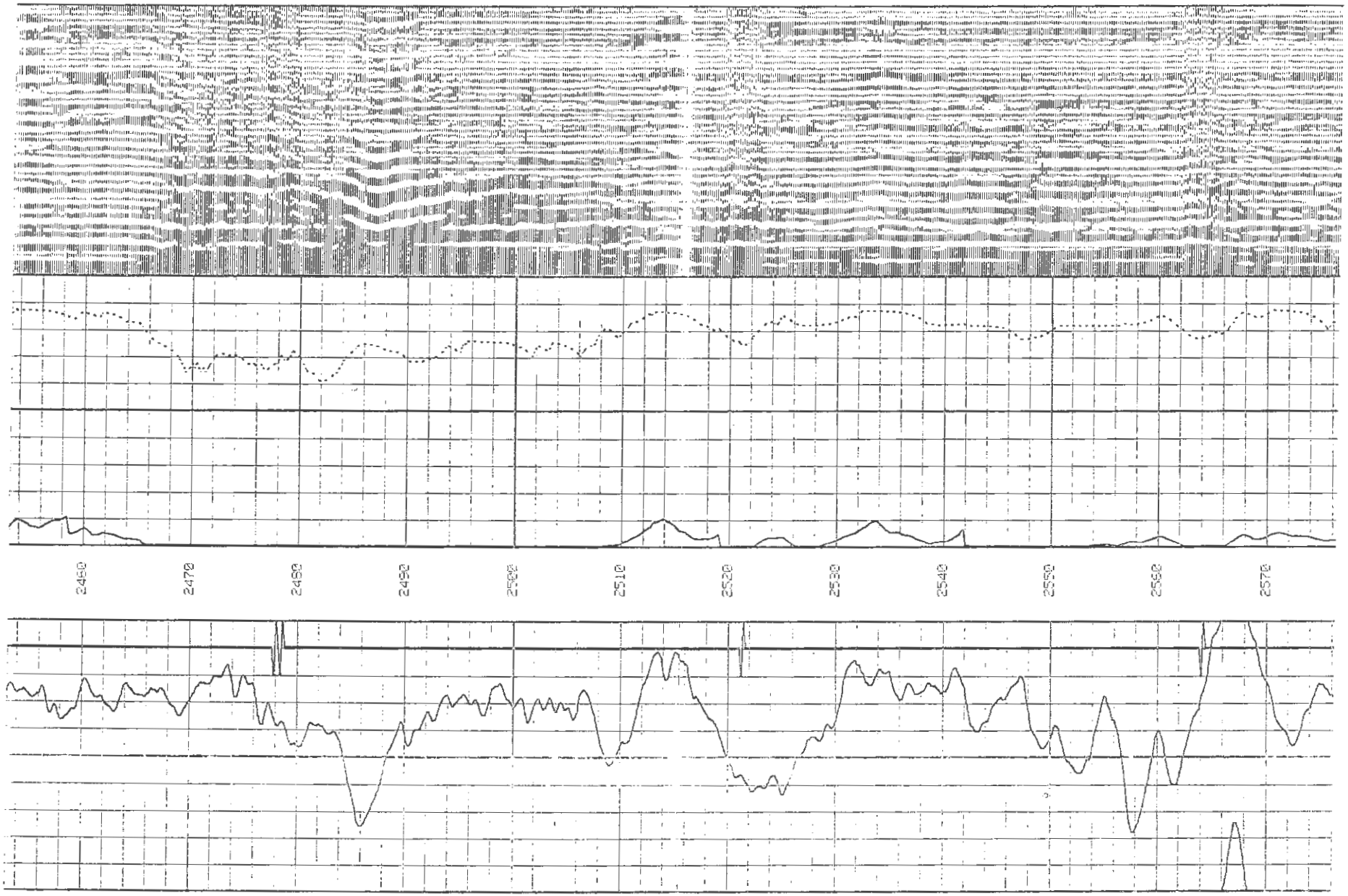
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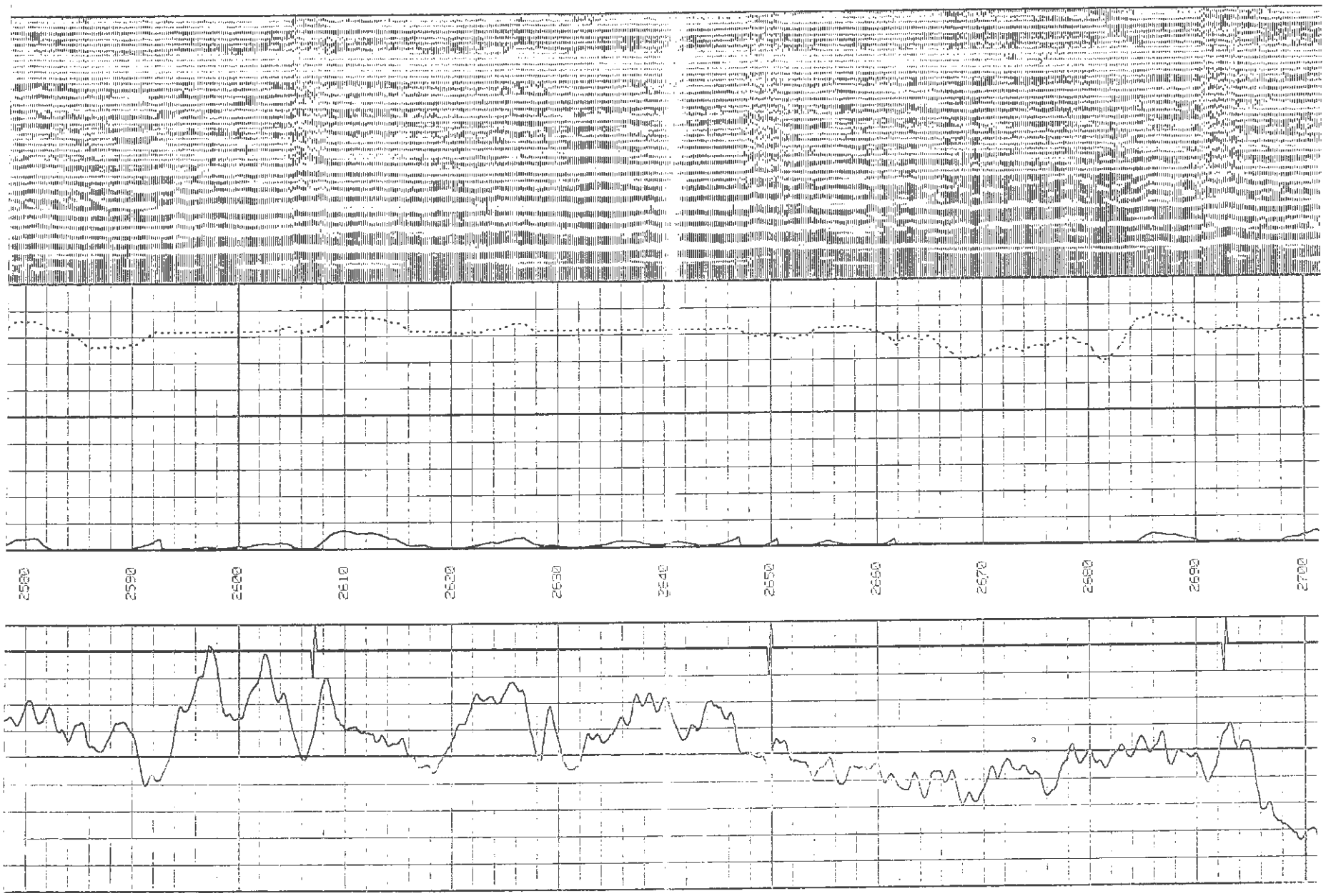
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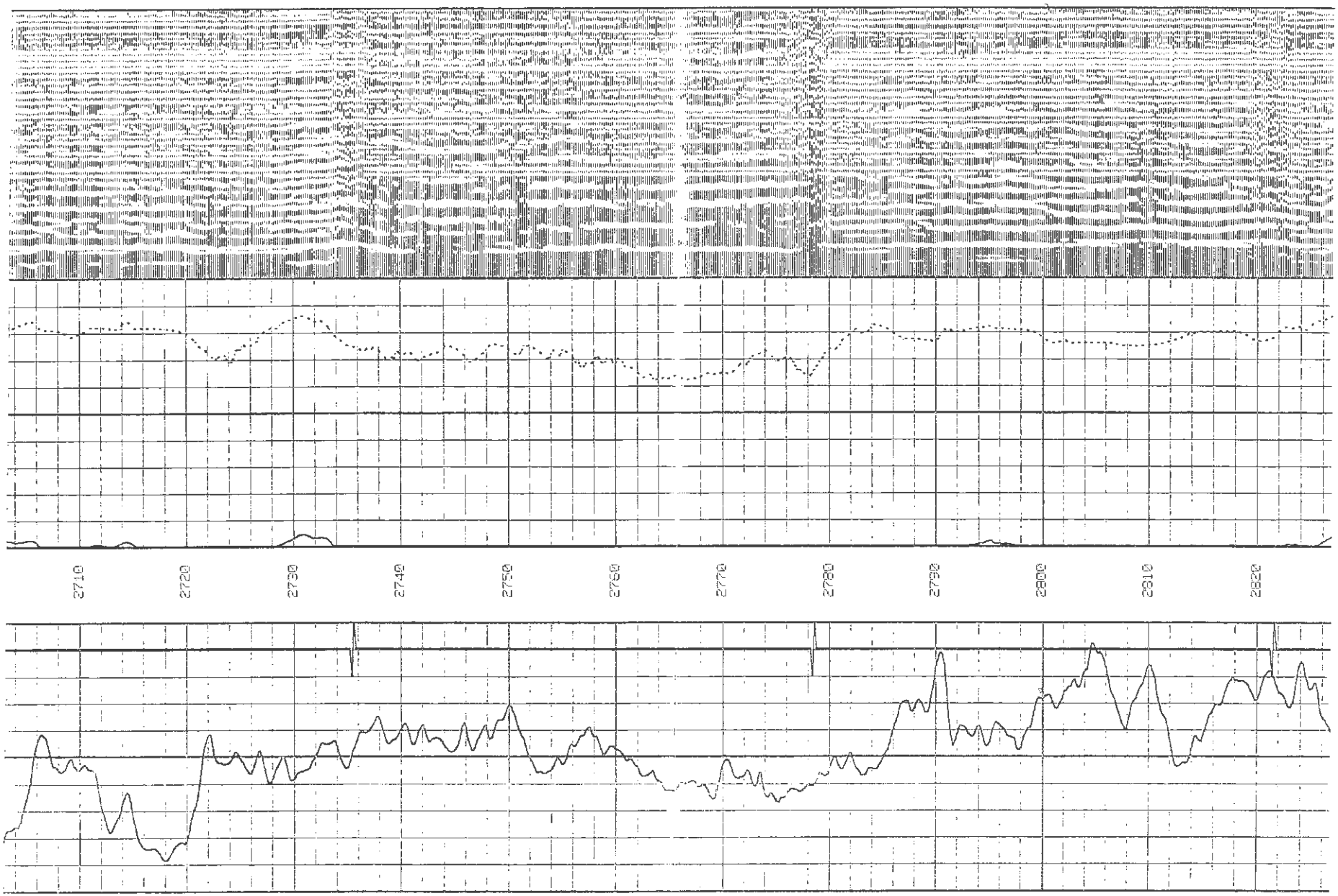
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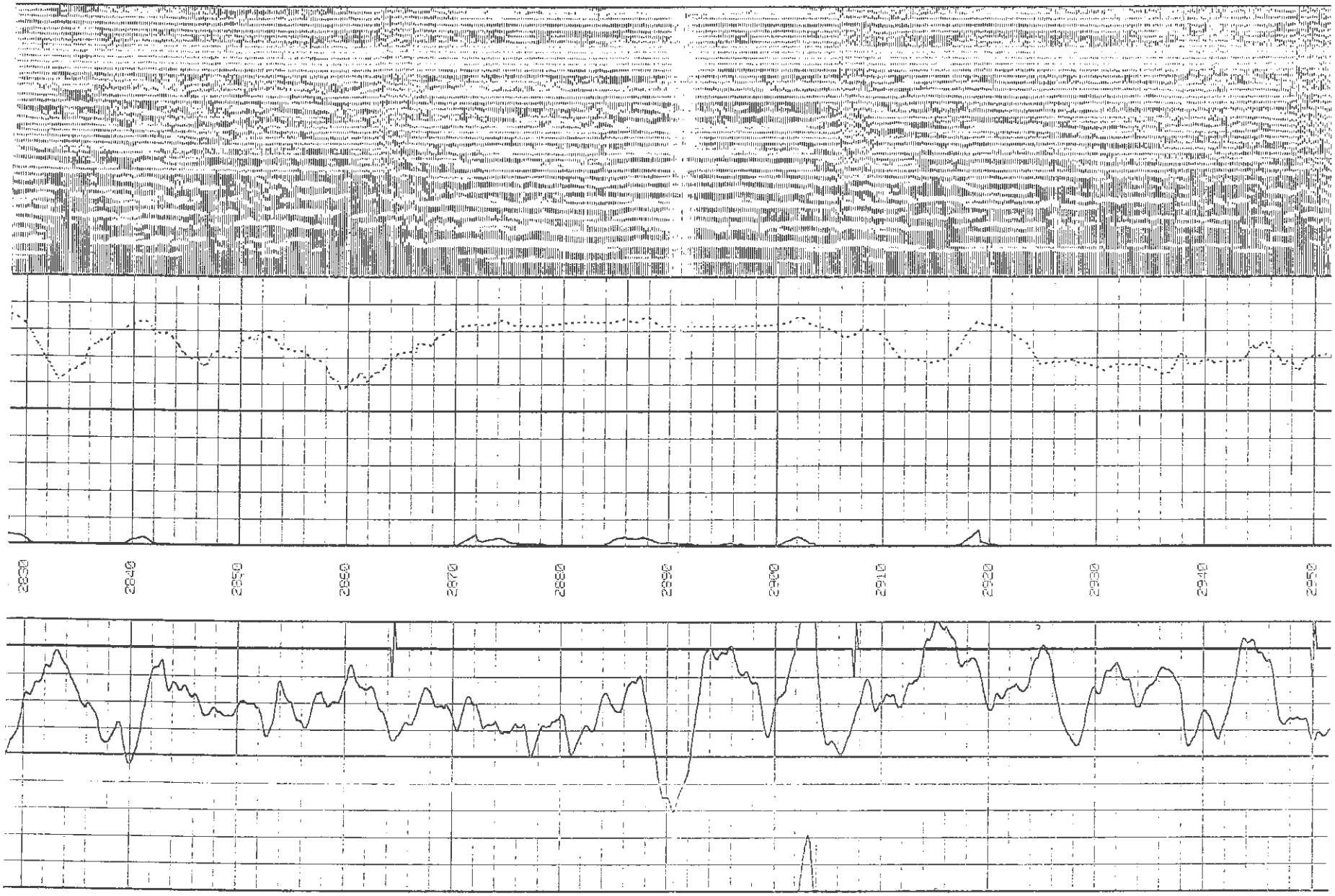
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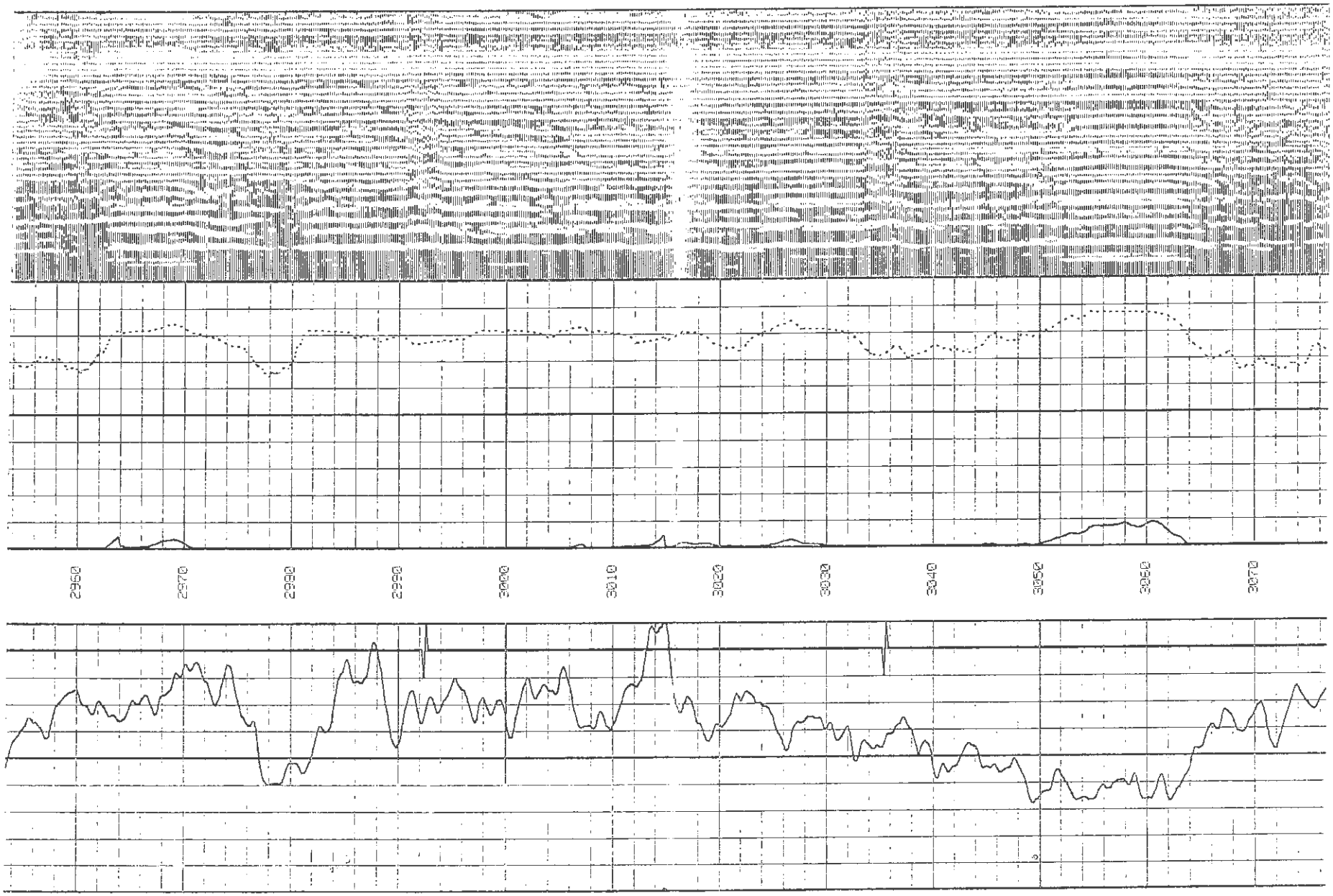
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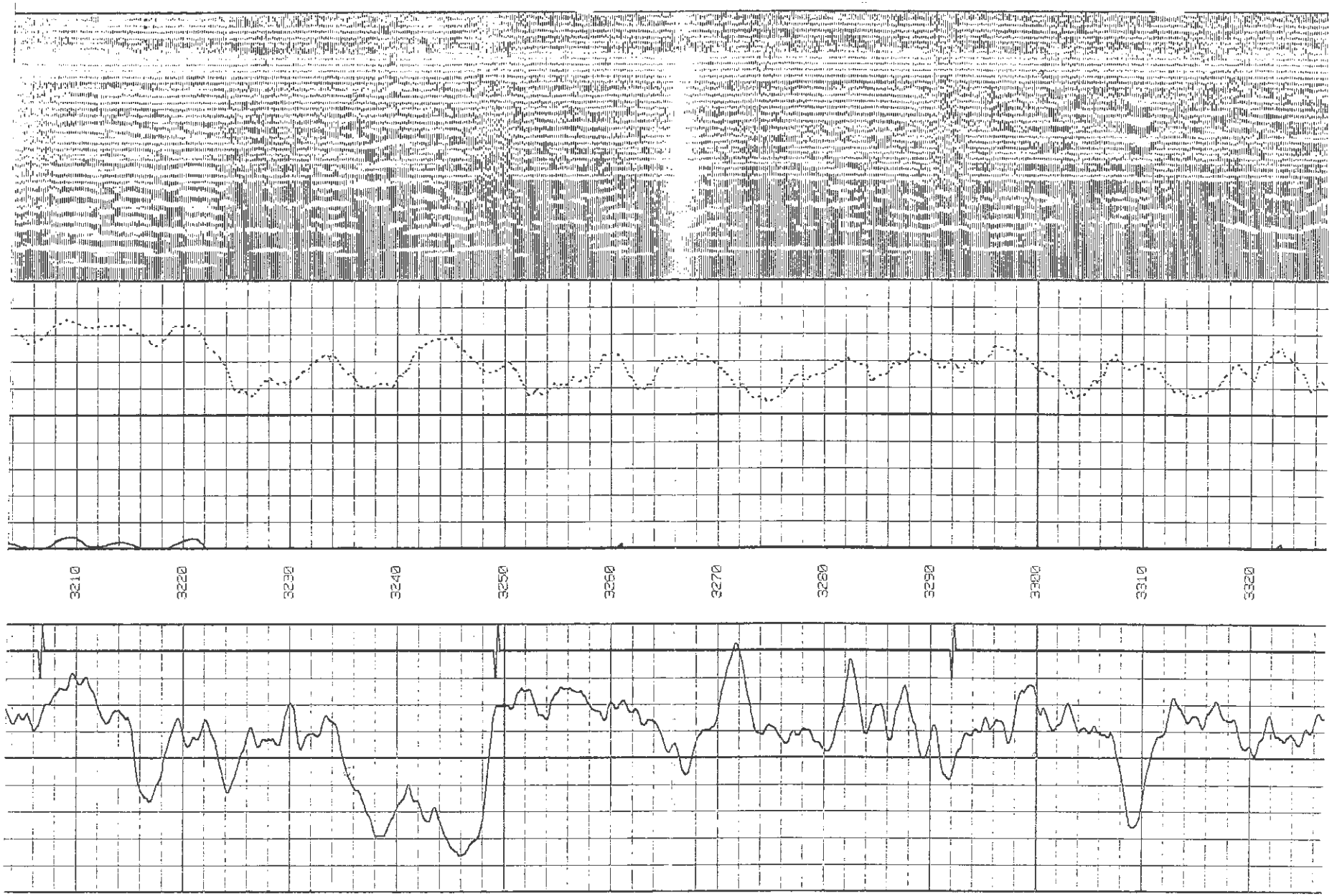
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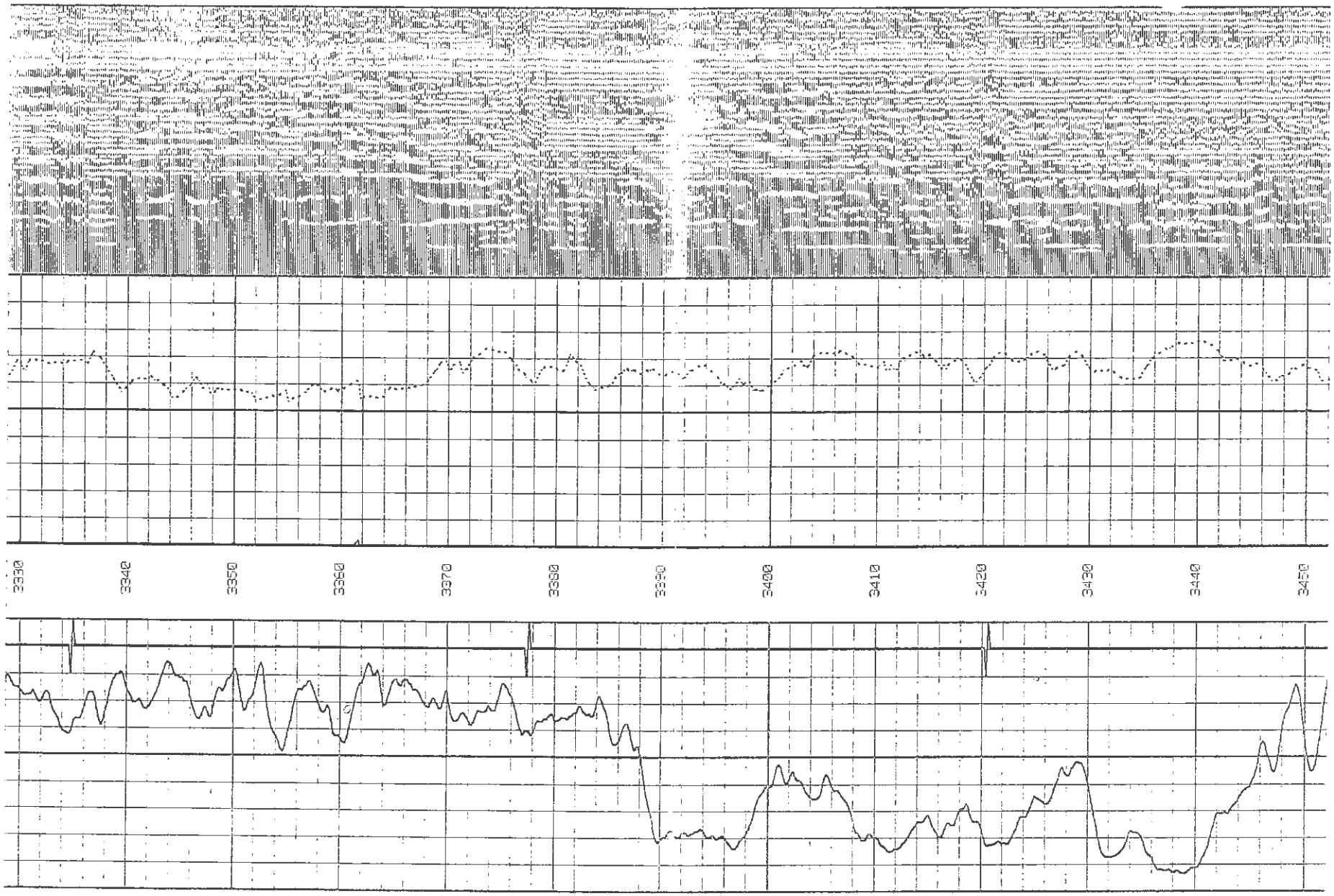
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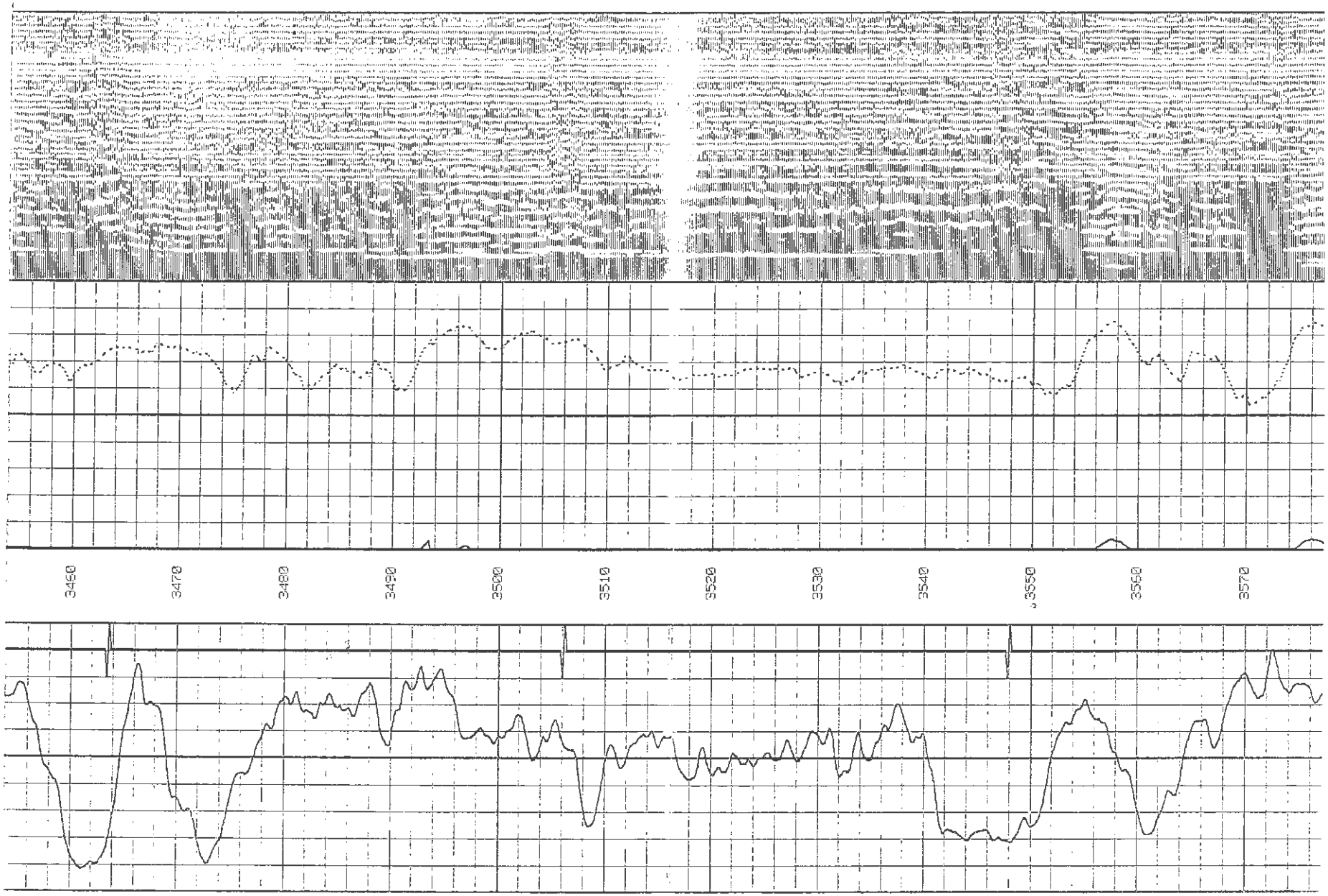
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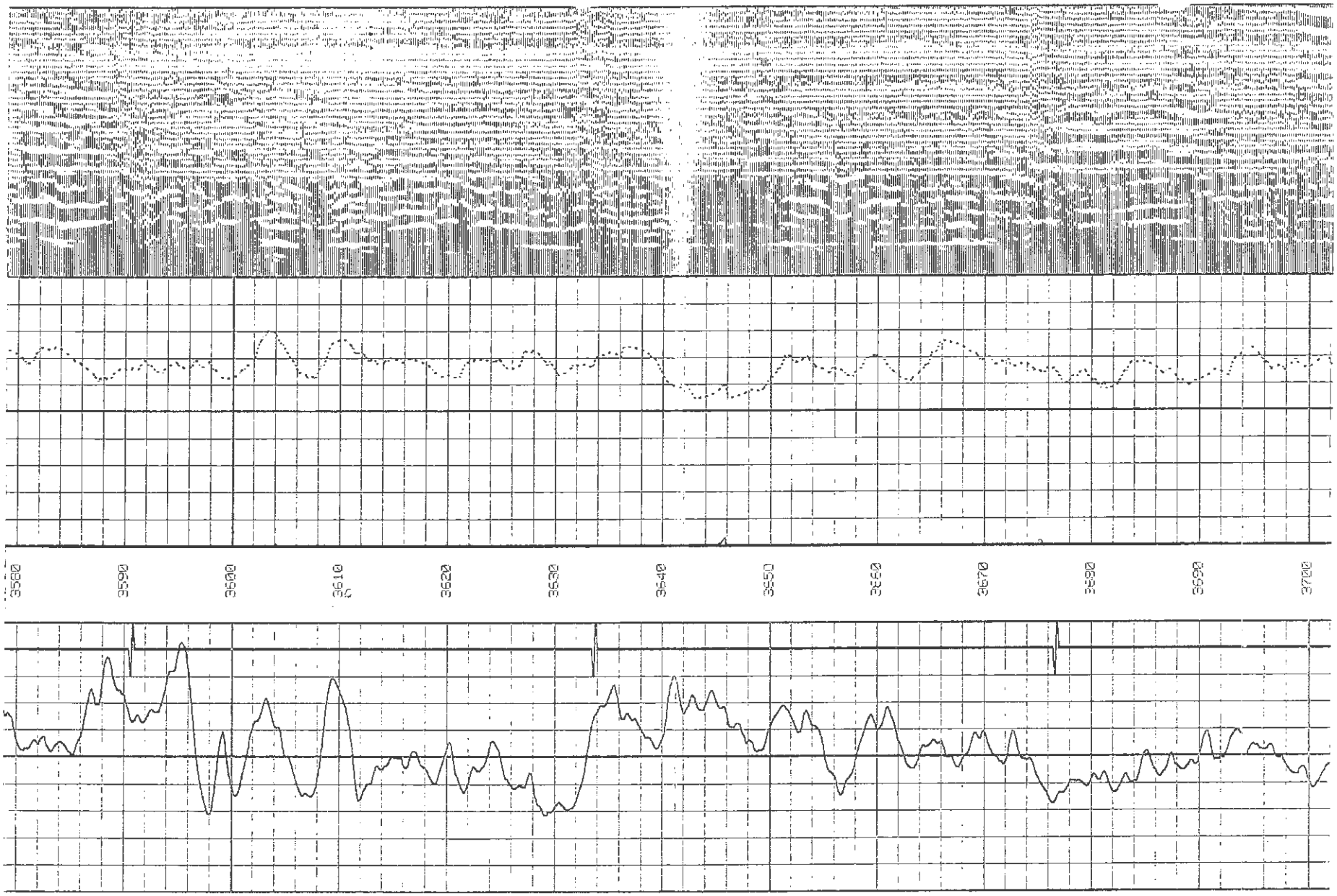
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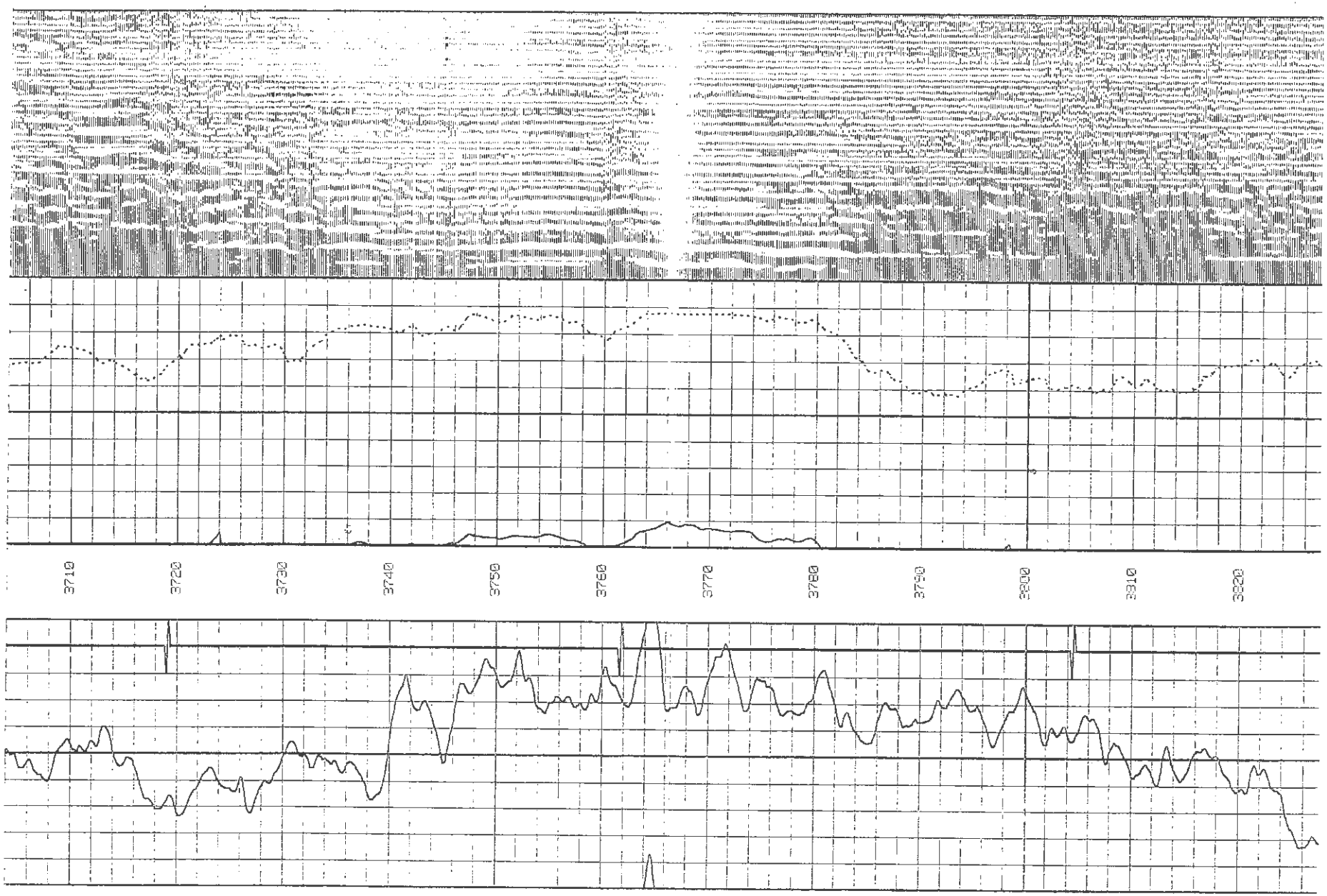
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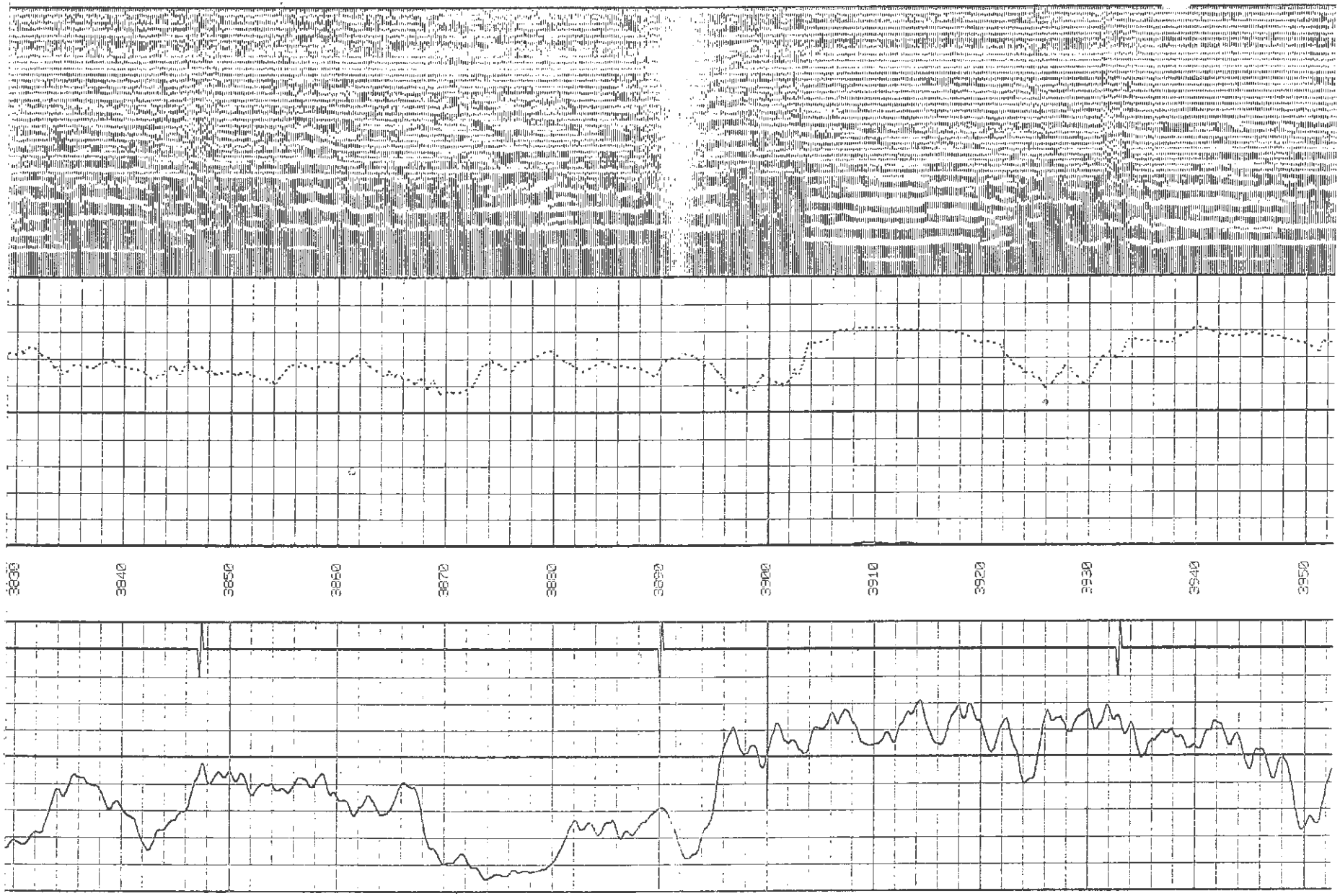
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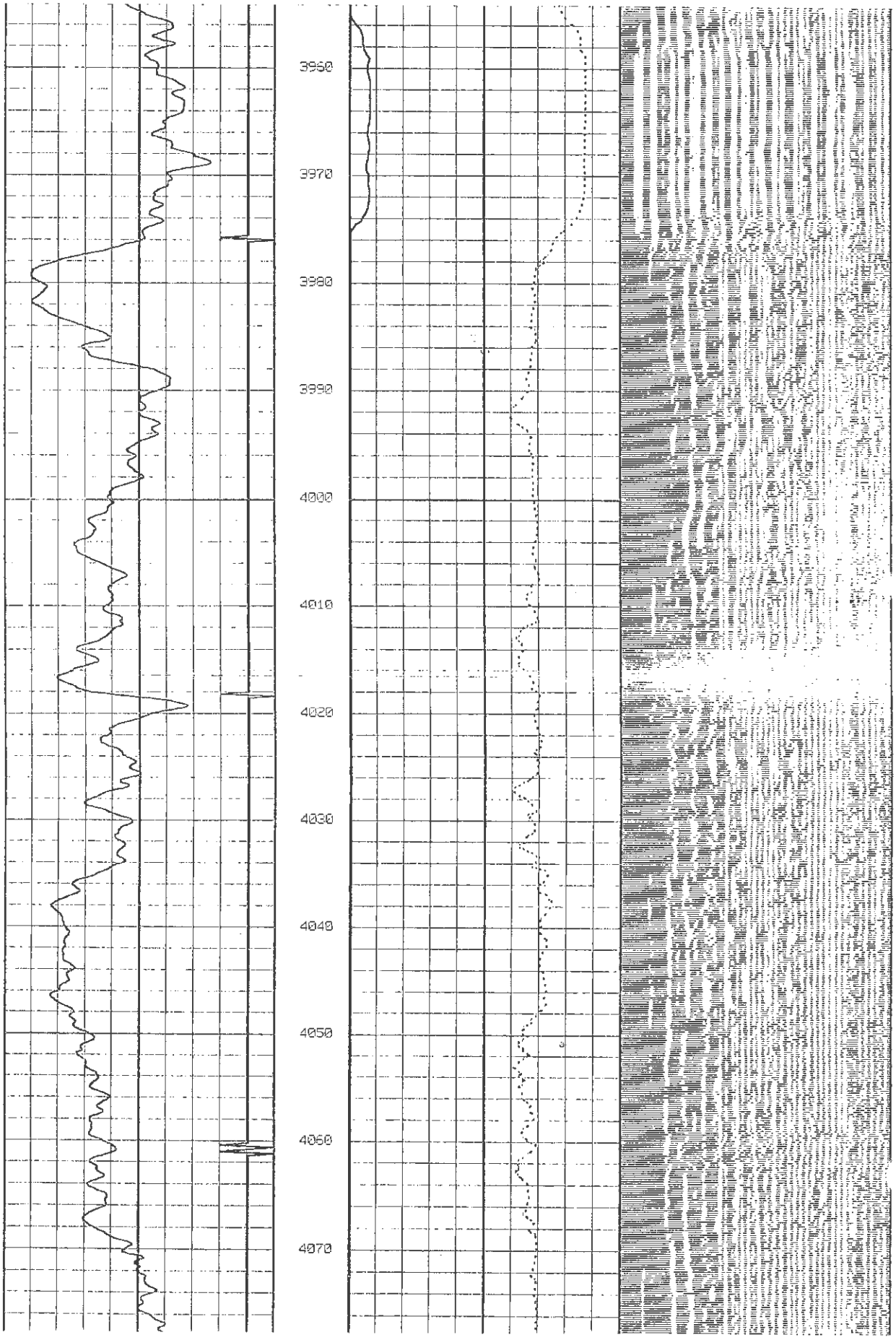
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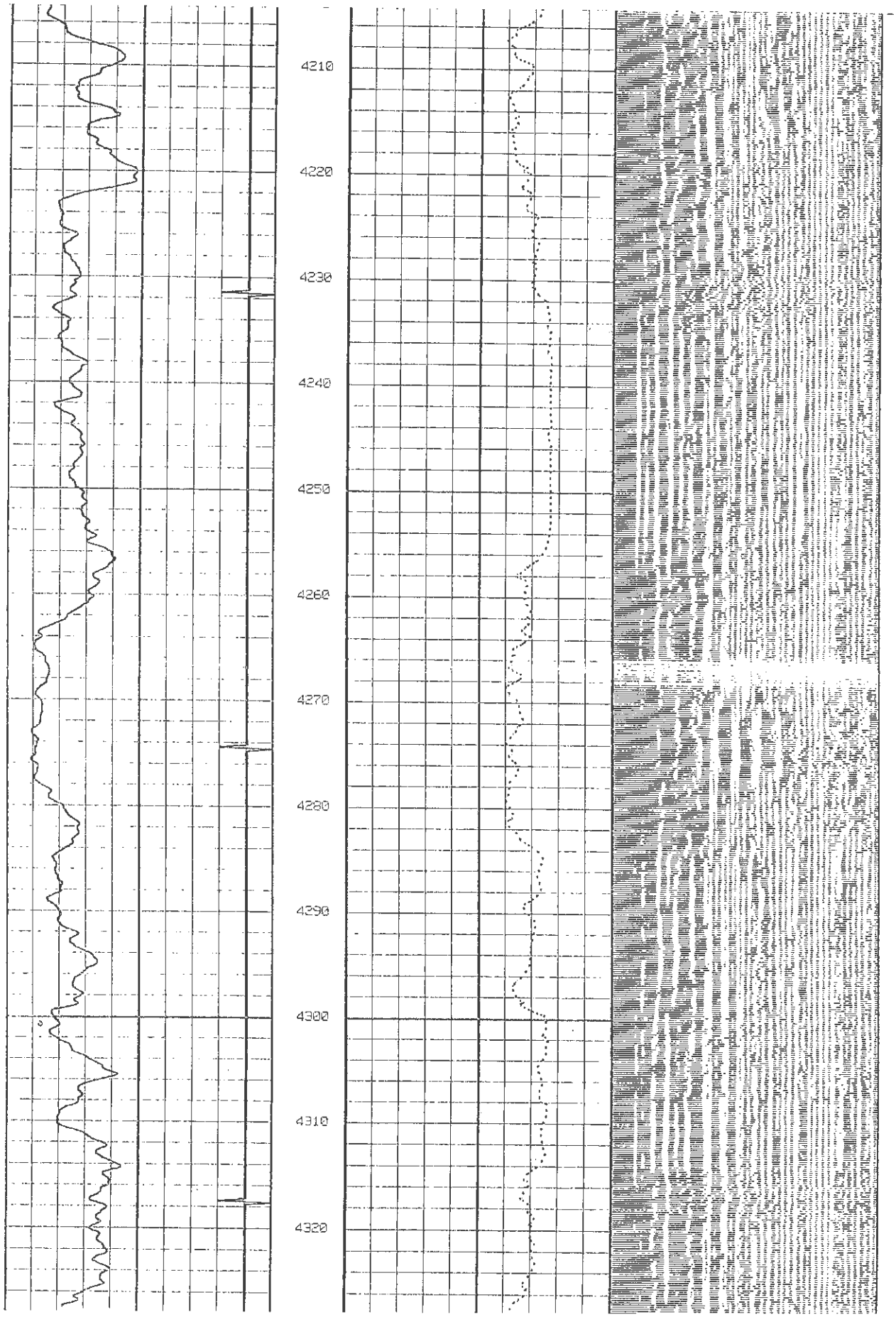
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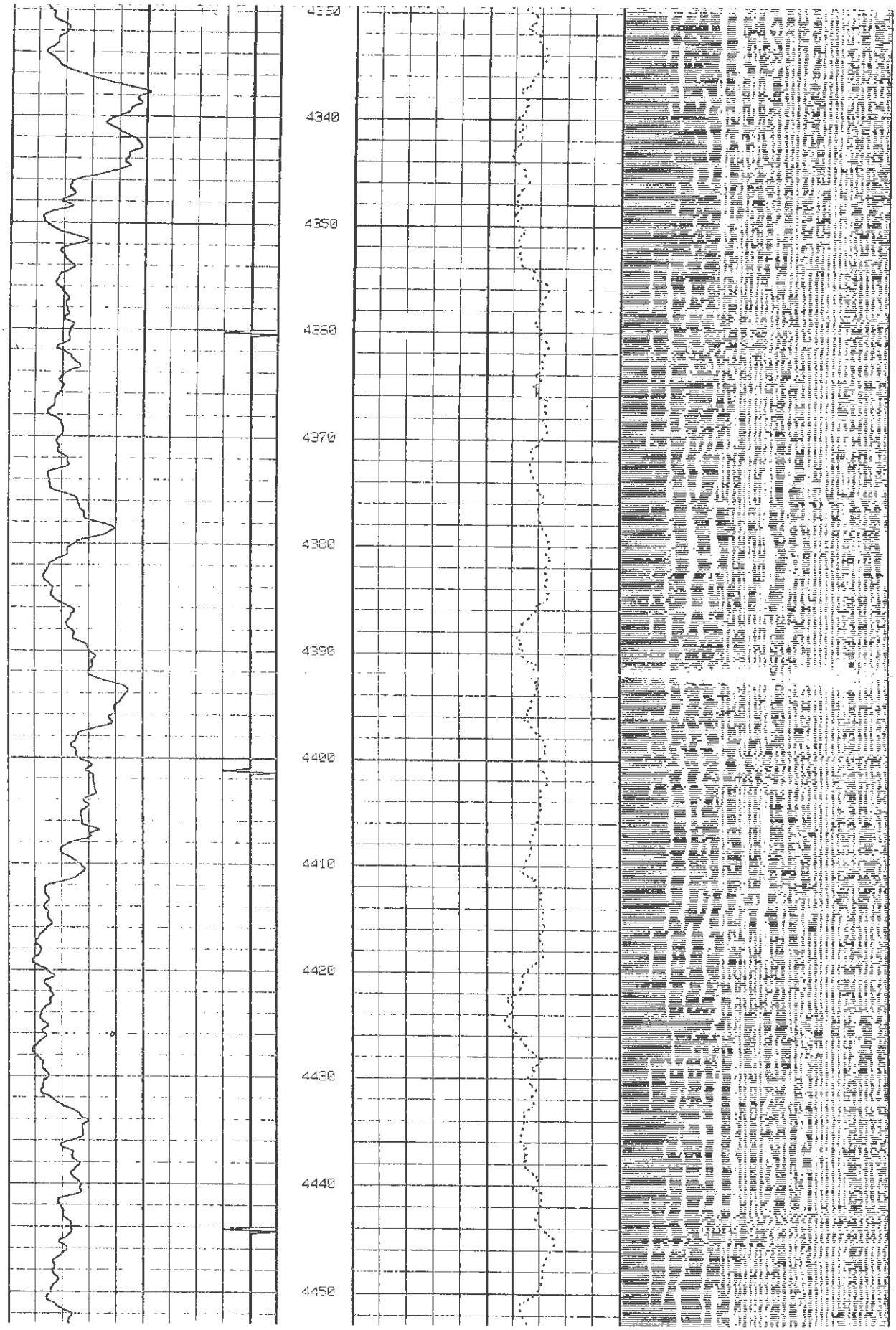
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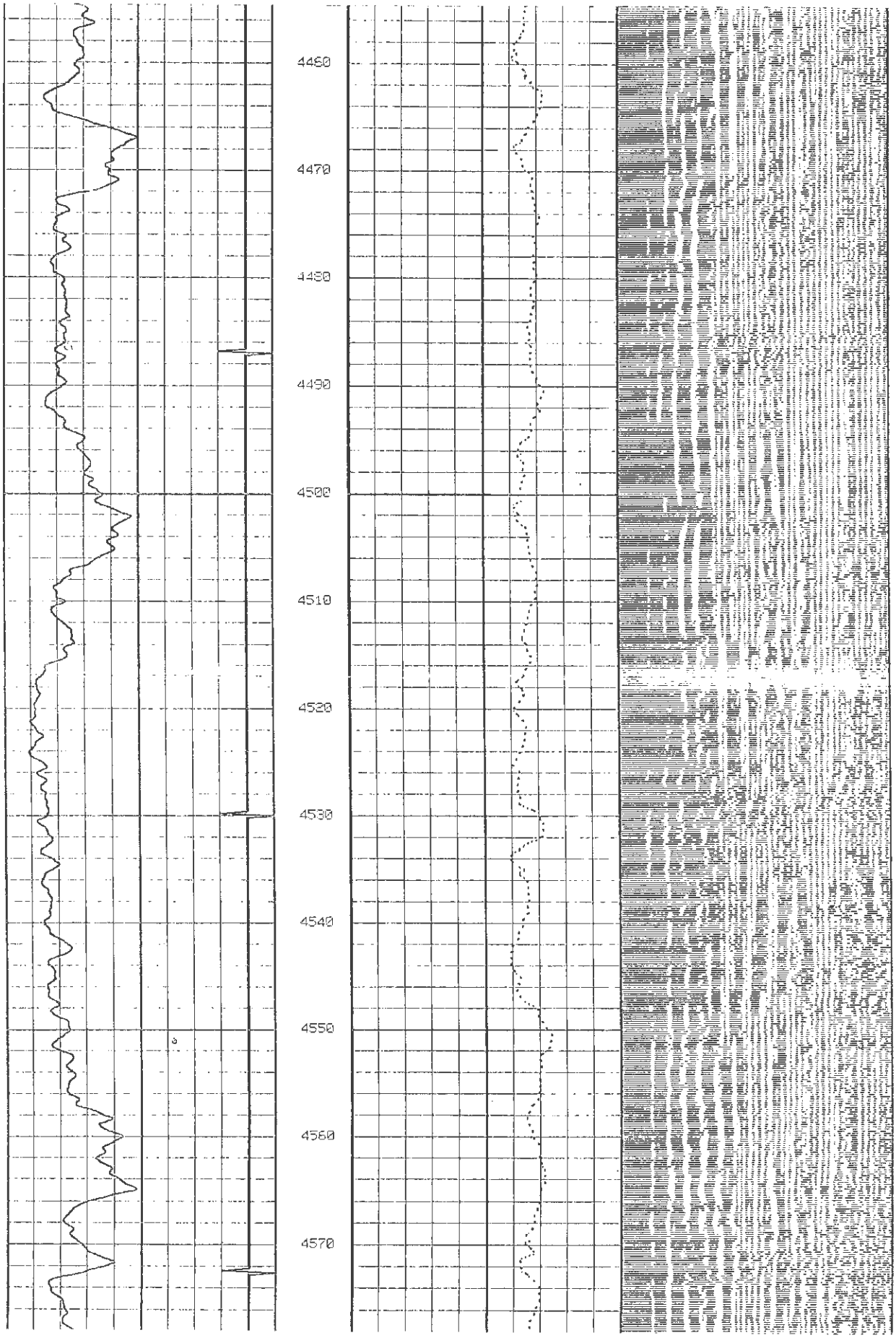
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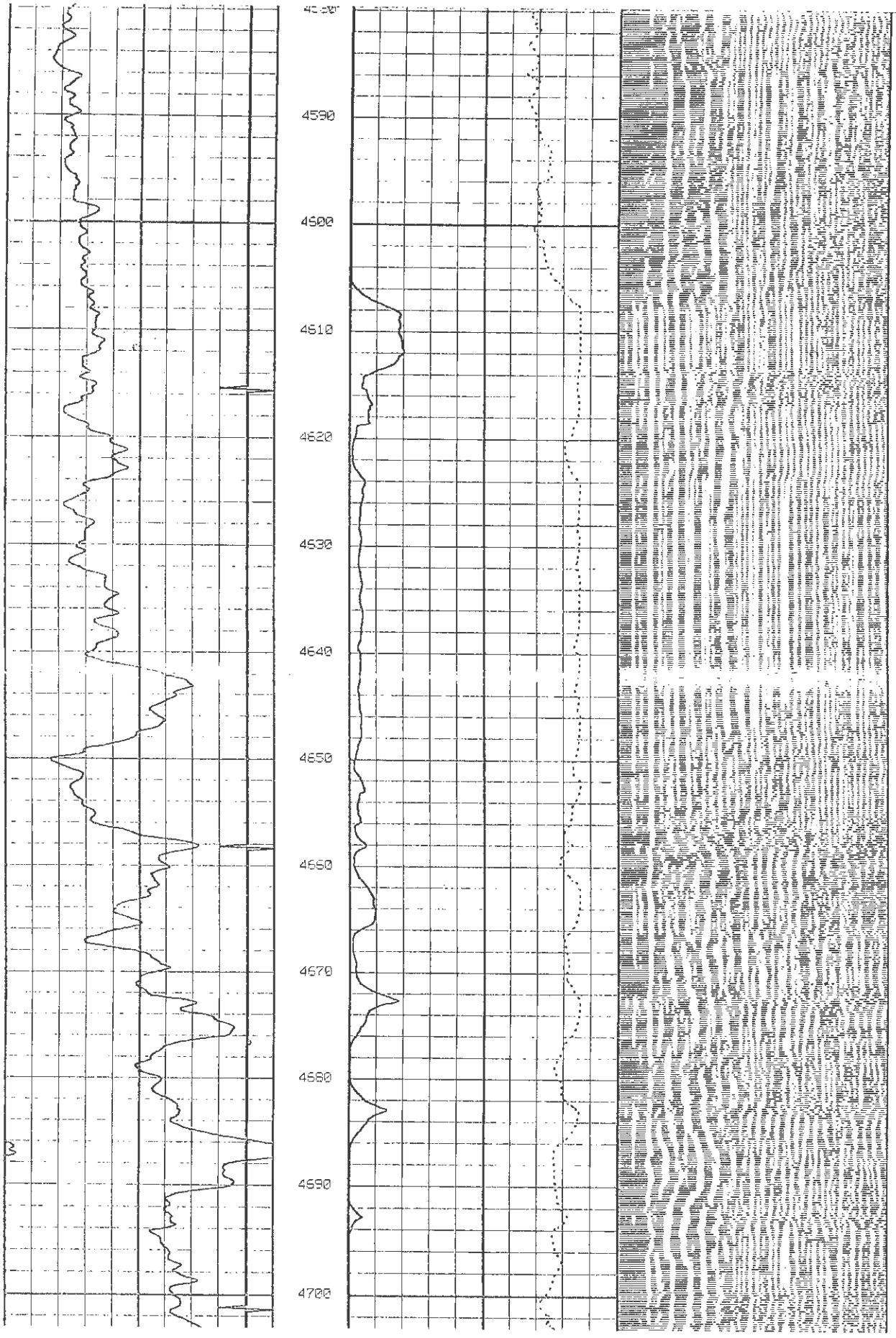
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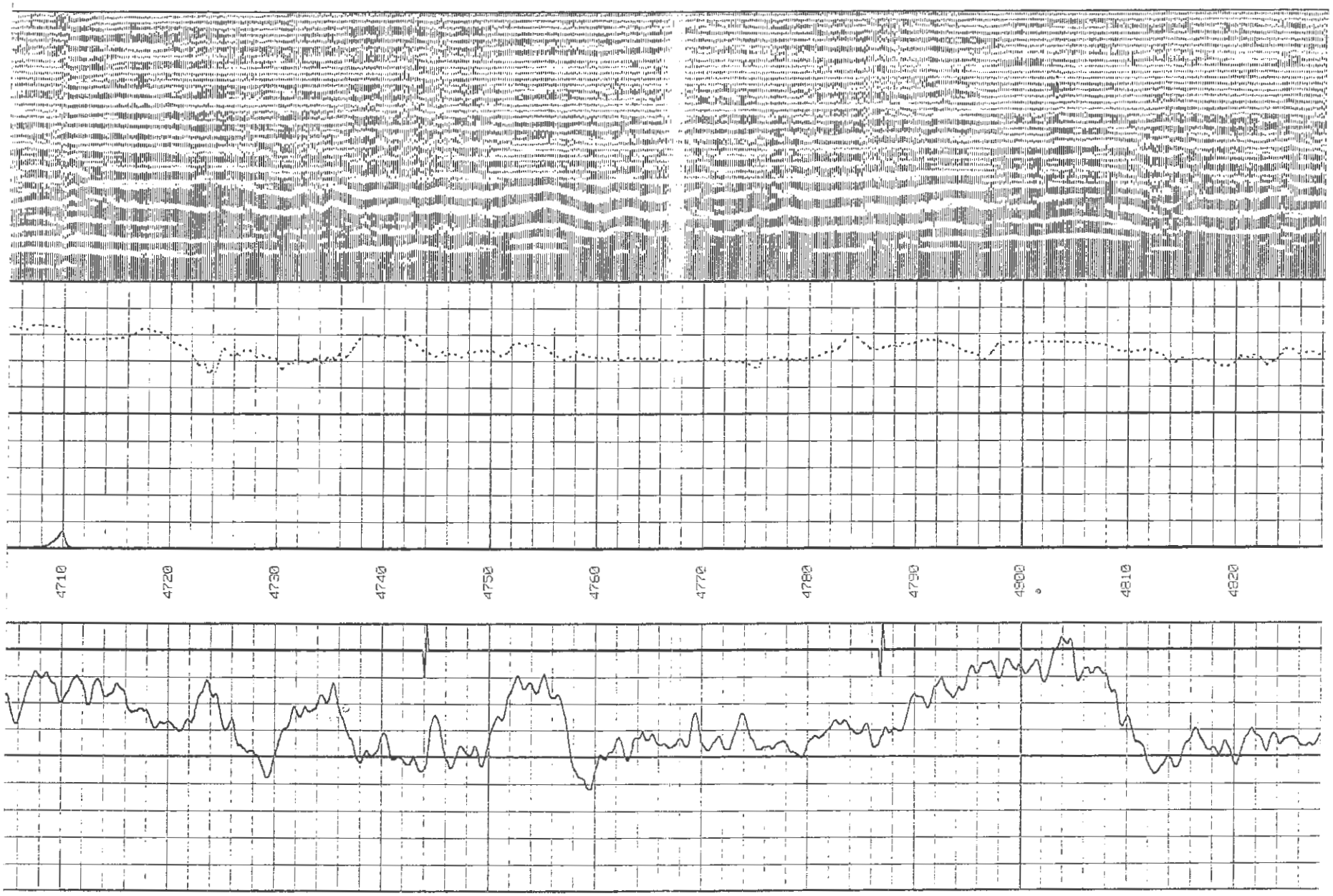
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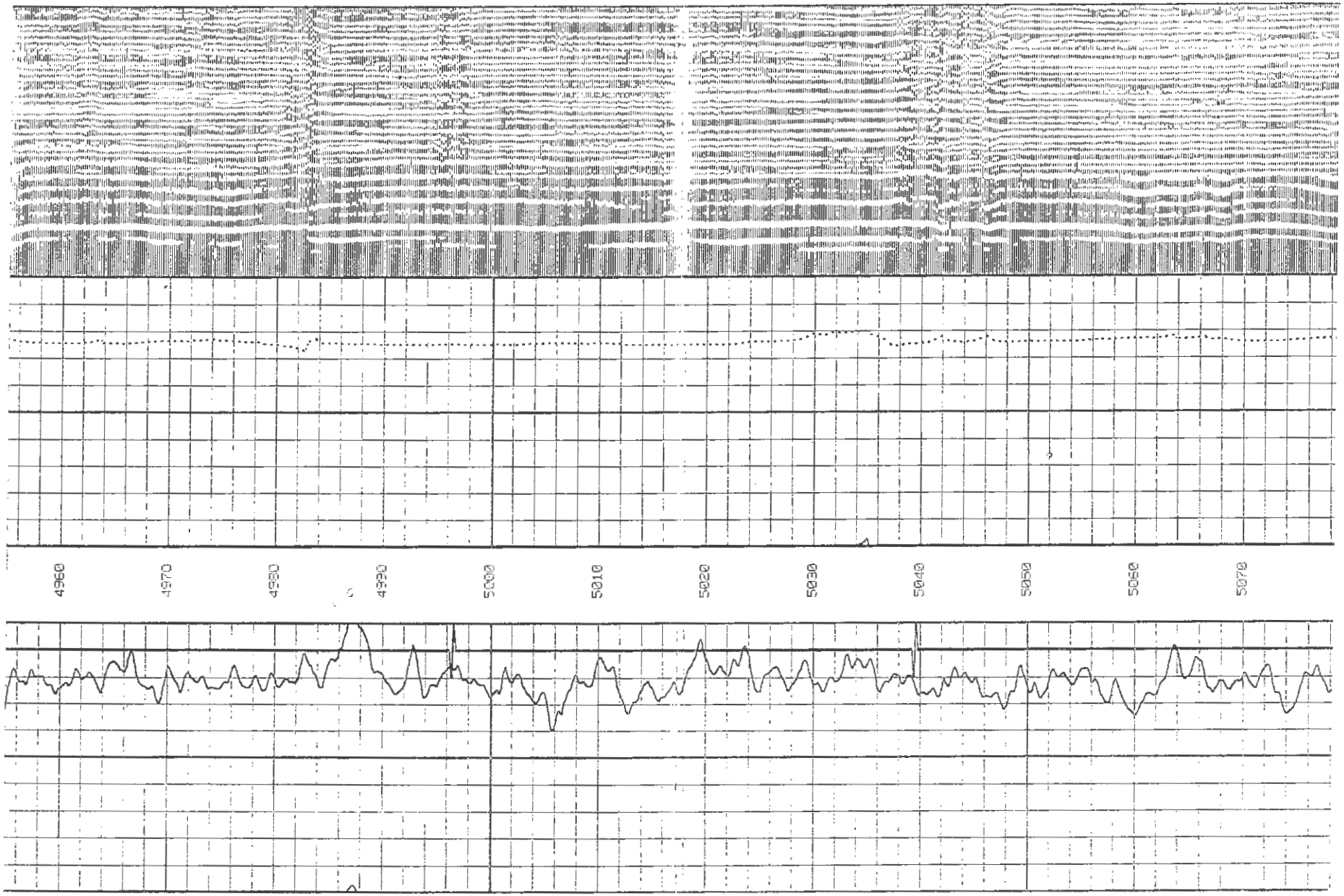
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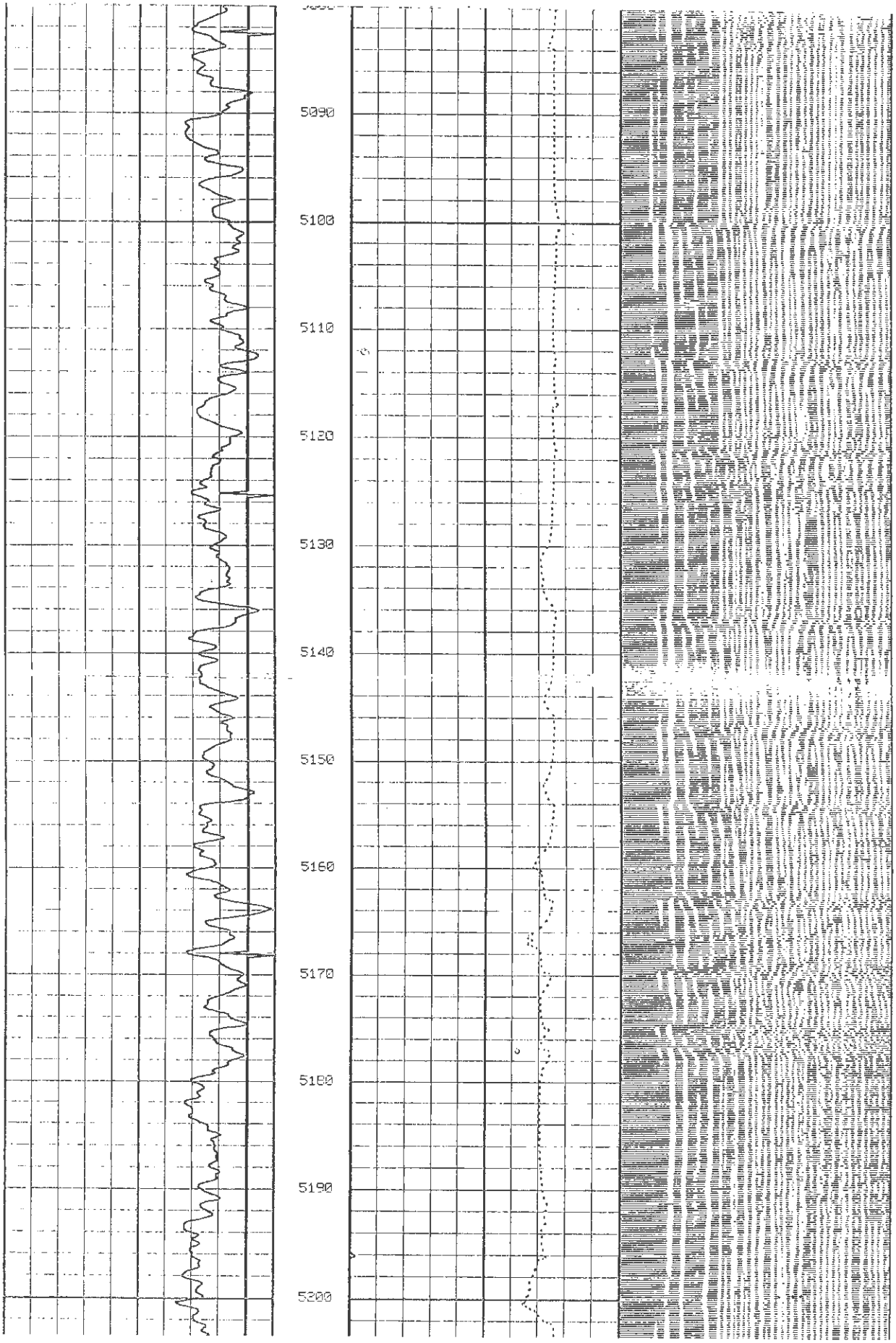
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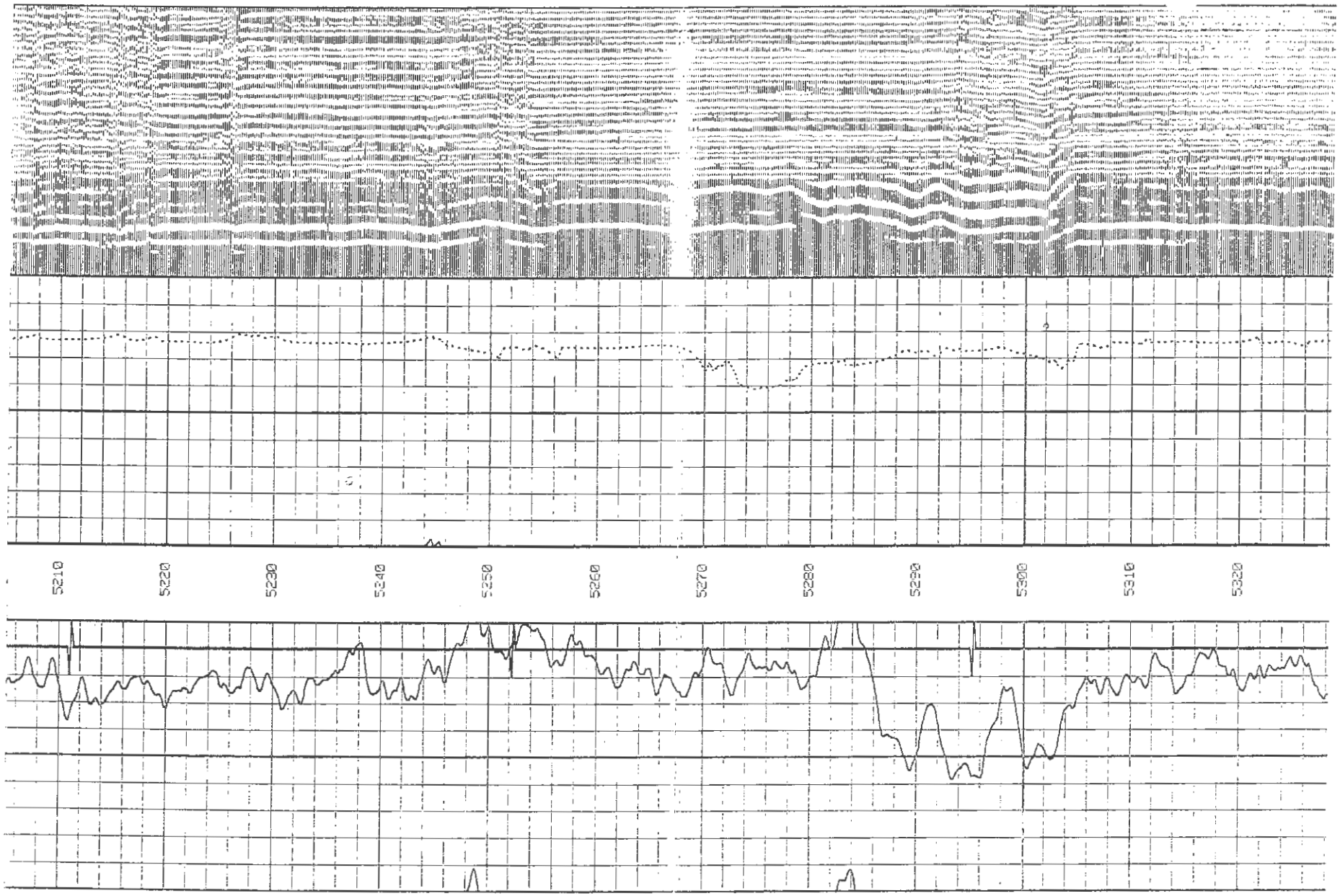
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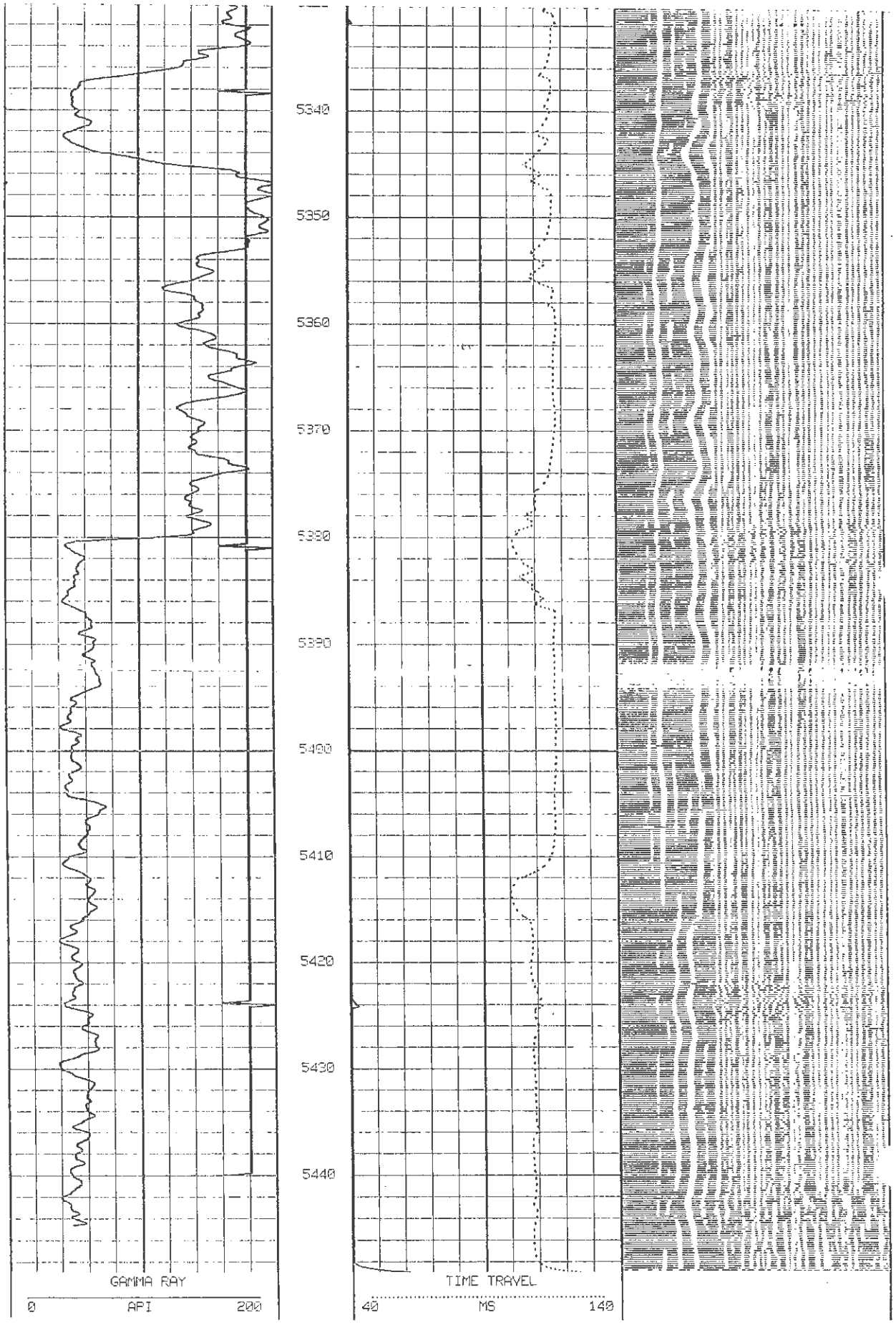
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GAMMA RAY
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API
200
TIME TRAVEL
40
MS
140

1 MV -1		0 MV 100	200 usec 1200

STOP DEPTH 5449FT DATE: 12-29-98 TIME: 7:17a FILE: BPC01 PLAYBACK PROGRAM

App 6

Surface Owners

Surface tract owners

LNAME	FNAME	ADDRESS1	ADDRESS2	ADDRESS3	tract number
Austin	Curtis		Rt. 2, Box 455I	Honaker, VA 24260	19
Austin	Garland		5416 Old Grissom Creek Road	Honaker, VA 24260-5162	10
Austin et ux	Hampton E.		Rt. 2, Box 456B	Honaker, VA 24260	2 and 11
Buchanan Production Company			PO Drawer Q	Richlands, VA 24641	7, 12 and 13
Combs	Ervin J.	(Irvin J. Combs)	344 Sandhill Road	Fairborn, OH 45324-9410	16
Combs	James J.		3239 Old Grissom Creek Road	Honaker, VA 24260-5189	14 and 17
Hess	Howard		PO Box 163	Richlands, VA 24641-0163	1
Hess	Jonah C.		Address Unknown		8
Hess	Mintie		1141 Venia Church Road	Honaker, VA 24260	3 and 5
Johnson	Earl D.		1655 Old Grissom Creek Road	Honaker, VA 24260-5145	15
Owens	Shelia Ann		Route 1 Box 253A	Grundy, VA 24614	18
Rose	Nannie	c/o Juanita Leedy	13916 State Rt. 279	Oak Hill, OH 45656	6
VDOT			870 Bonham Road	Bristol, VA 24201-2002	4 and 9

App H

Plugging and

Abandonment

needs update

App I

Plugged wells

No plugged wells.

App J

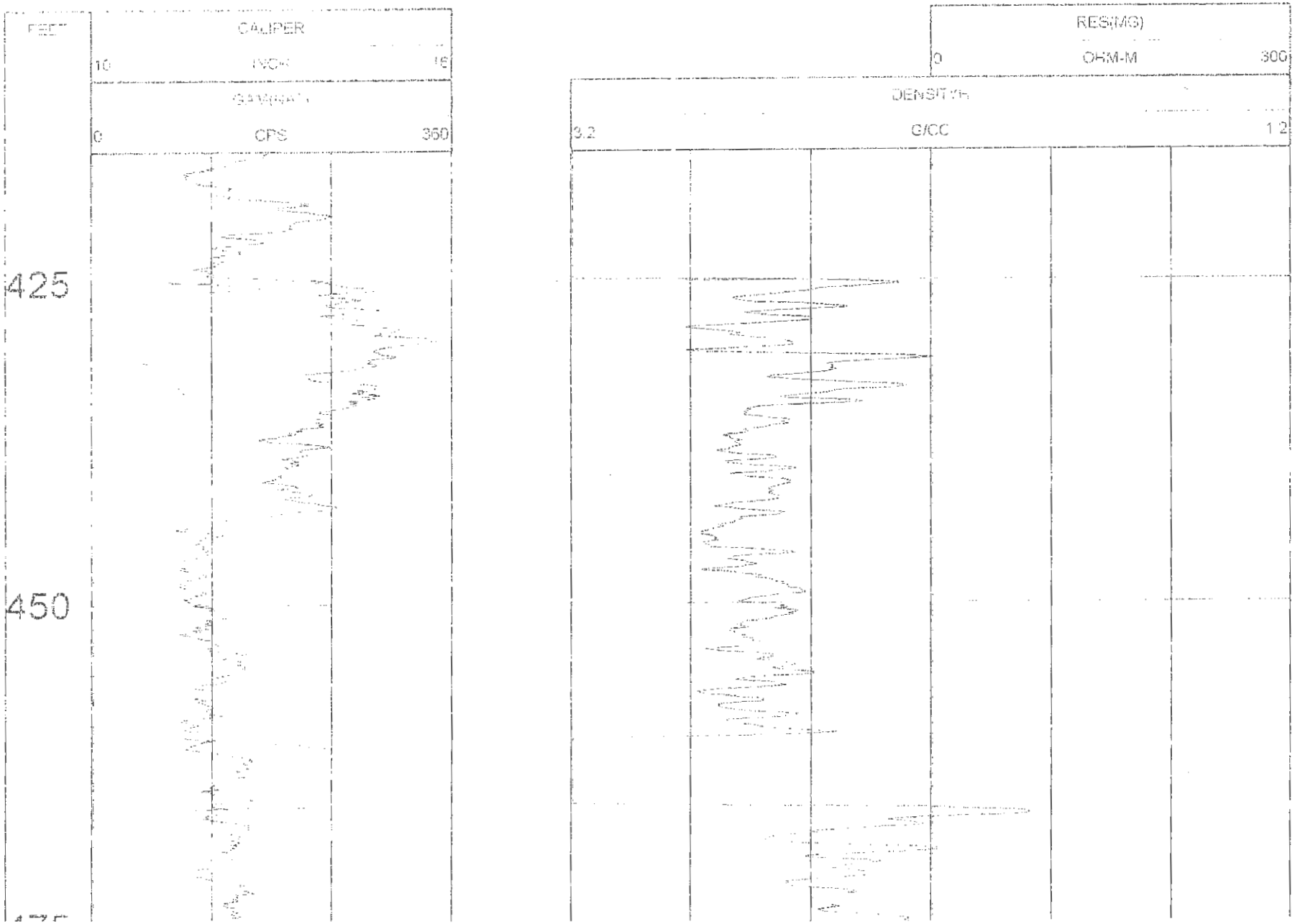
E-Los

GEOLOGICAL LOGGING SYSTEMS

01-BPC-#1

COMPANY	BUCHANAN PRODUCTION COMPANY			OTHER SERVICES:	
WELL	1-BPC-#1			0019C	
LOCATION/FIELD				0033CA	
COUNTY	BUCHANAN			-	
STATE	VIRGINIA				
	-	TOWNSHIP	: -	RANGE	: -
DATE	: 03/03/01	PERMANENT DATUM	: GL		
DEPTH DRILLER	: 2427.0			KB	: 1909.77
LOGGER'S DEPTH	: 2396.46	LOG MEASURED FROM:	GL	DF	: N/A
LOG TOP	: 413.60	DRL MEASURED FROM:	KB	GL	: 1903.27
CASING DEPTH	: 11.	LOGGING UNIT	: 08		
CASING	: STEEL	FIELD OFFICE	: BLFD, VA		
ORIGINAL THICKNESS:	.25	RECORDED BY	: C. STULTZ		
BIT SIZE	: 10.625	BOREHOLE FLUID	: WATER	FILE	: PROCESSED
MAGNETIC DECL.	: -6.8	RM	: 0	TYPE	: 0033CH
MATRIX DENSITY	: 2.71	RM TEMPERATURE	: 0		
NEUTRON MATRIX	: SANDSTONE	MATRIX DELTA T	: 140		
				THRESH:	25000

-
-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CALIPER
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INCH
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GAMMA
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CPS
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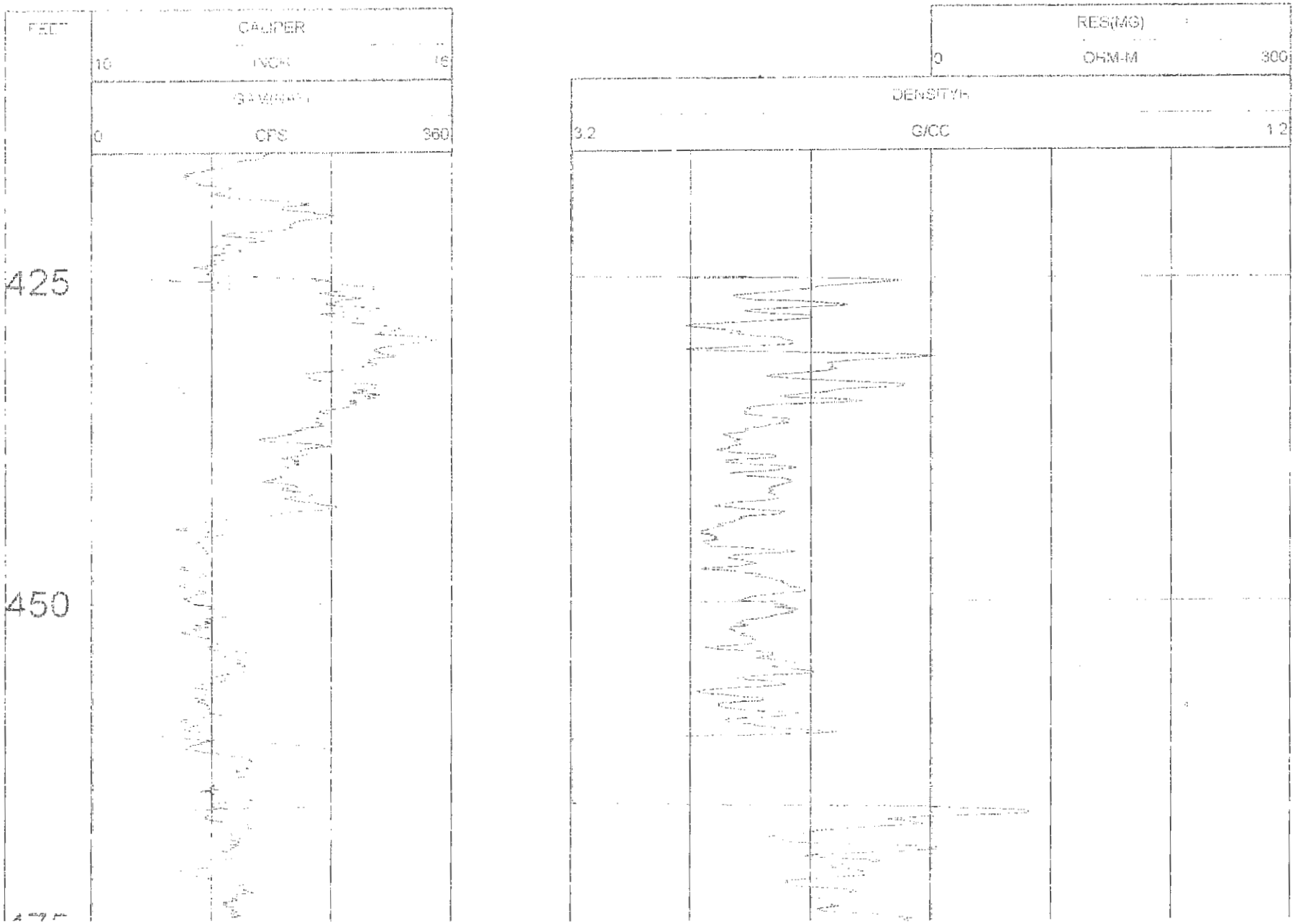
425
450
RES(MG)
0
OHM-M
300
DENSITY
3.2
G/CC
1.2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CALIPER
10
INCH
16
GAMMA RAY
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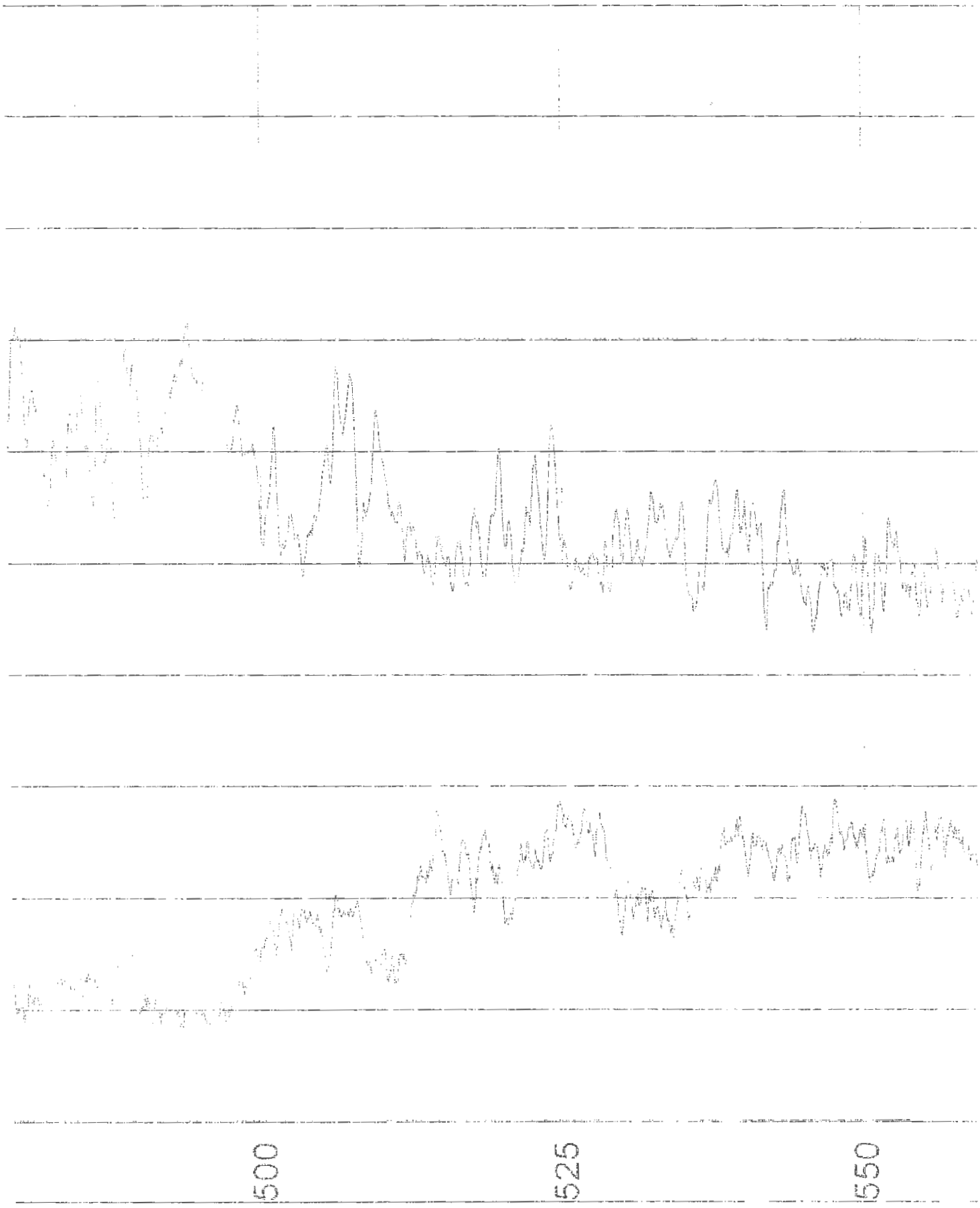
CPS
360
425
450
RES(MG)
0
OHM-M
300
DENSITY
3.2
G/CC
1.2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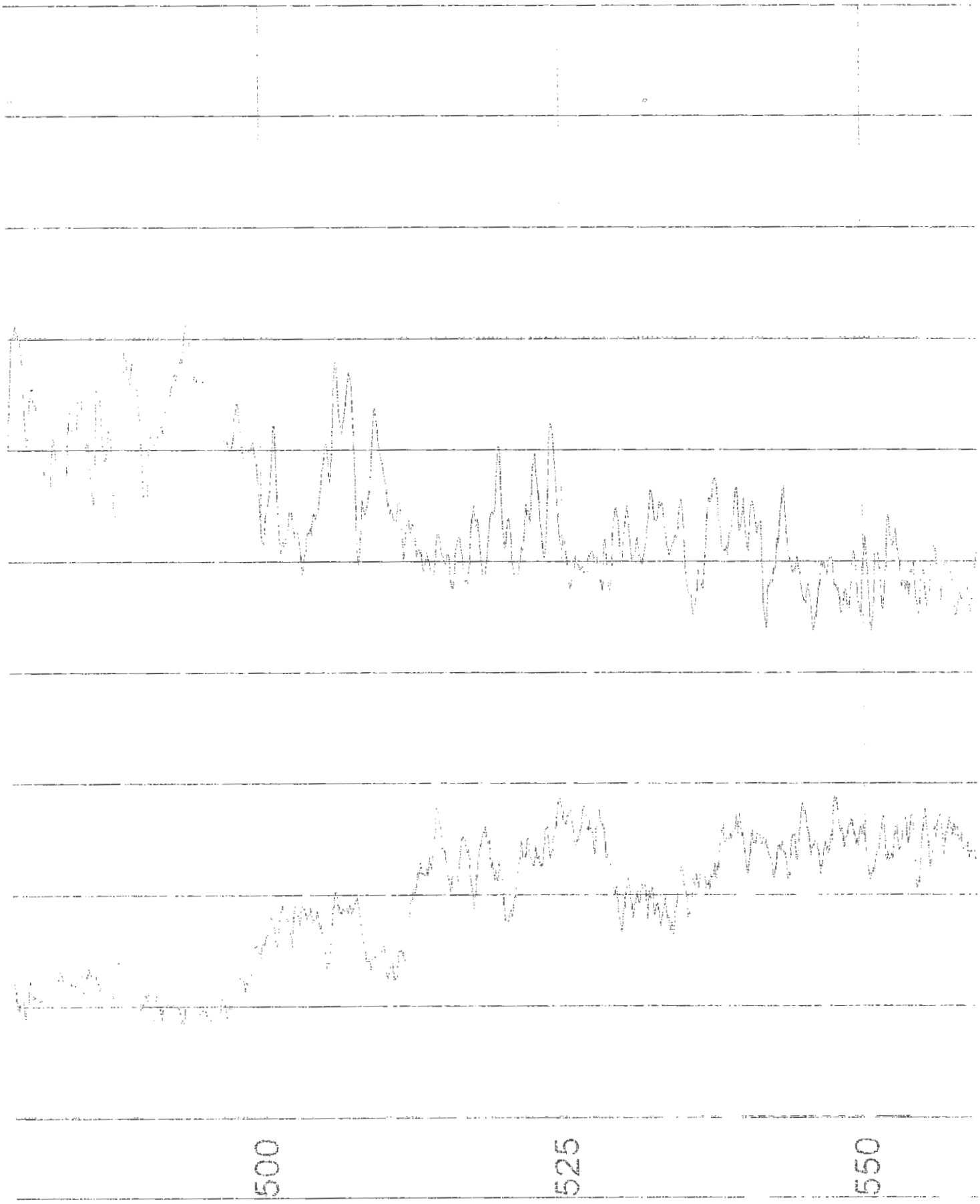
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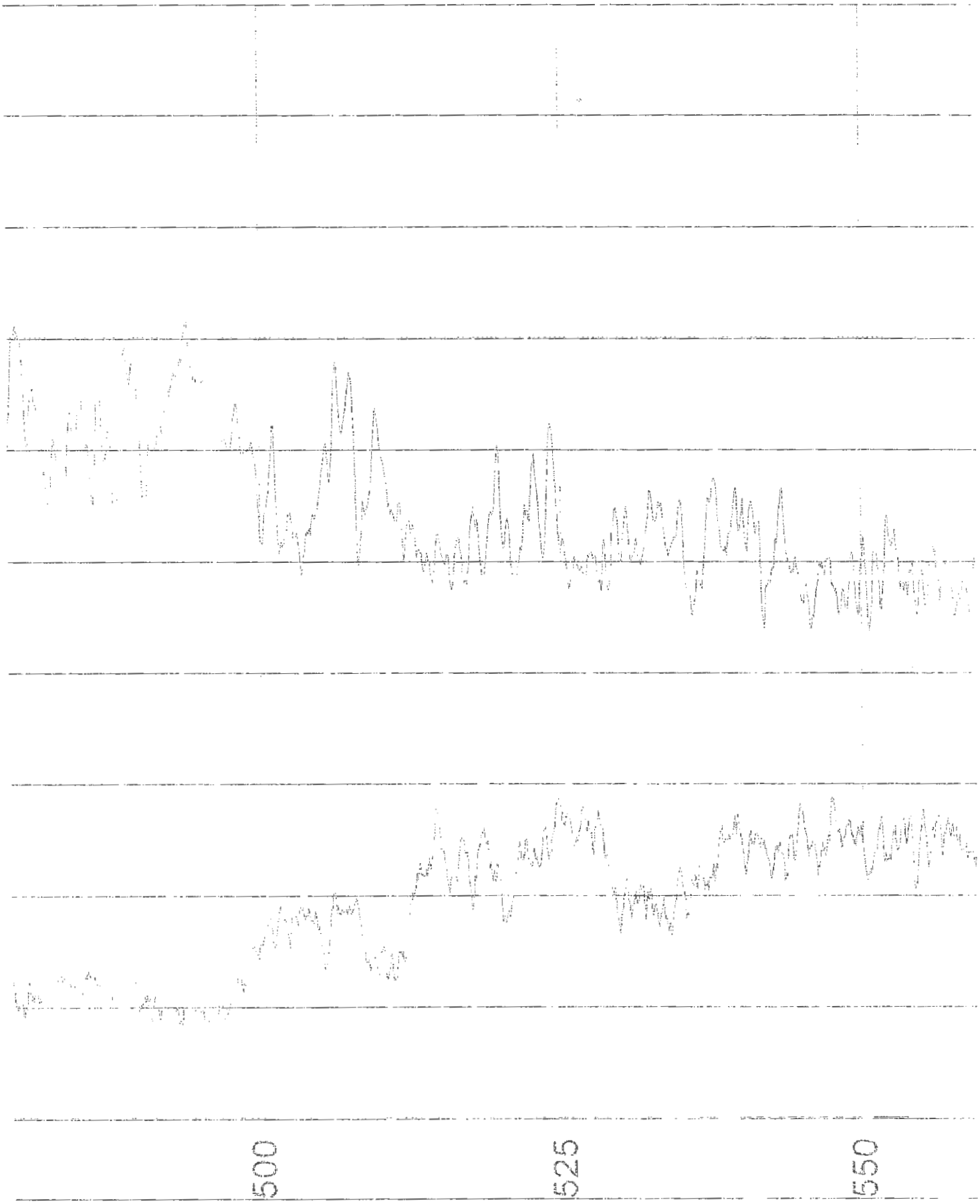
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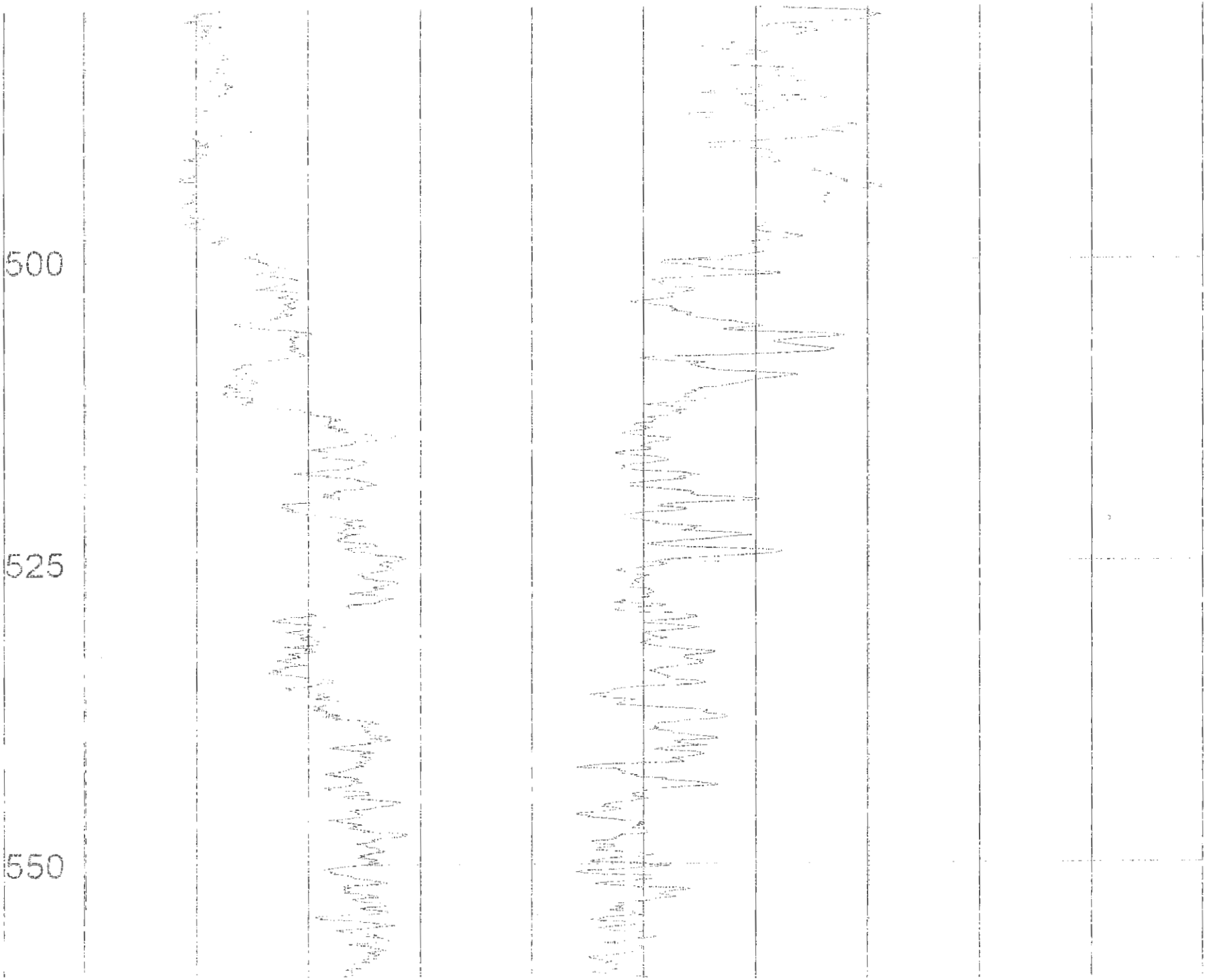
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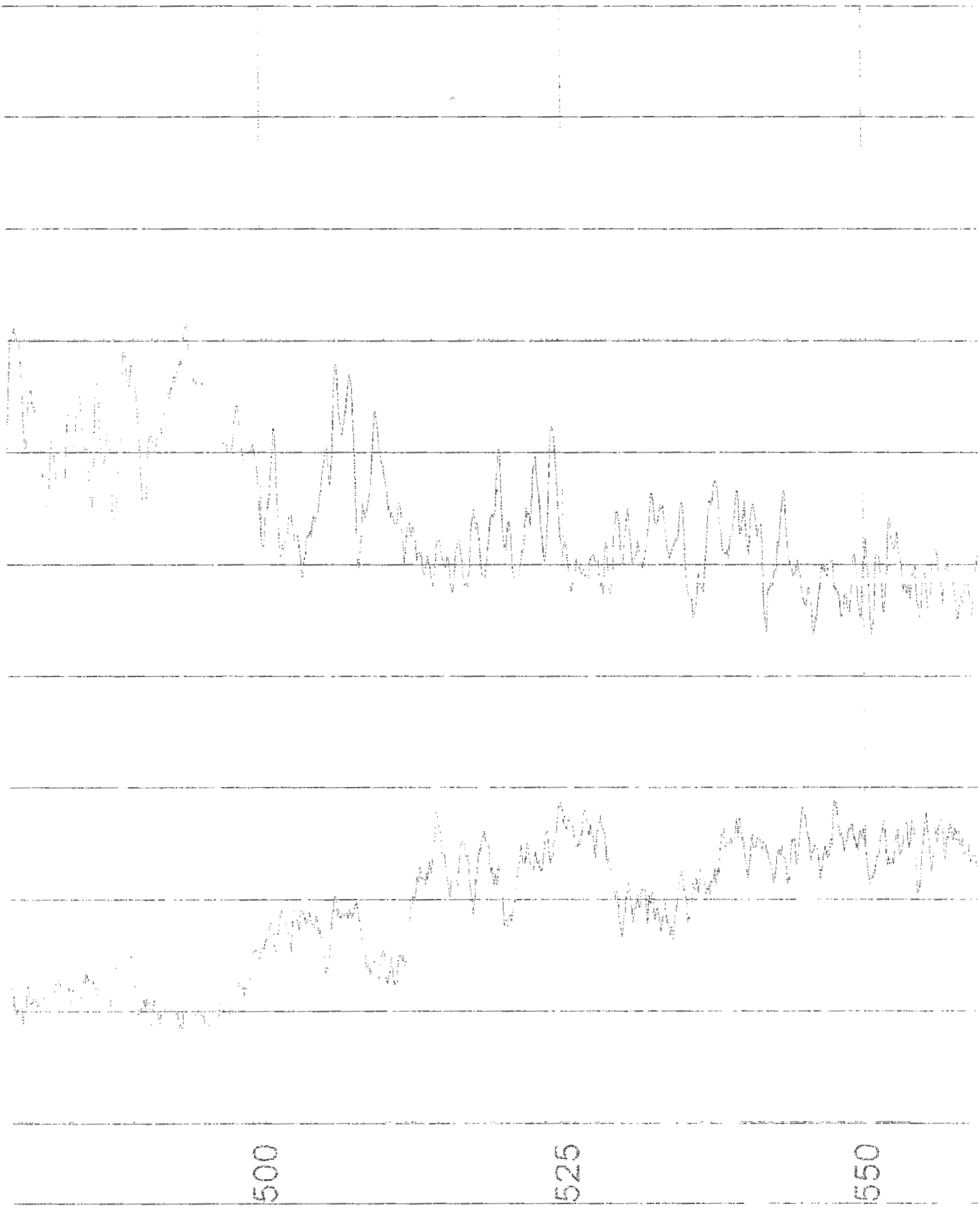
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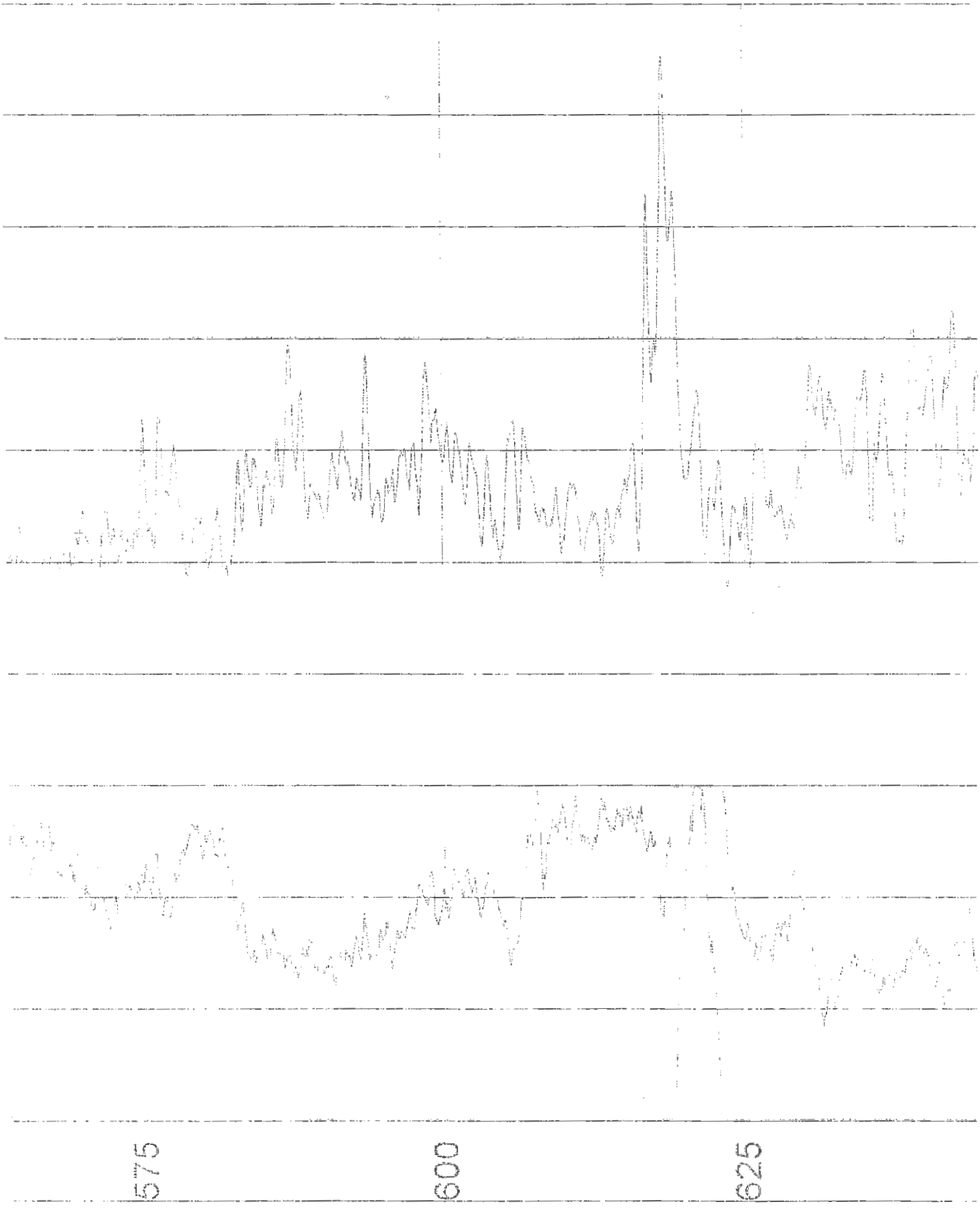
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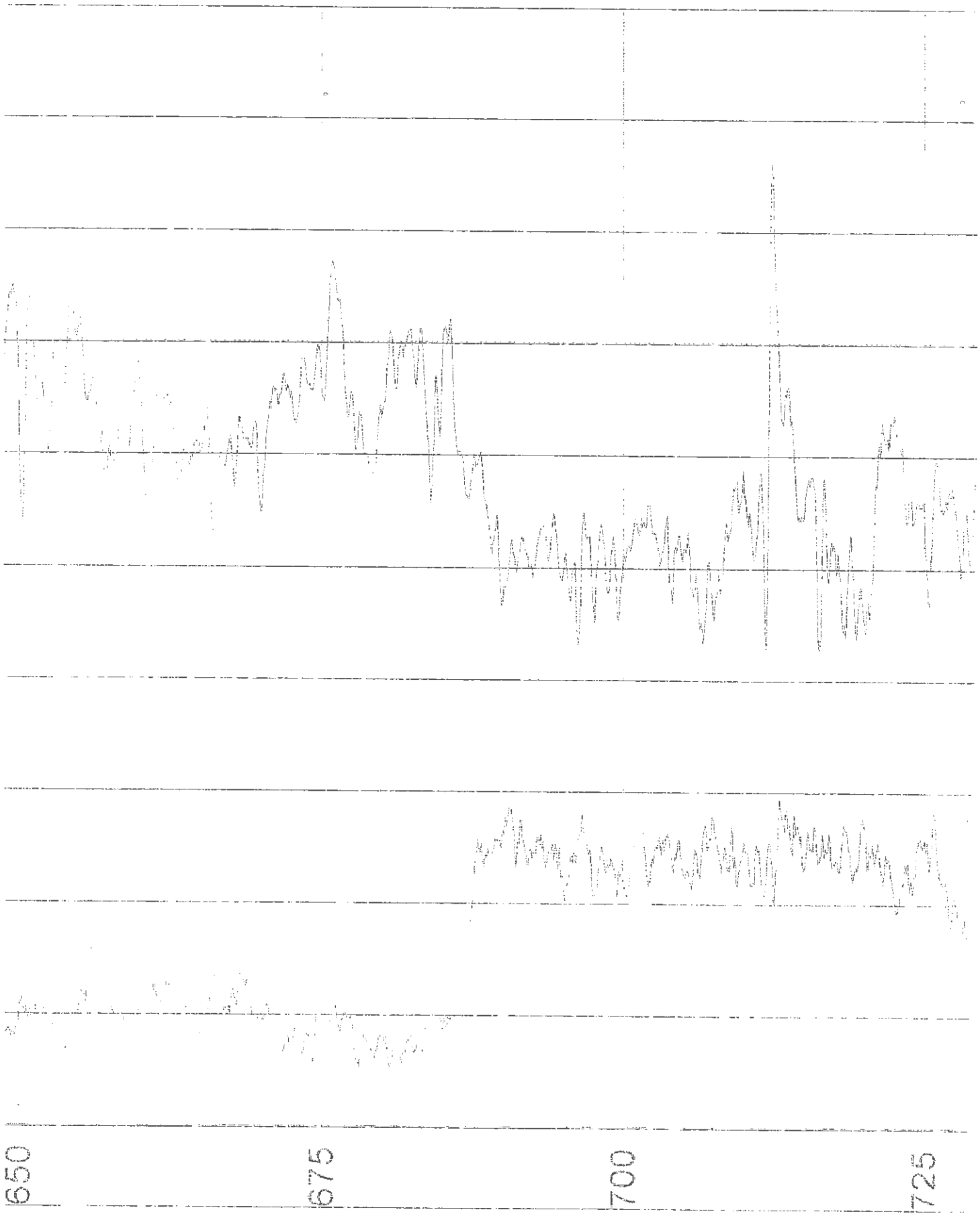
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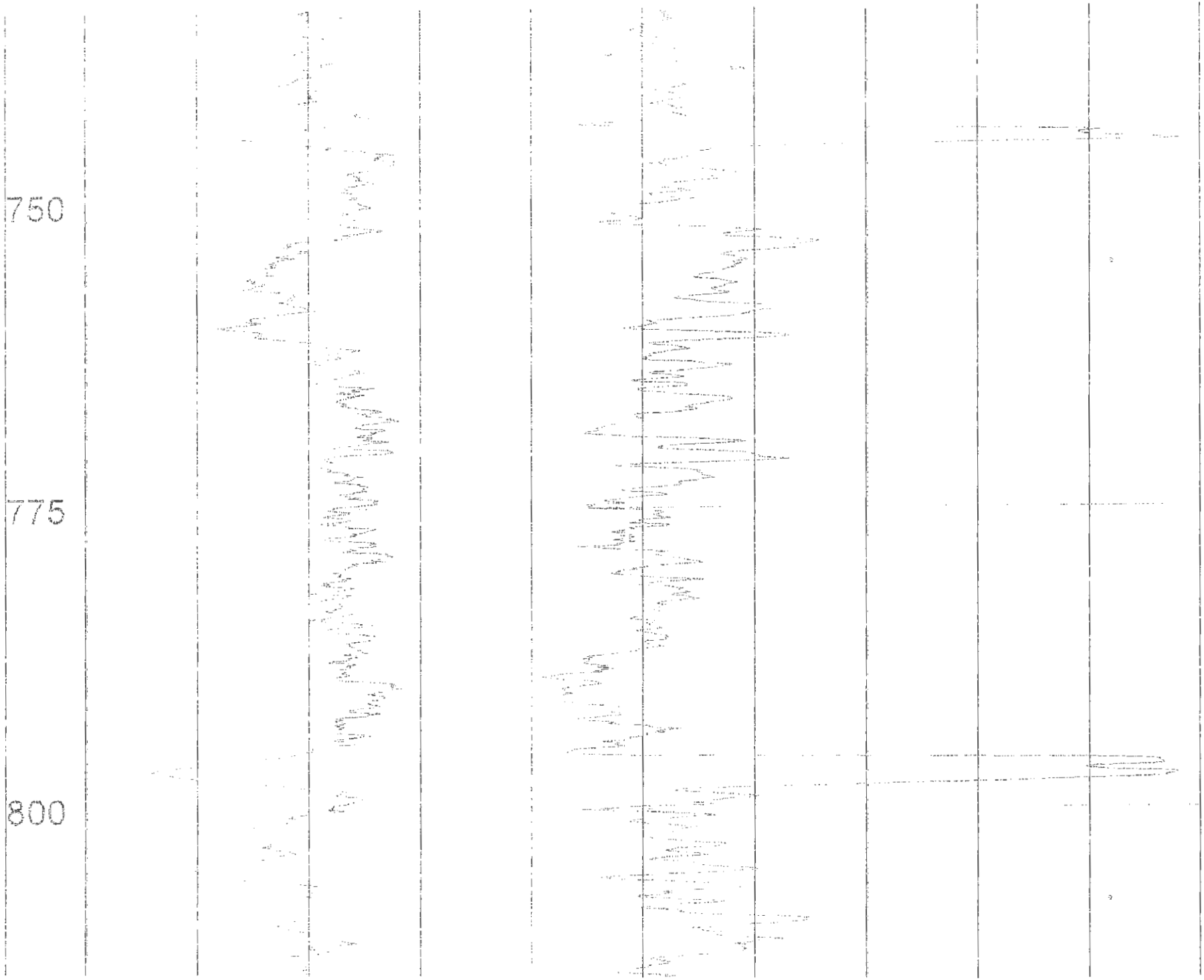
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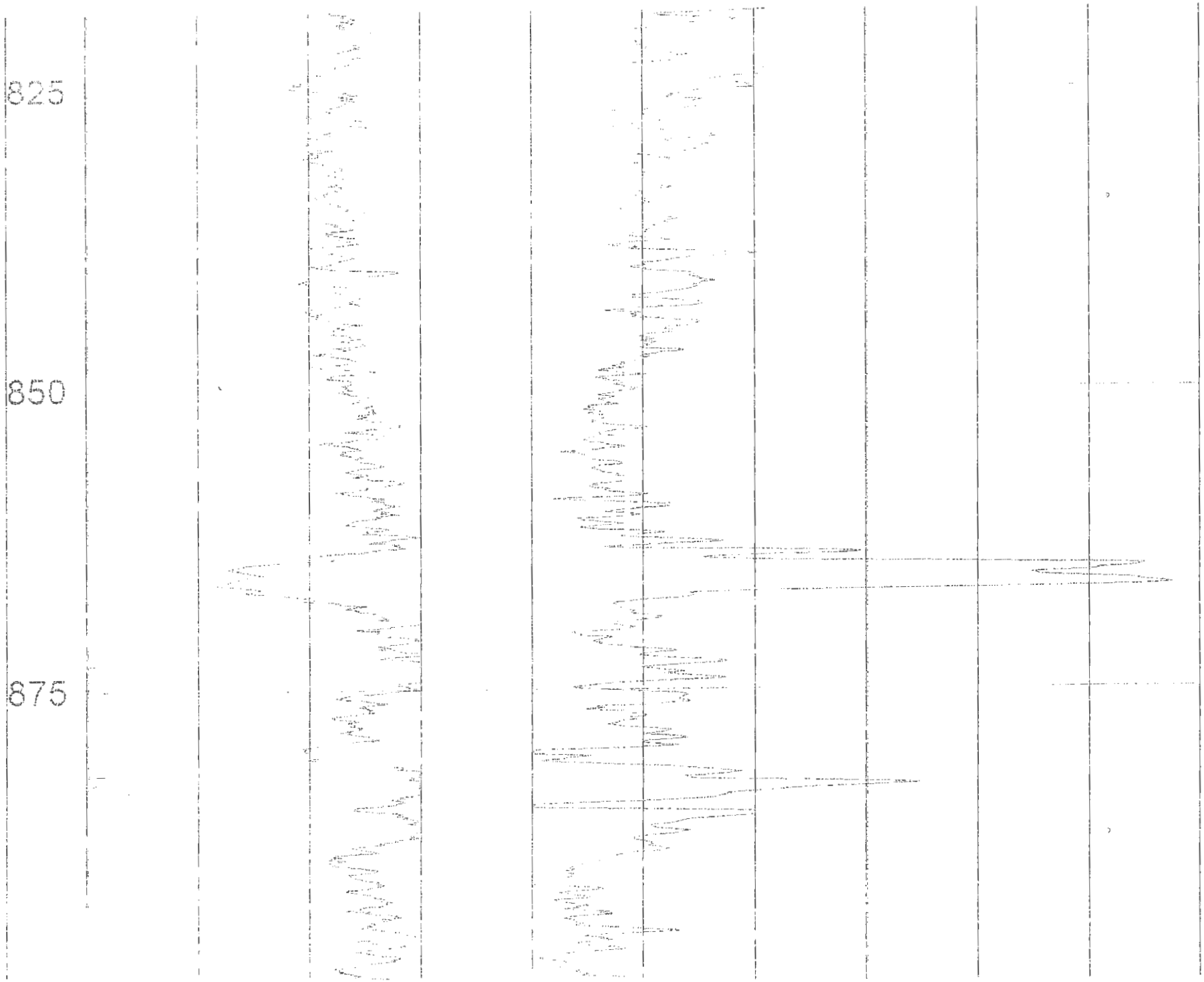
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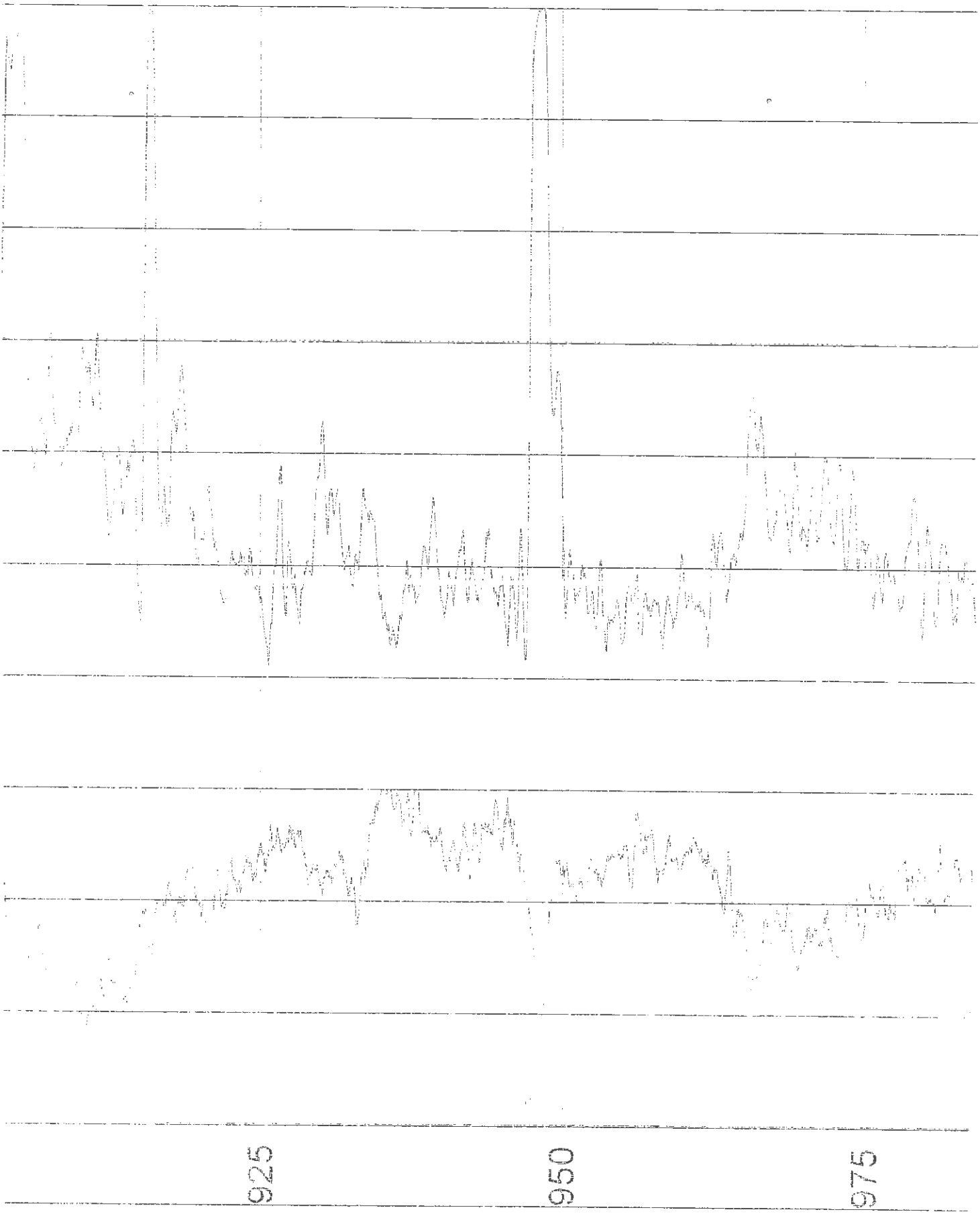
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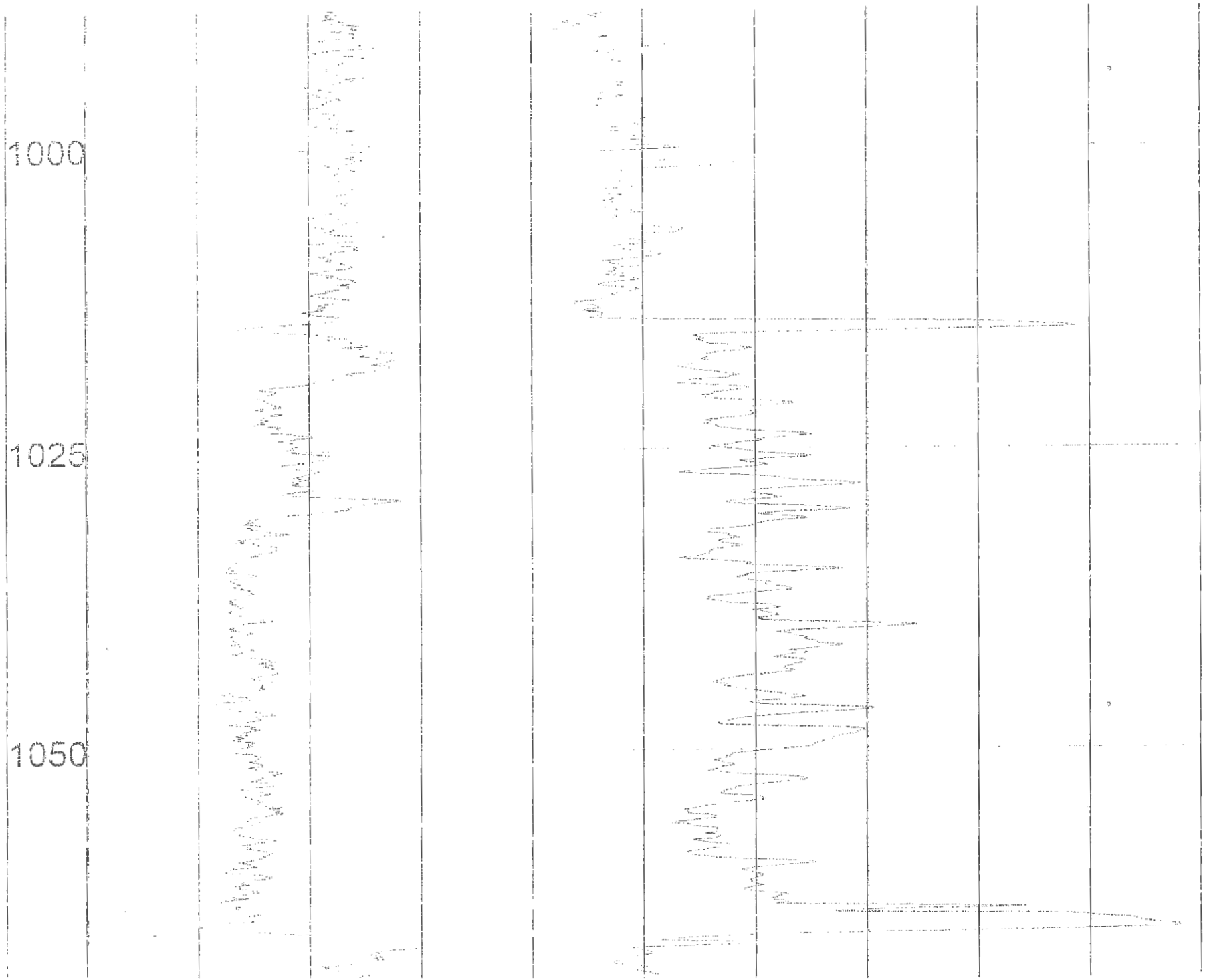
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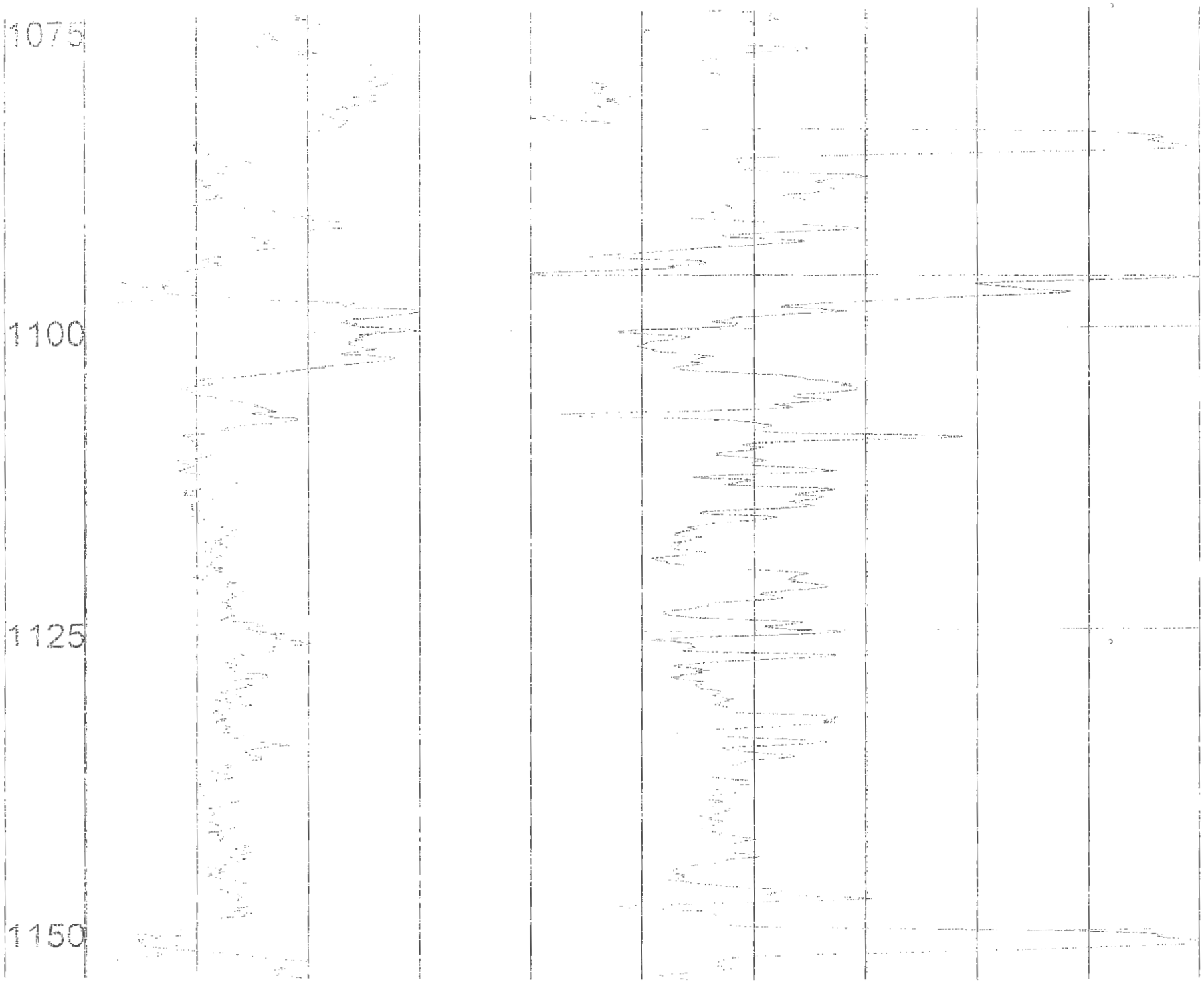
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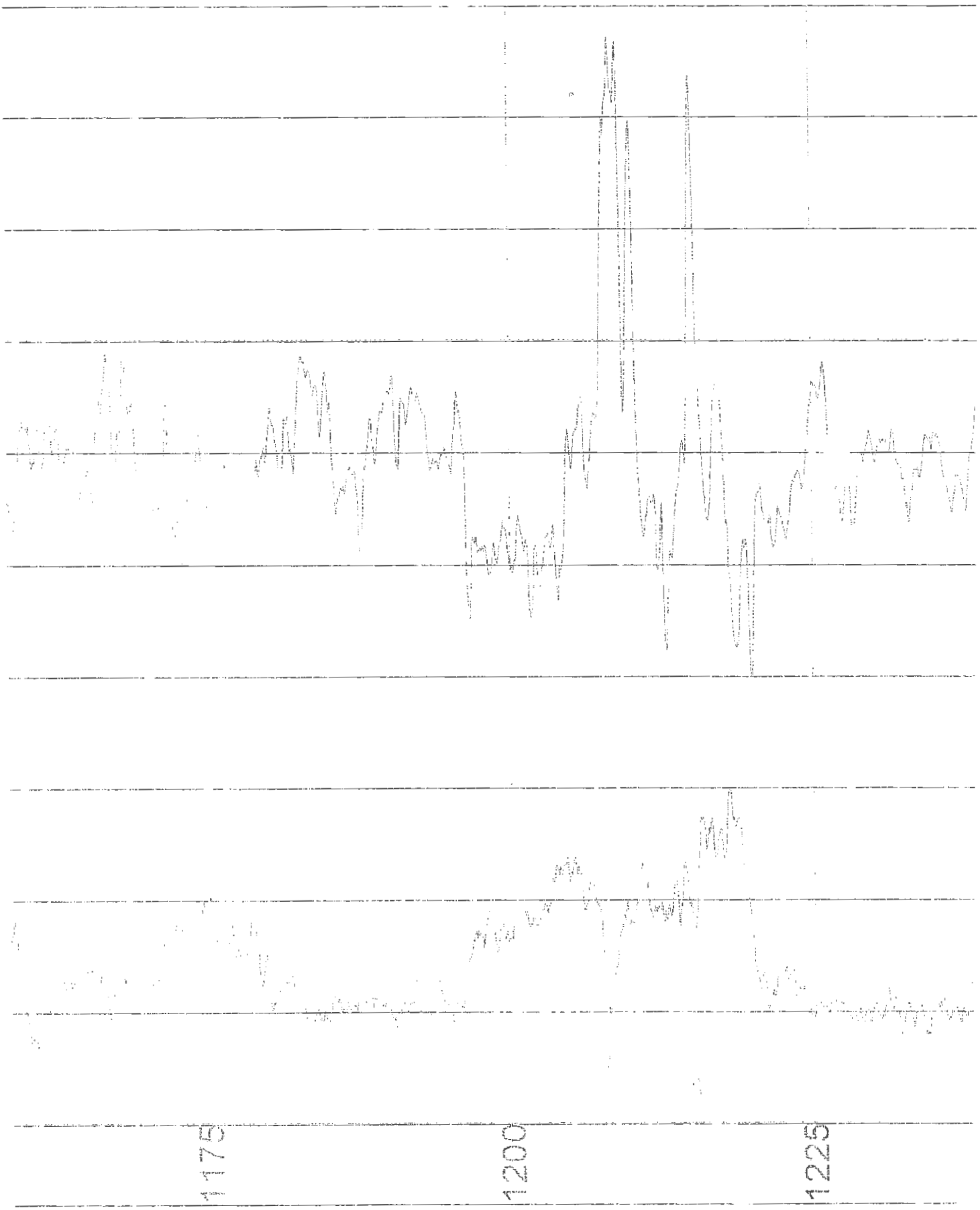
1100
1125
1150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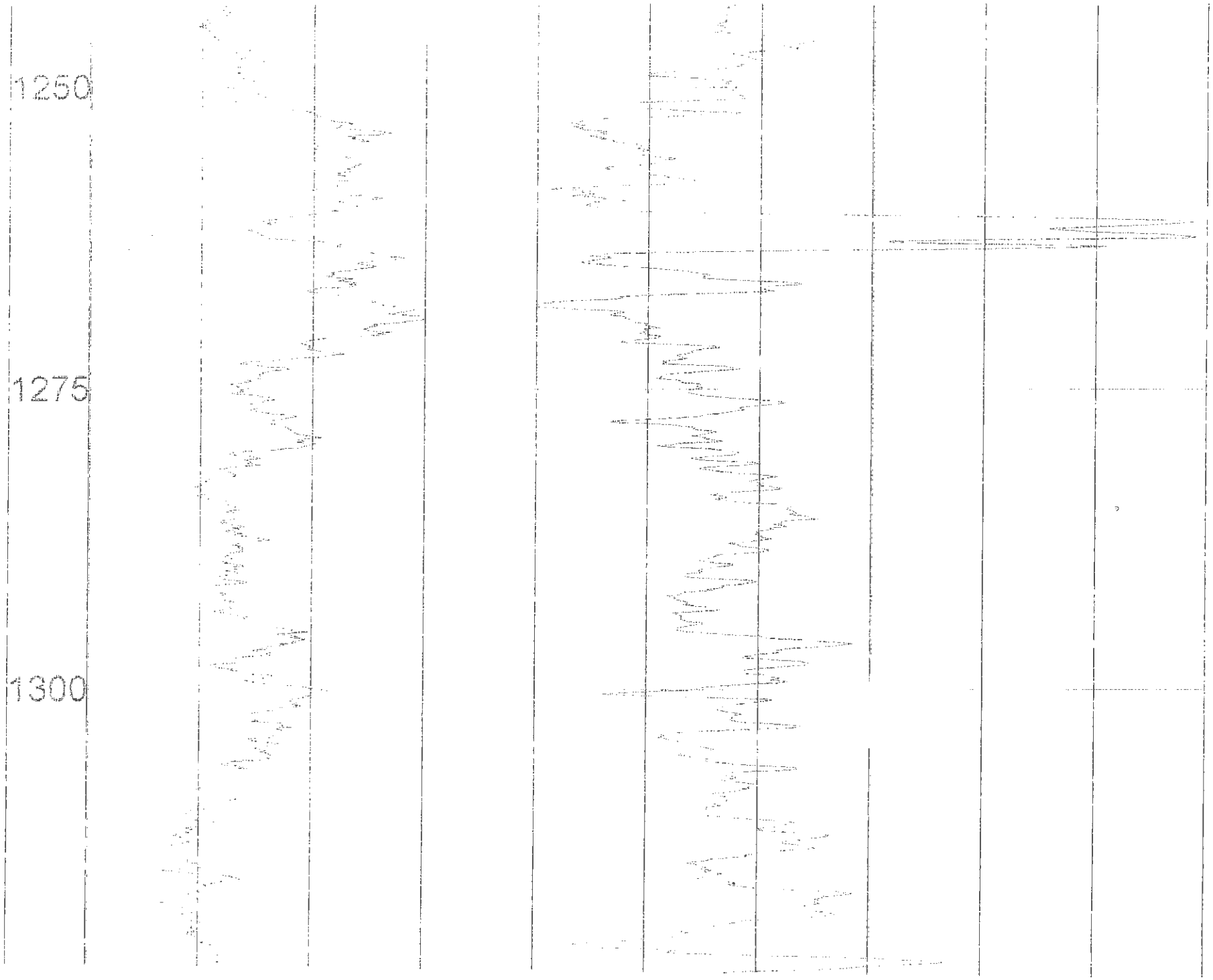
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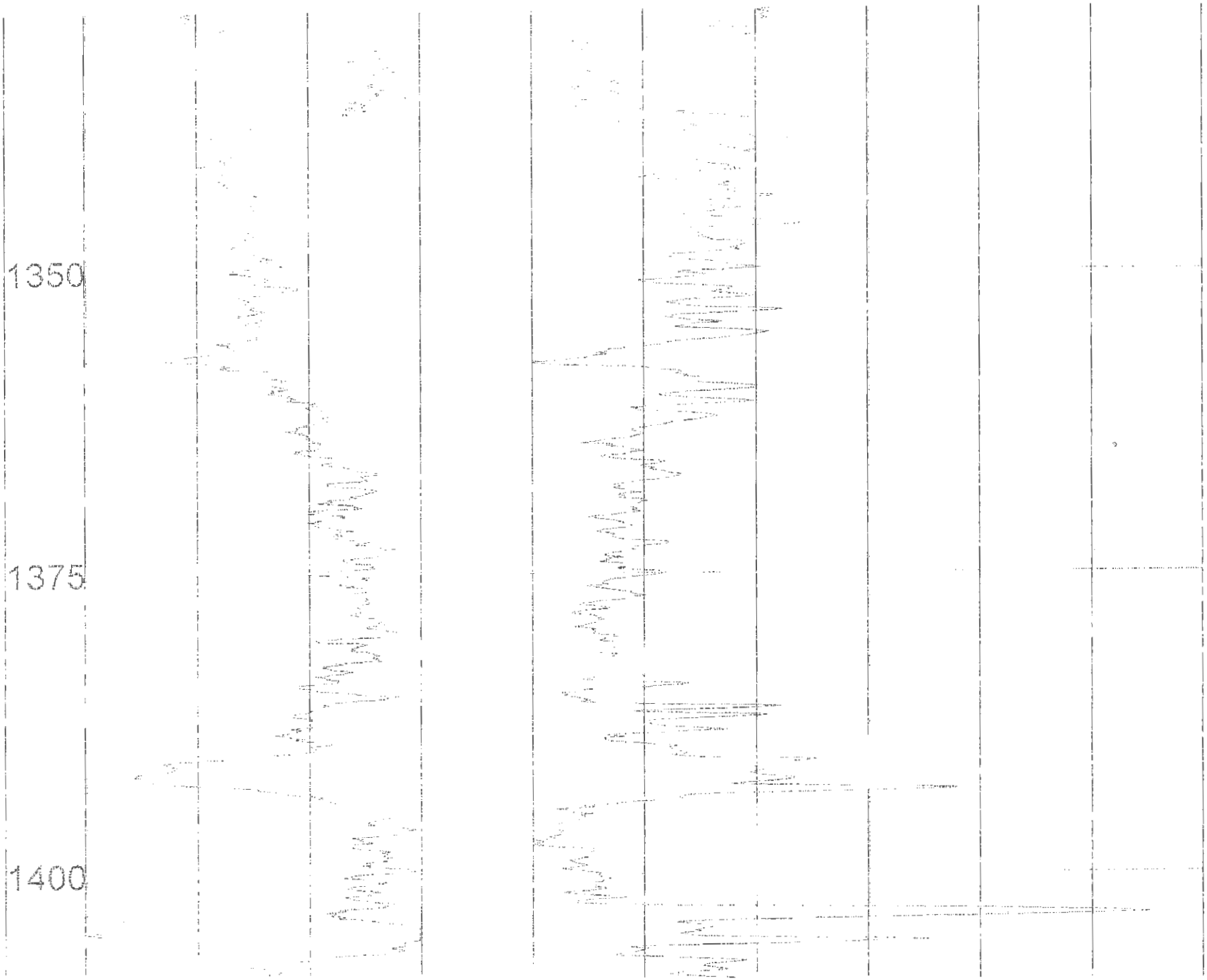
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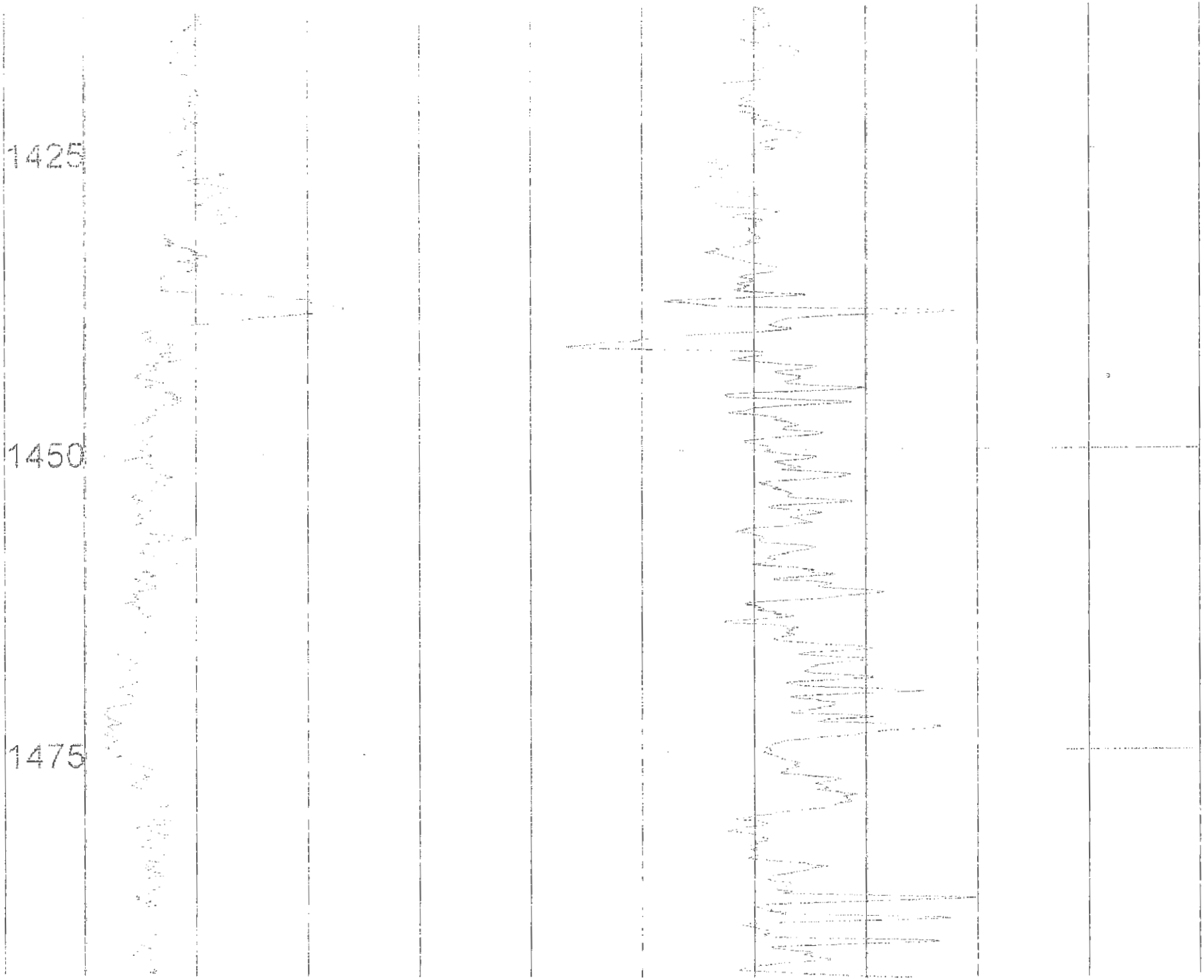
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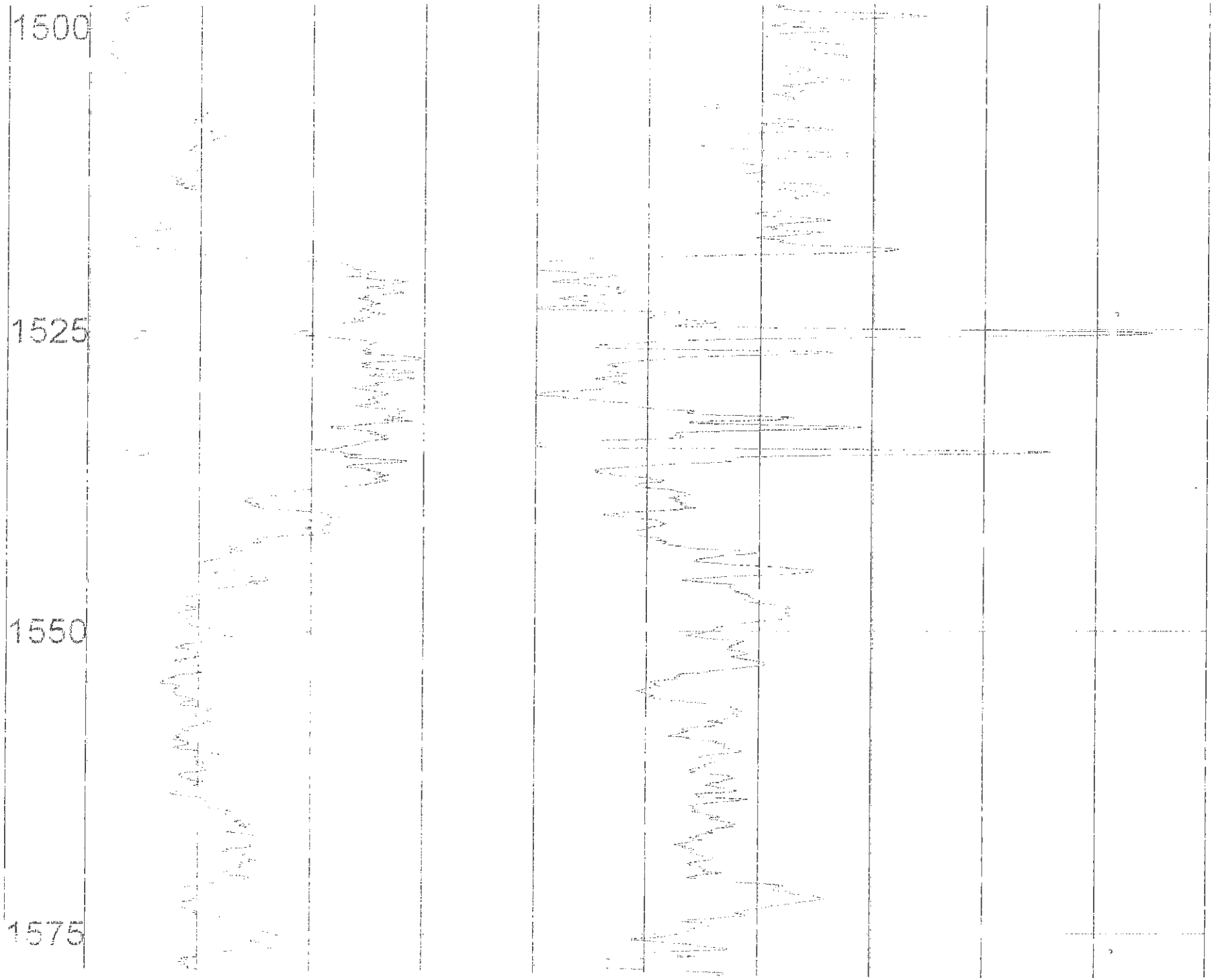
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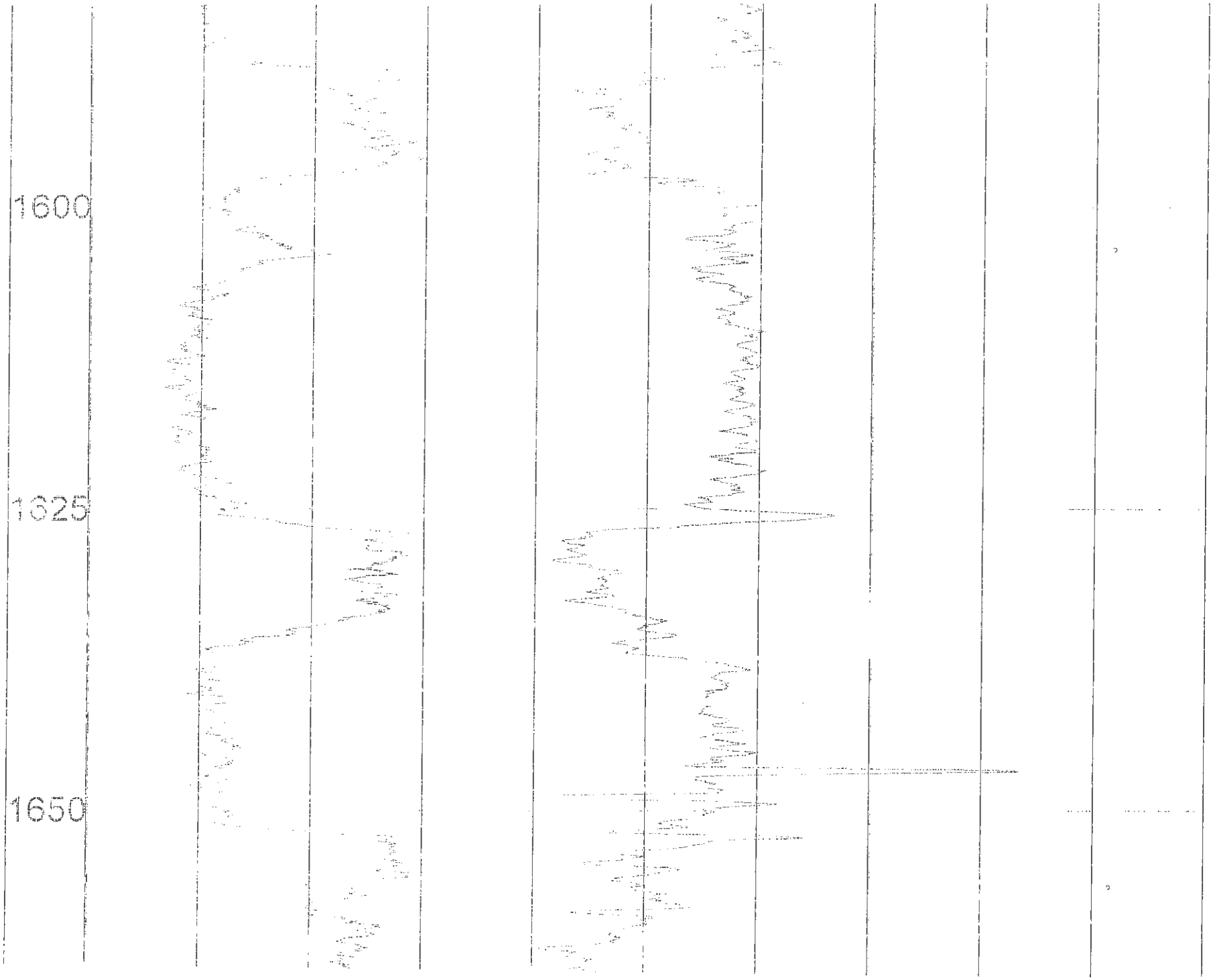
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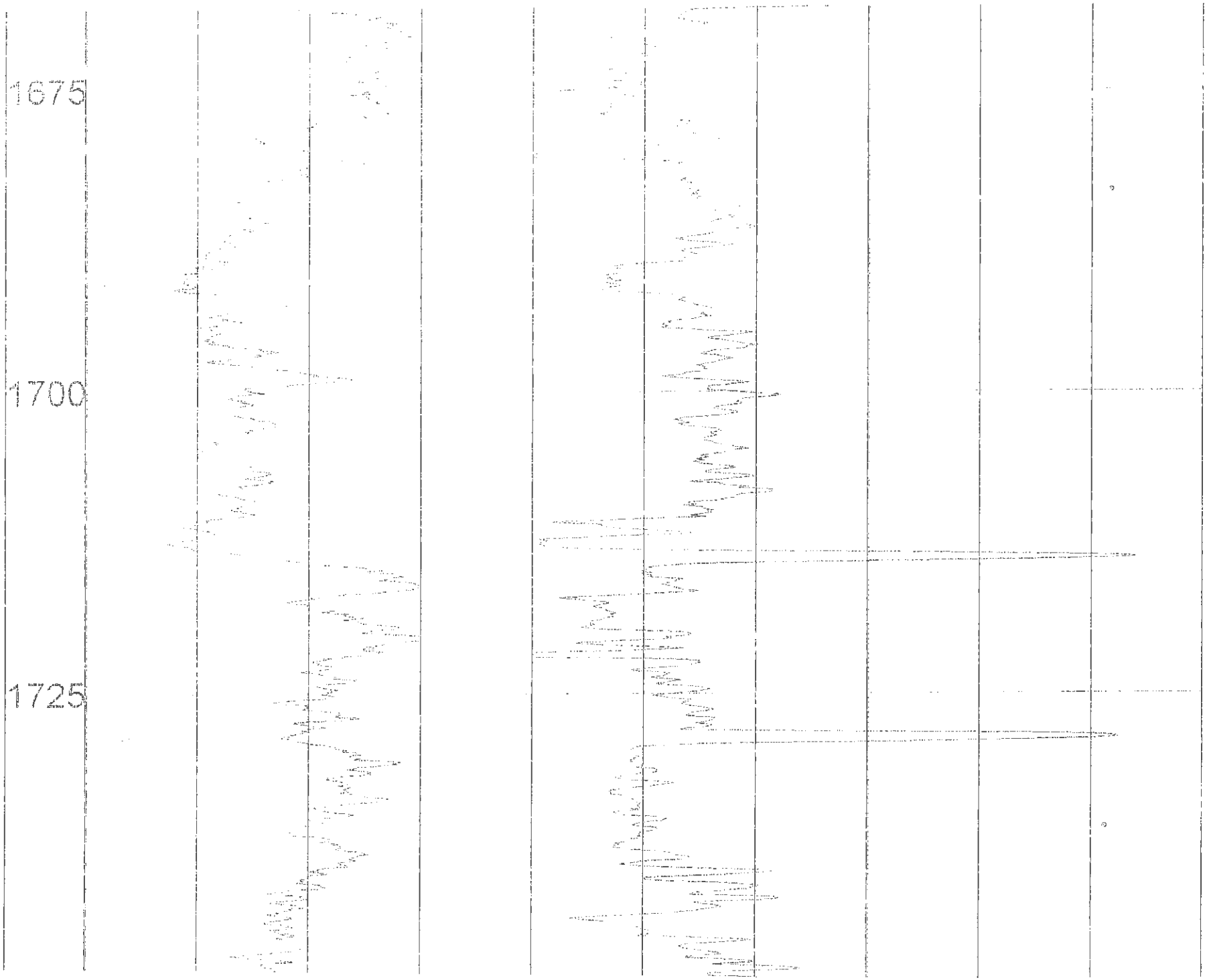
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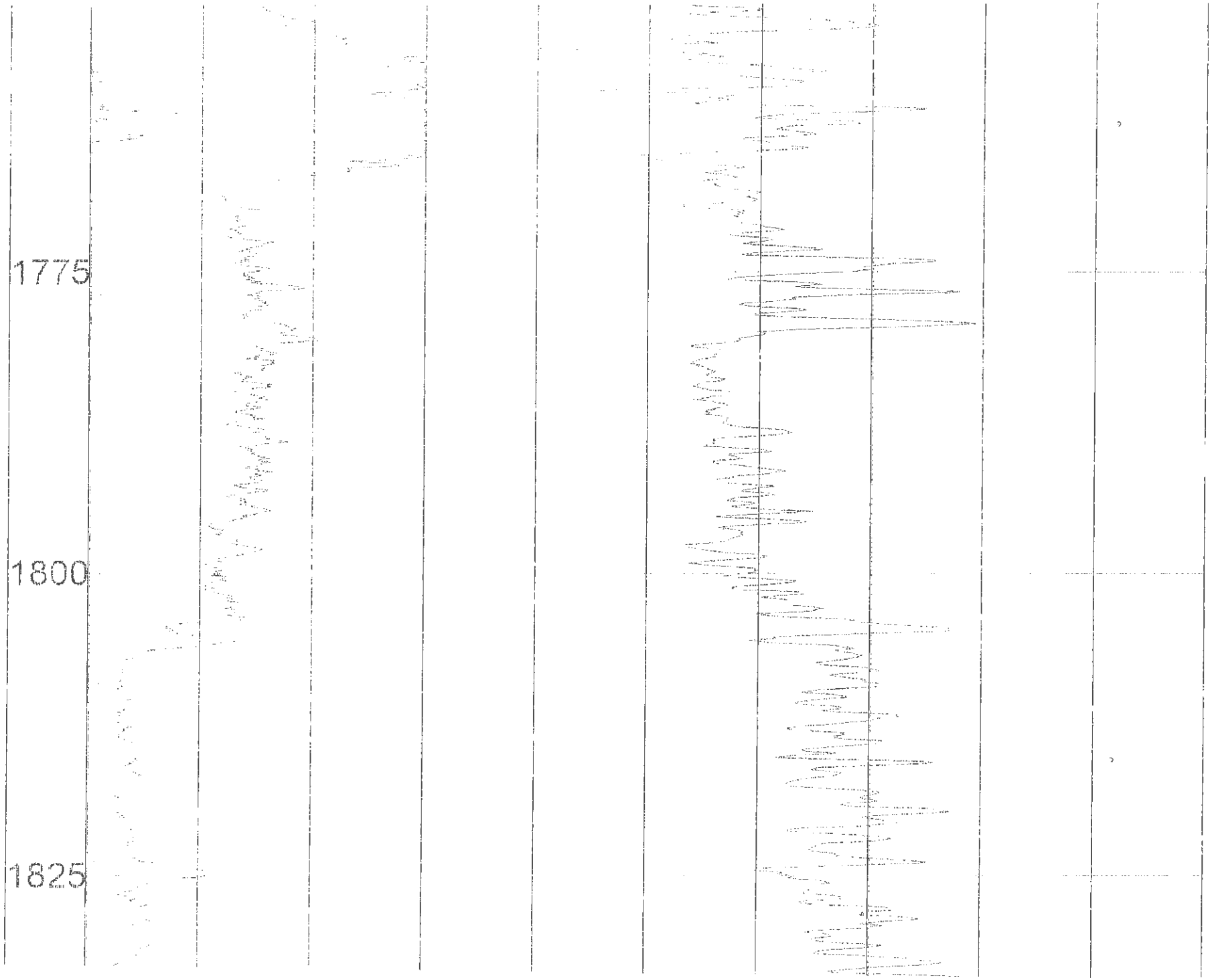
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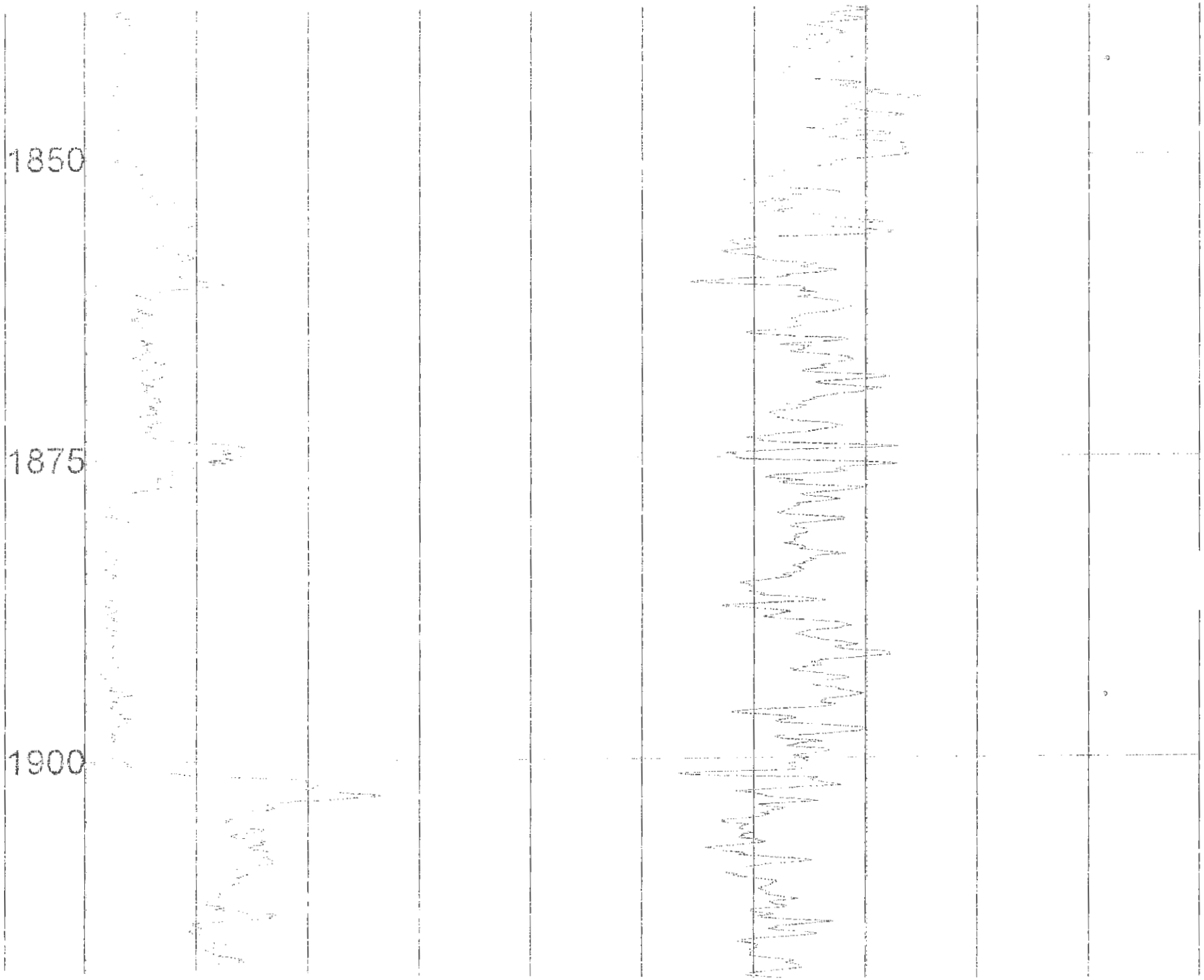
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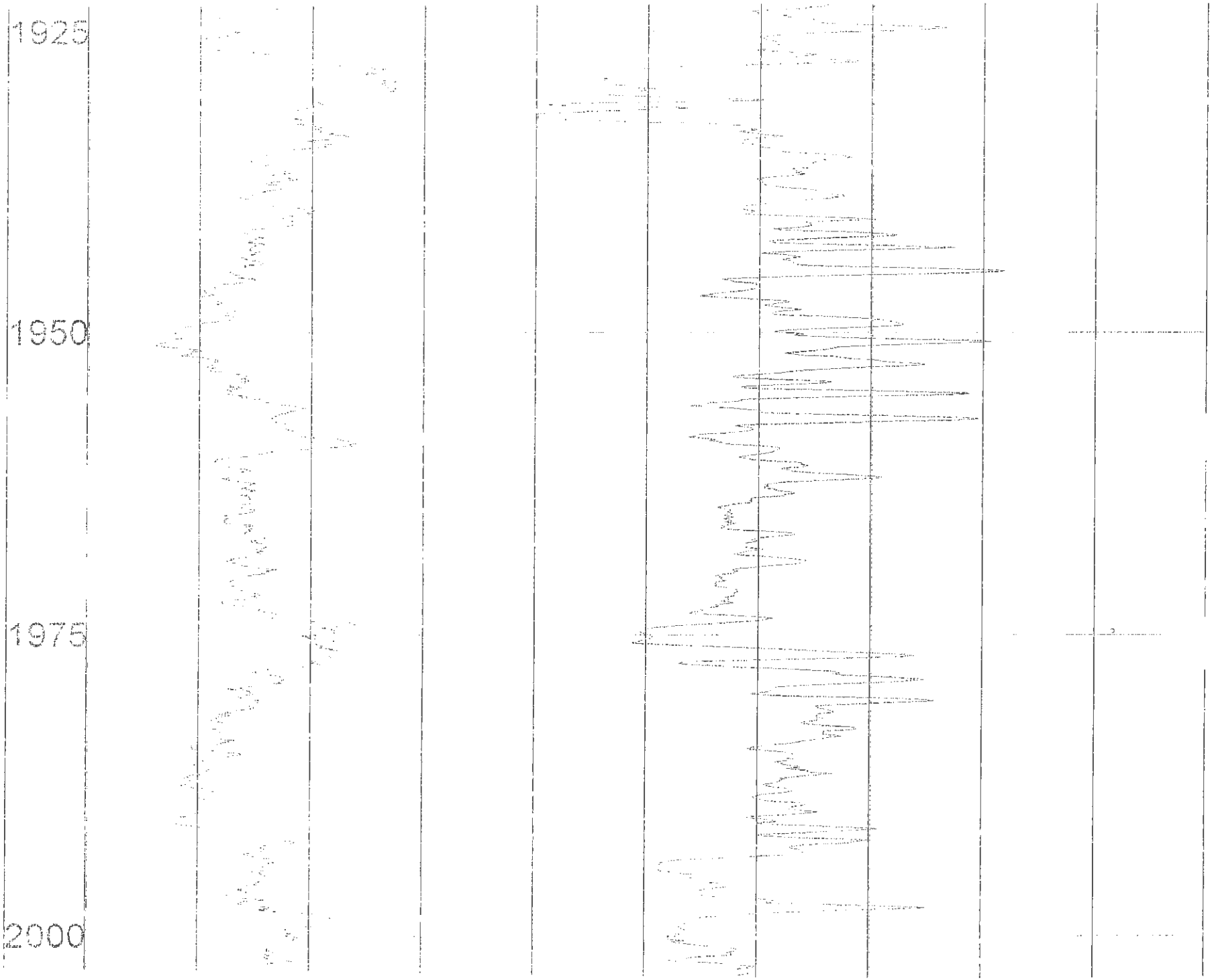
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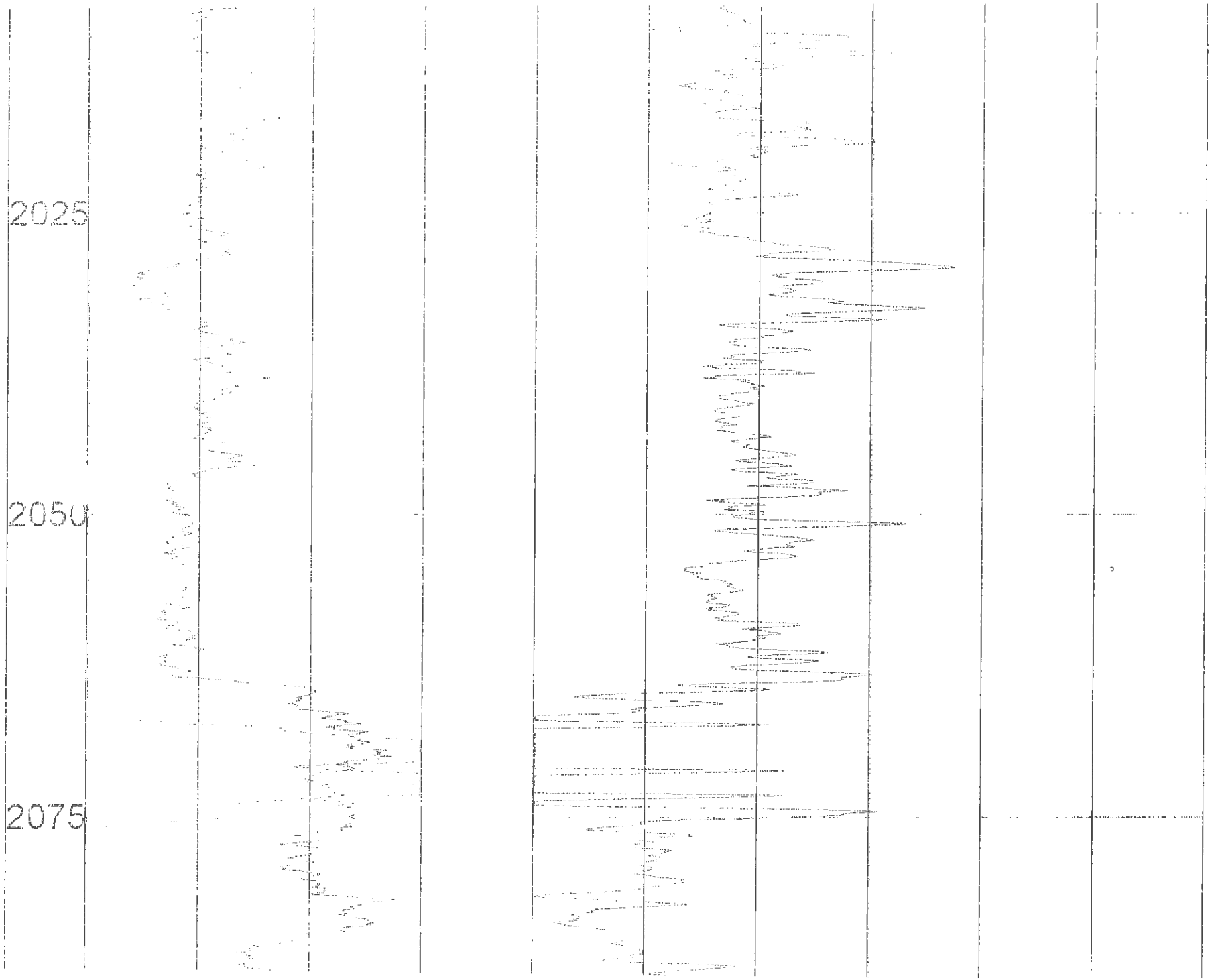
1950
1975
2000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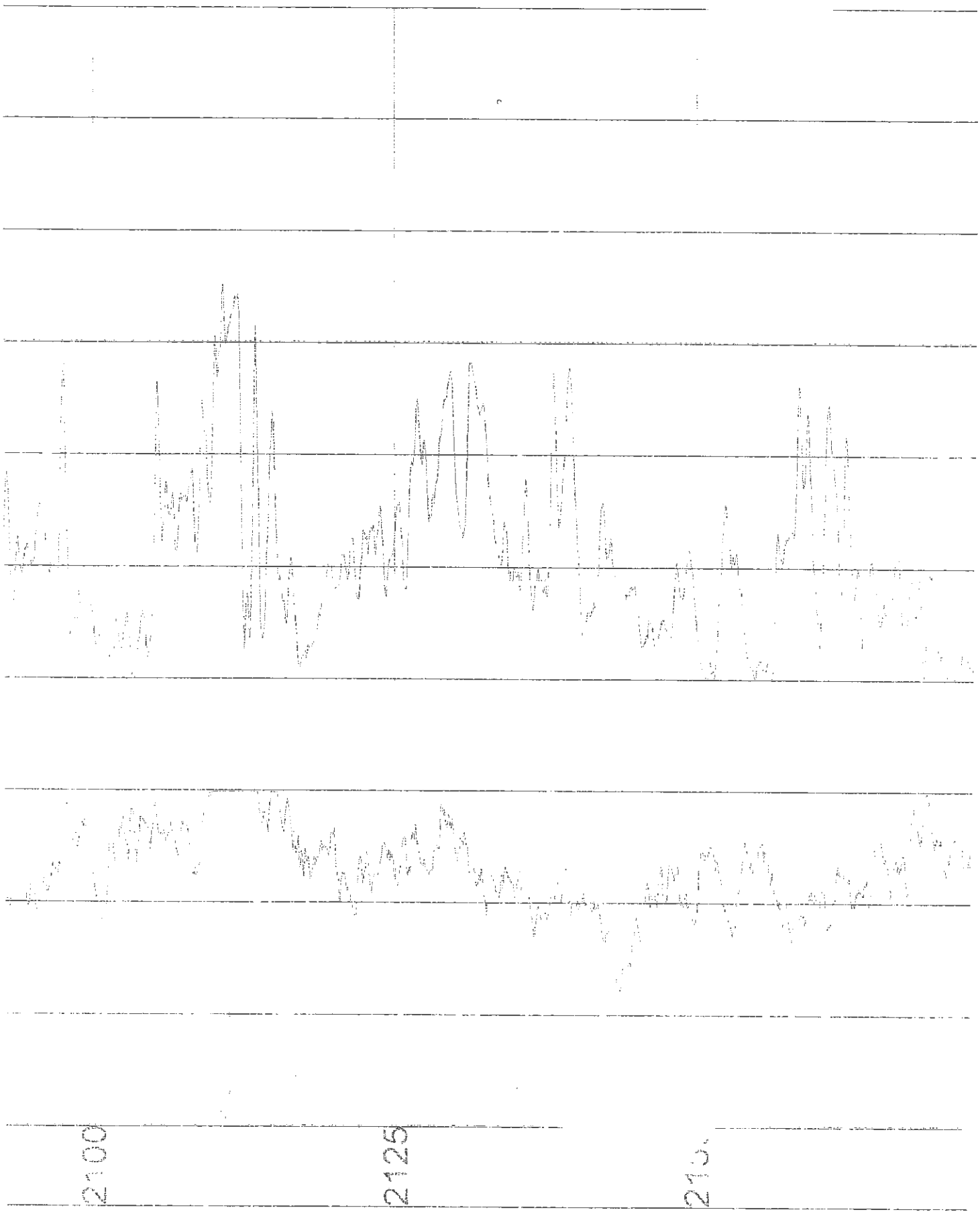
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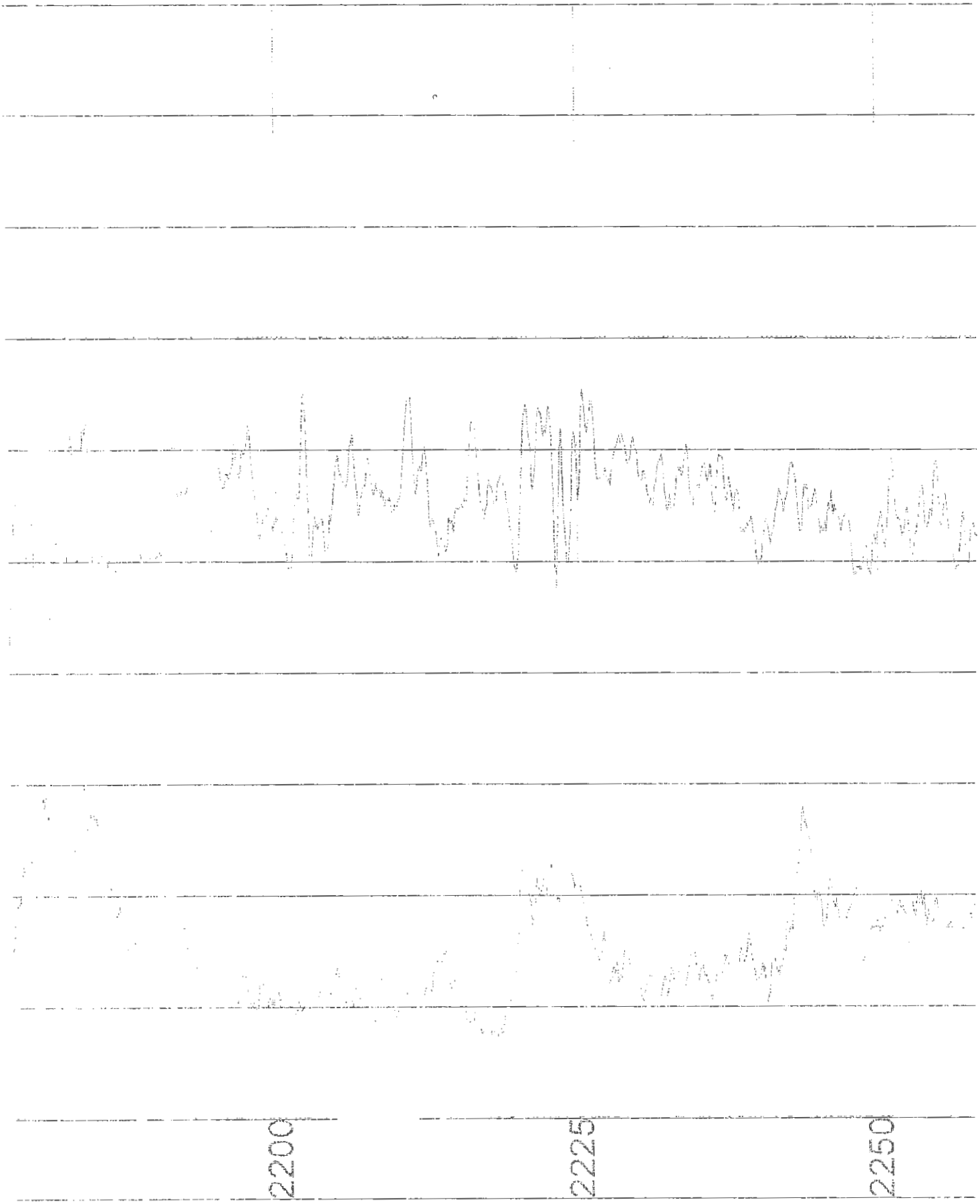
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2225
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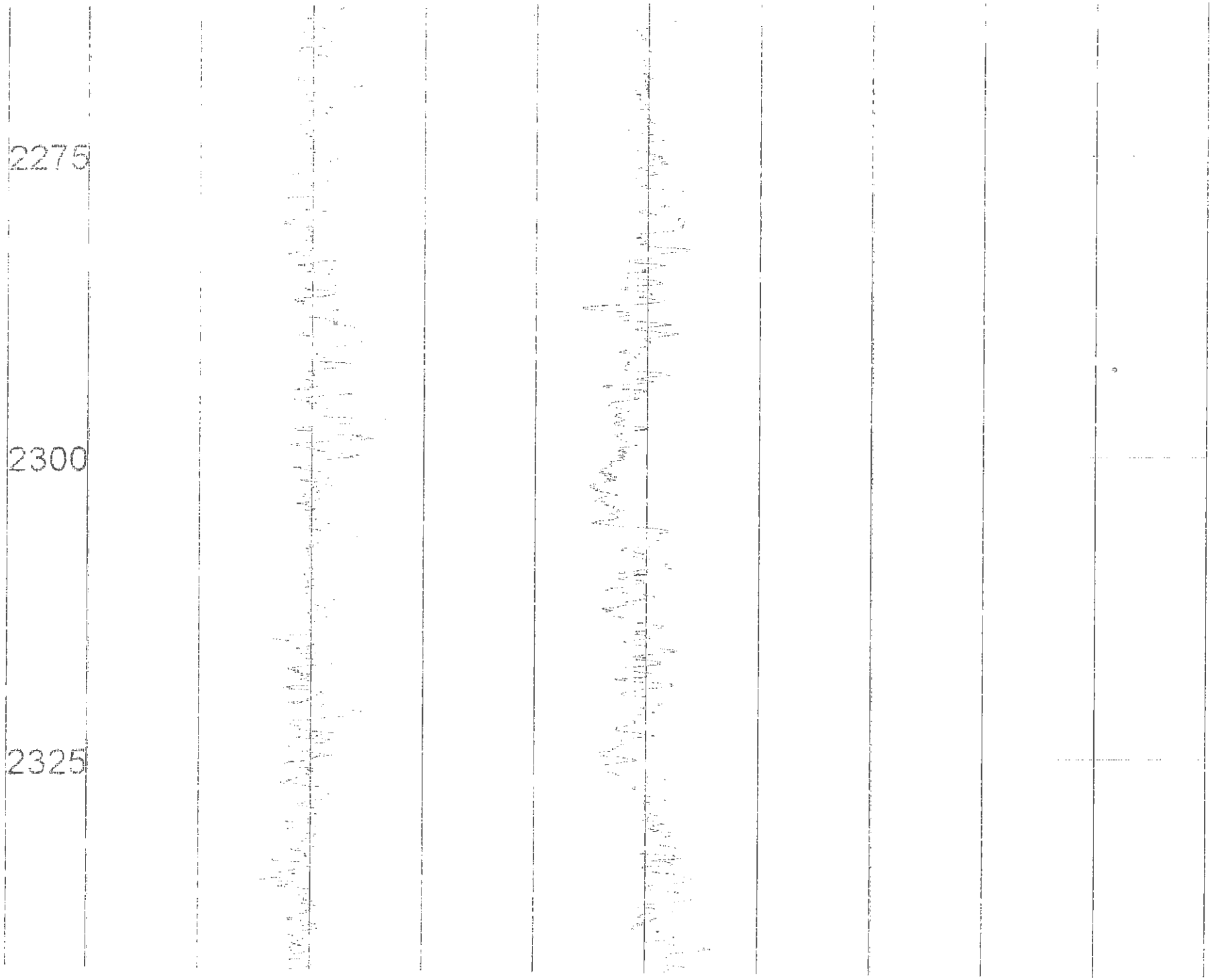
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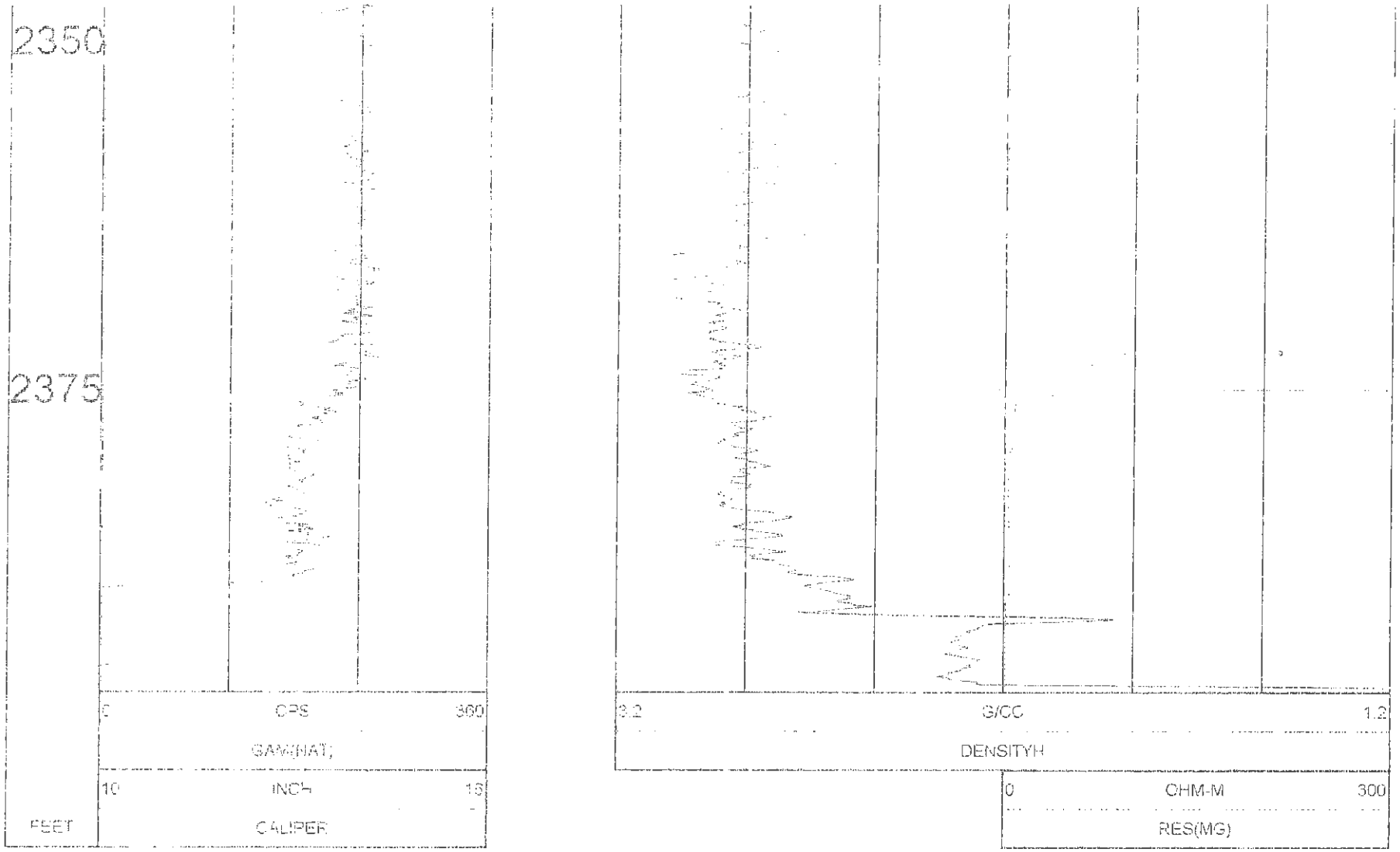

2350
2375
0
CPS
360
GAM(NAT)
10
INCH
15
FEET
CALIPER
3.2
G/CC
1.2
DENSITYH
0
OHM-M
300
RES(MG)

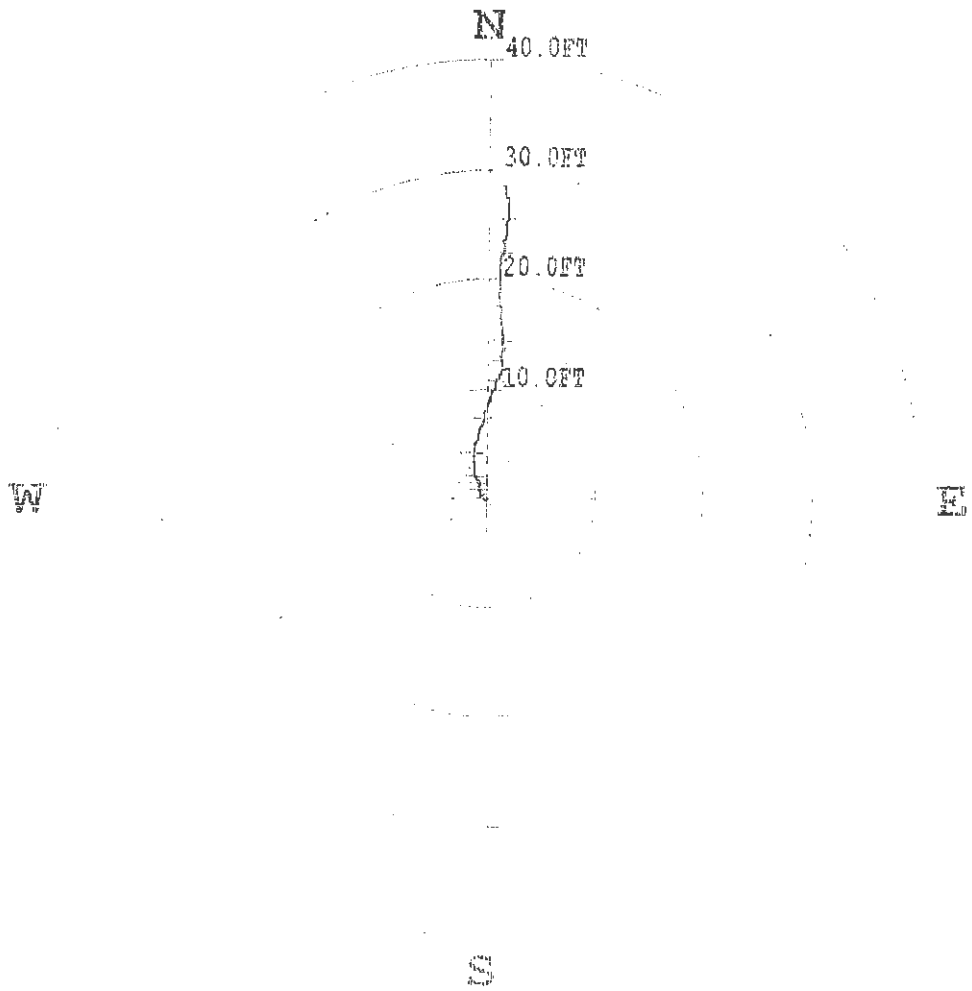
	DATE	TIME	SENSOR	STANDARD	RESPONSE
1	Mar03,01	11:46:01	GAM(NAT)	Default [API-GR]	Default [CPS]
	Mar03,01	11:46:01	GAM(NAT)	Default [API-GR]	Default [CPS]
2	Mar03,01	11:46:06	DENSITY	1.750 [G/CC]	2150 [CPS]
	Mar03,01	11:46:06	DENSITY	3.250 [G/CC]	450 [CPS]
3	Mar03,01	11:46:11	RES(MG)	Default [OHM-M]	Default [CPS]
	Mar03,01	11:46:11	RES(MG)	Default [OHM-M]	Default [CPS]
4	Mar03,01	11:46:16	CALIPER	3.000 [INCH]	374 [CPS]
	Mar03,01	11:46:16	CALIPER	5.000 [INCH]	1052 [CPS]
5	Mar03,01	11:45:54	DENSITYH	4.250 [G/CC]	2975 [CPS]
	Mar03,01	11:45:54	DENSITYH	1.800 [G/CC]	8970 [CPS]
6	Mar03,01	11:46:21	CALIPERL	4.000 [INCH]	285 [CPS]
	Mar03,01	11:46:21	CALIPERL	8.000 [INCH]	999 [CPS]

PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: BUCHANAN PRODUCTION COMPANY
LOCATION: -
HOLE ID: 01-BPC-#1
DATE OF LOG: 02/27/01
PROBE: 0019C 775

MAG DECL: -6.8

SCALE: 5 FT/IN
TRUE DEPTH: 2395.70 FT
AZIMUTH: 2.6
DISTANCE: 29.2 FT
+ = 200 FT INCR
= BOTTOM OF HOLE



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955.0	954.[illegible]	[illegible]	-1.41	[illegible]	[illegible]	[illegible]	[illegible]
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995.0	994.9[illegible]	7.31	[illegible]	7.3	[illegible]	[illegible]	[illegible]
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1095.0	1094.91	9.1[illegible]	[illegible]	9.1	1.[illegible]	[illegible]	[illegible]
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WELL SERVICES INC

GAMMA RAY - CEMENT BOND - CCL VDL LOG

FILING NO.

COMPANY BUCHANAN PRODUCTION COMPANY
WELL BPC BPC-01
FIELD RUSSELL
COUNTY RUSSELL STATE VA.

LOCATION:

SEC TWP RGE

OTHER SERV:

PERMANENT DATUM: ELEV:

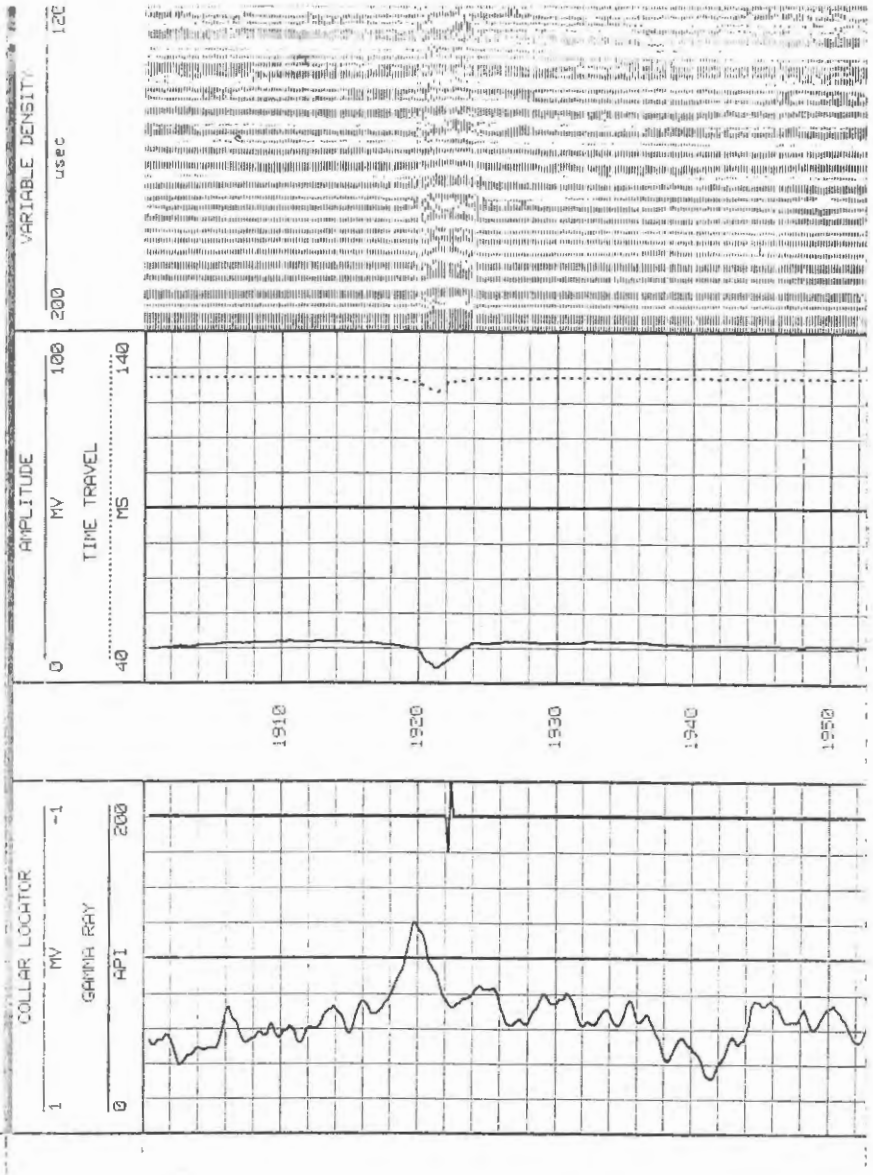
LOG MEASURED FROM FT ABOVE PERM DATUM
DRILLING MEASURED FROM

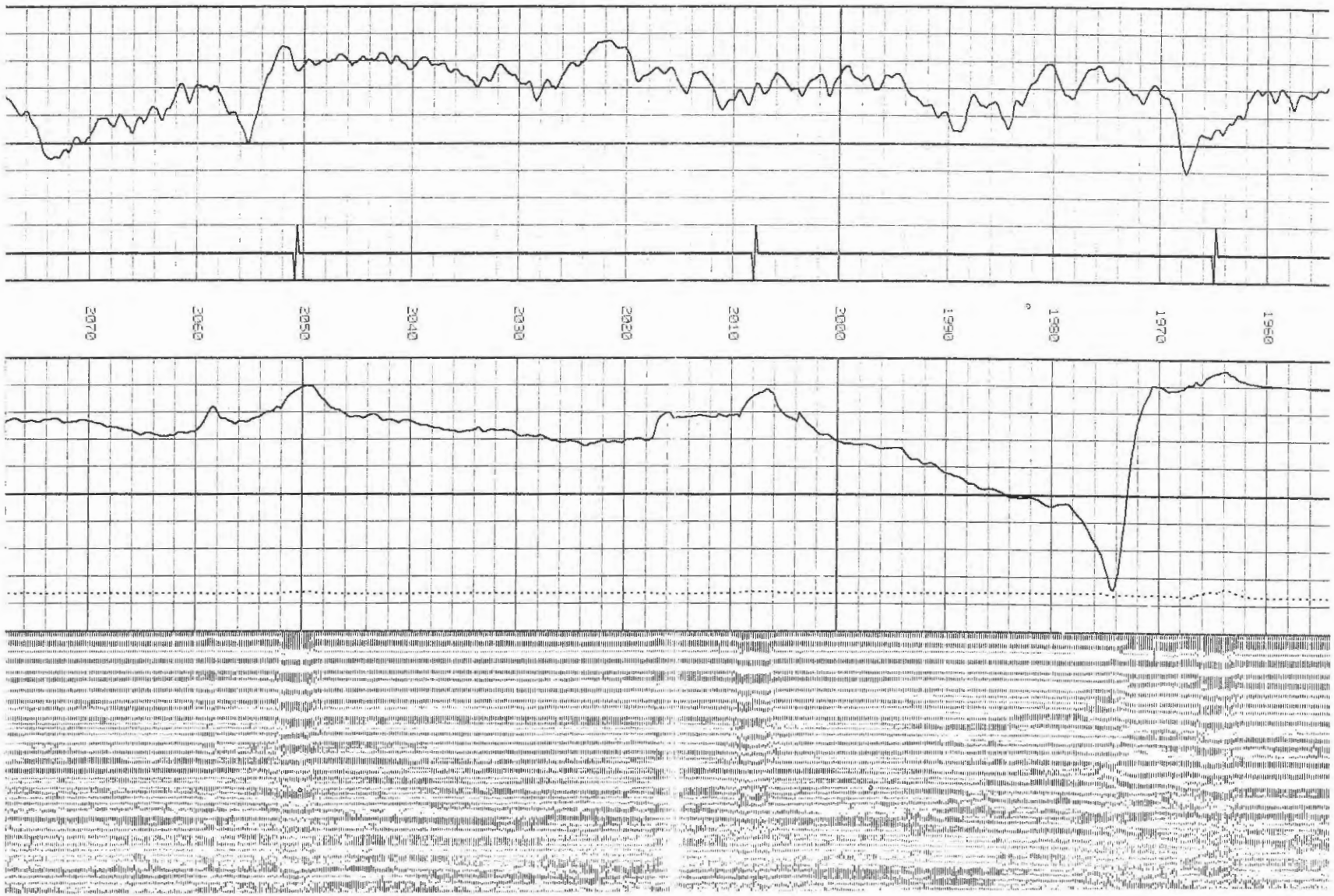
ELEVATION:
KB.
DF.
GL.

DATE	03-13-01		
RUN NO.	ONE		
DEPTH - DRILLER	5463'		
DEPTH - LOGGER	5455'		
BOTTOM LOGGED INT	5449'		
TOP LOGGED INT	1900'		
TYPE FLUID IN HOLE	WATER		
SALINITY PPM CL.			
DENSITY			
LEVEL	SURFACE		
MAX TEMP DEG F			
OPERATING RIG TIME	3 HOURS		
OPERATOR	R.N.MOSELEY		
WITNESSED BY	MR. WARD		

RUN	BORE HOLE RECORD			CASING RECORD			
NO.	BIT	FROM	TO	SIZE	WGT.	FROM	TO
ONE				4.5"		0	T.D.

START DEPTH 1900FT DATE: 12-29-98 TIME: 7:17a FILE: BPC01 PLAYBACK PROGRAM

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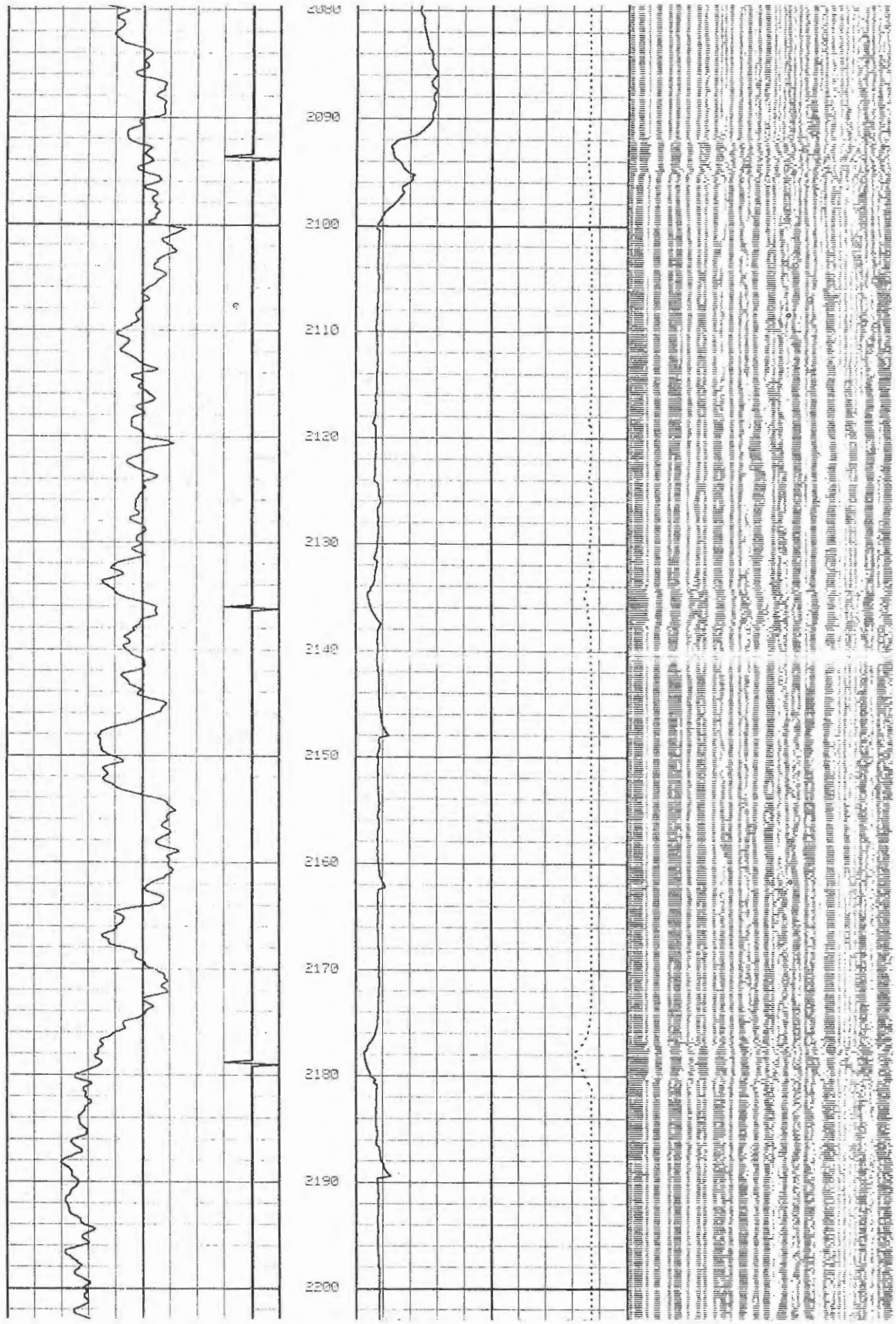
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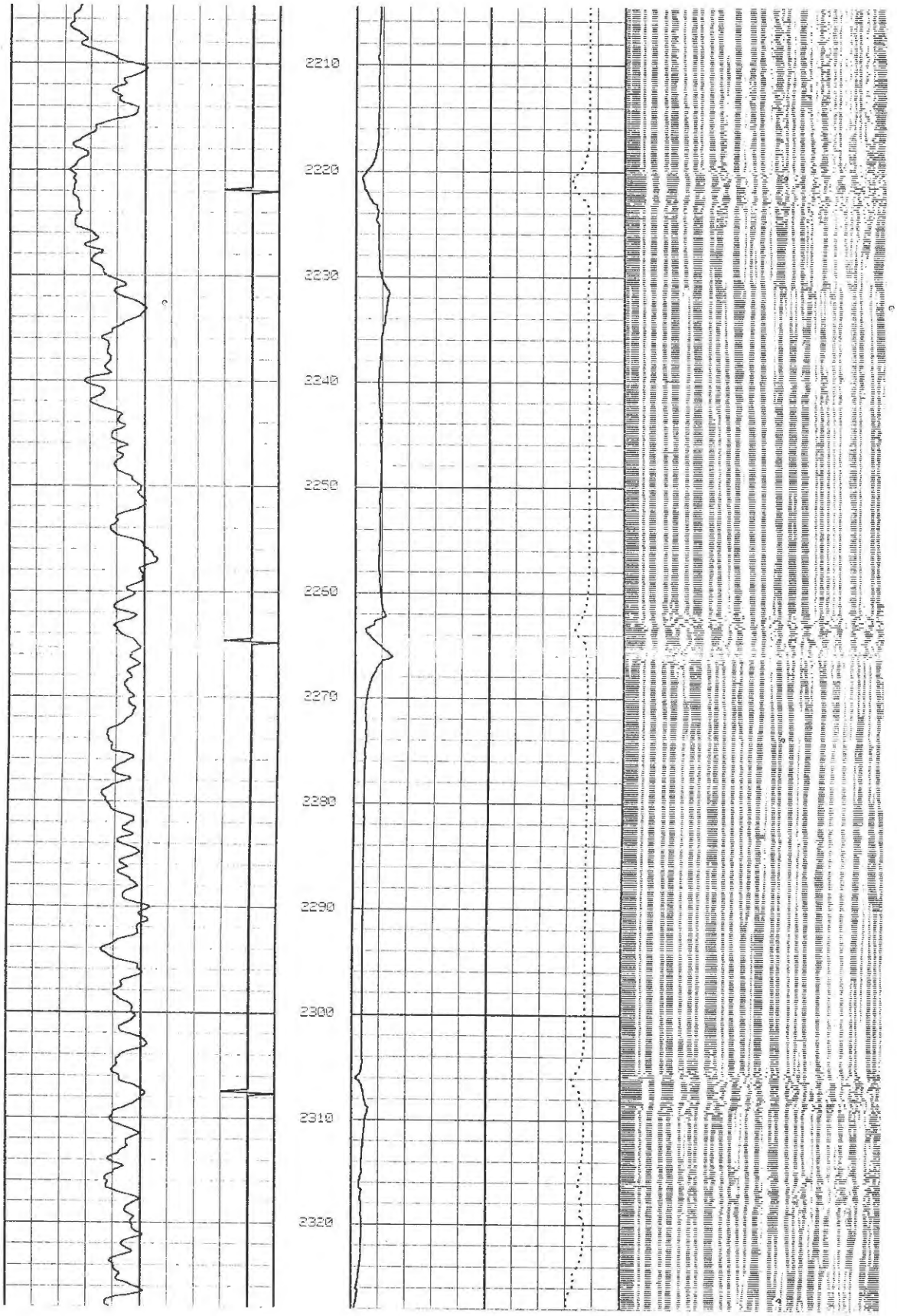
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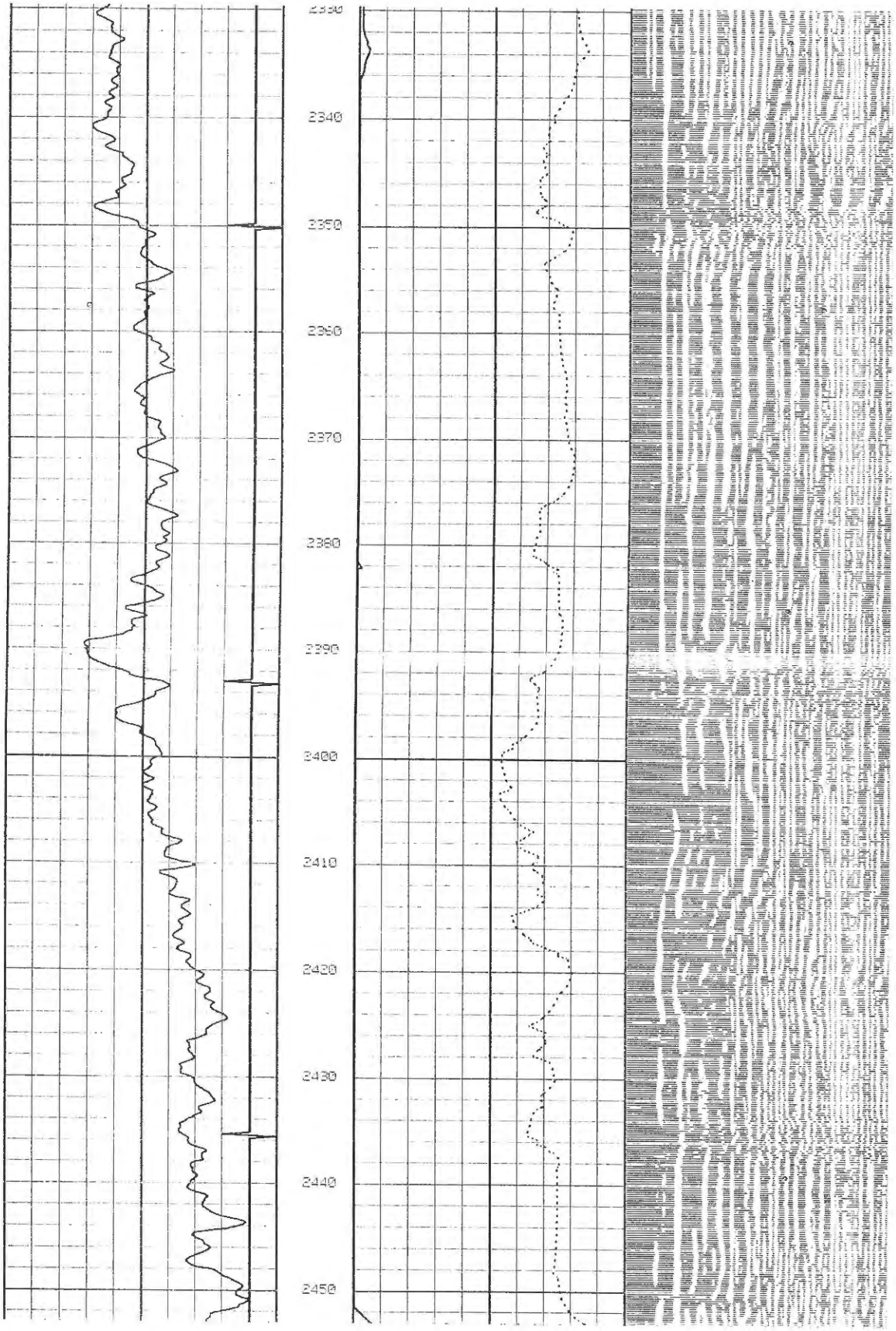
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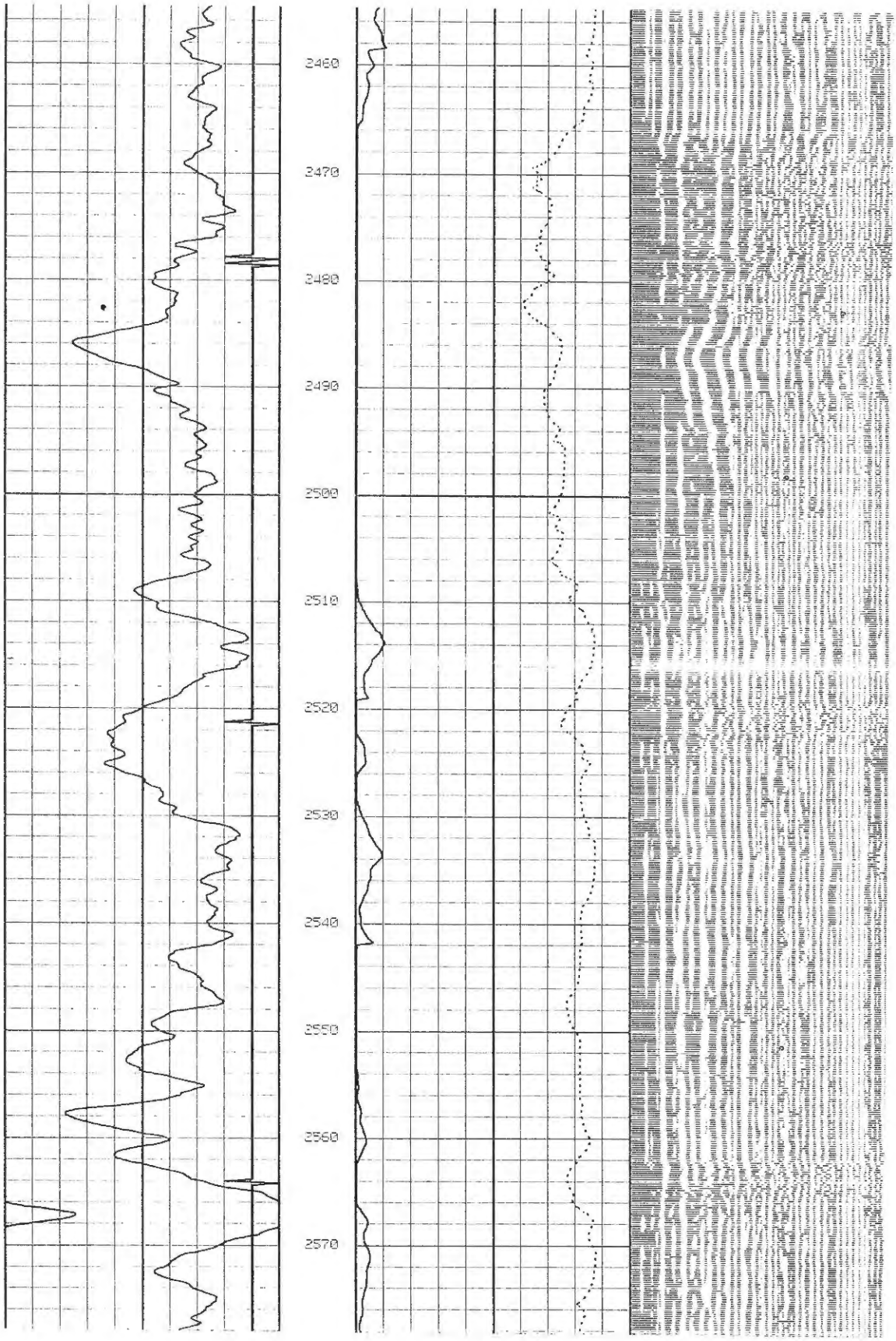
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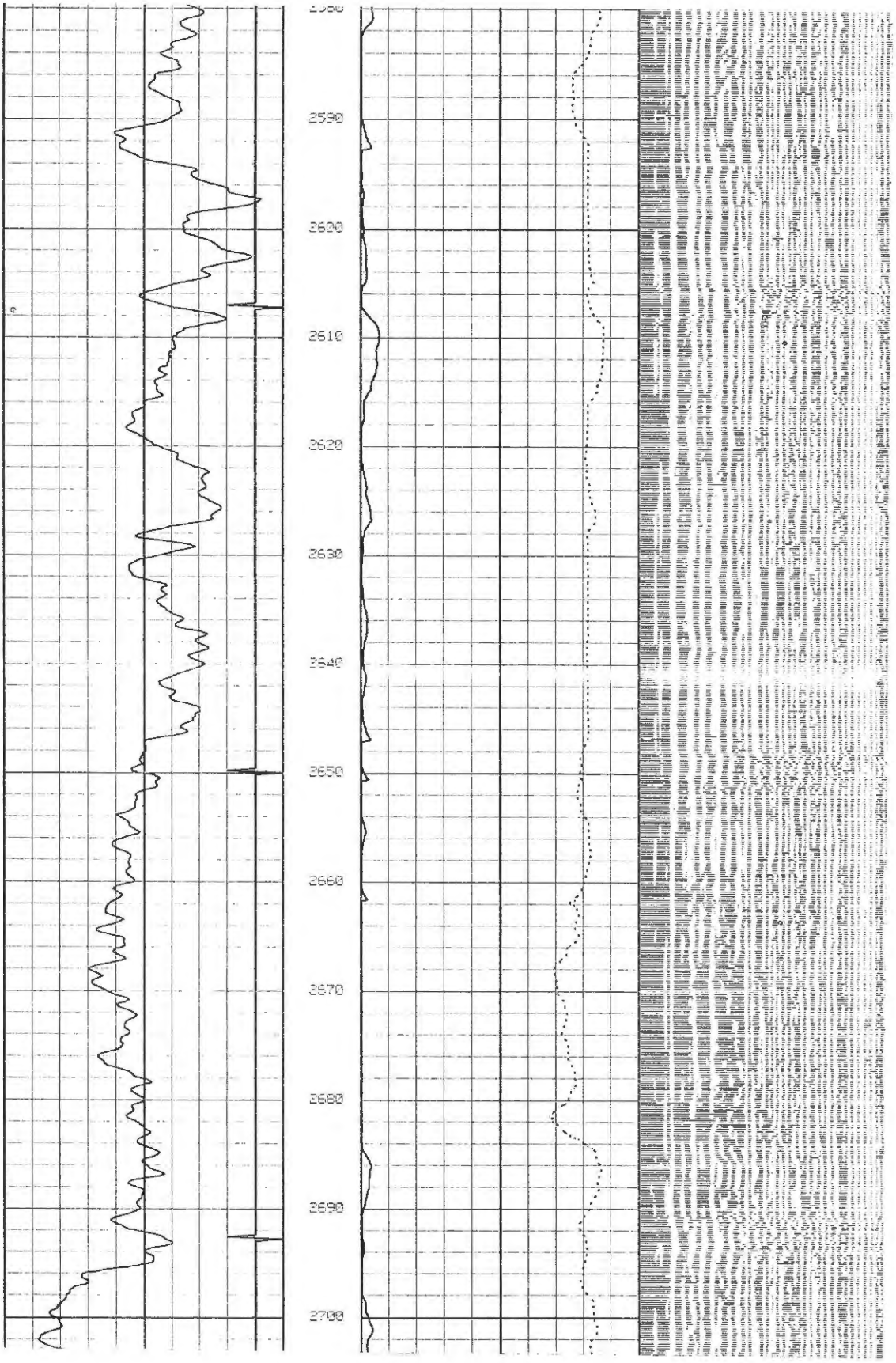
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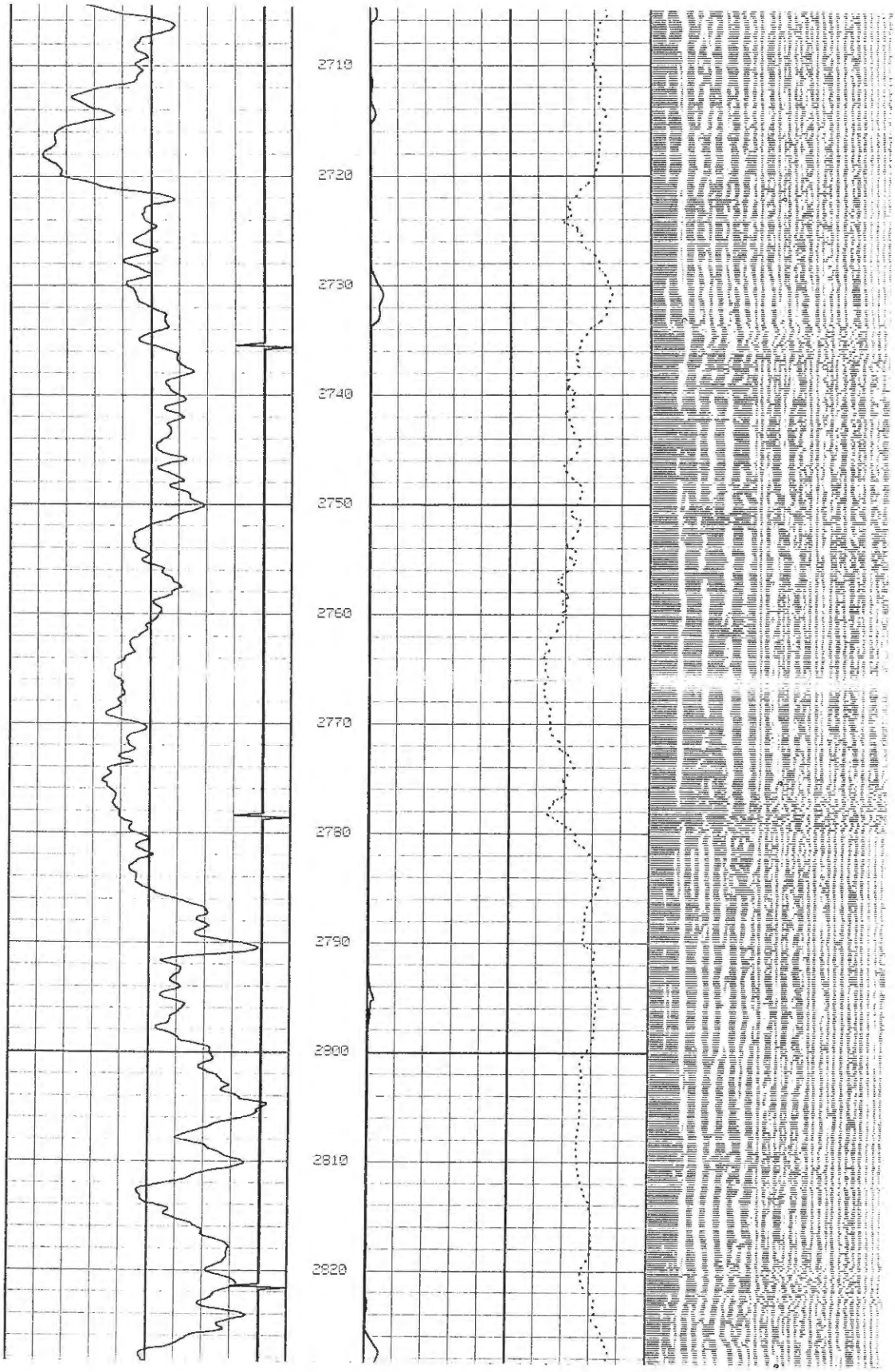
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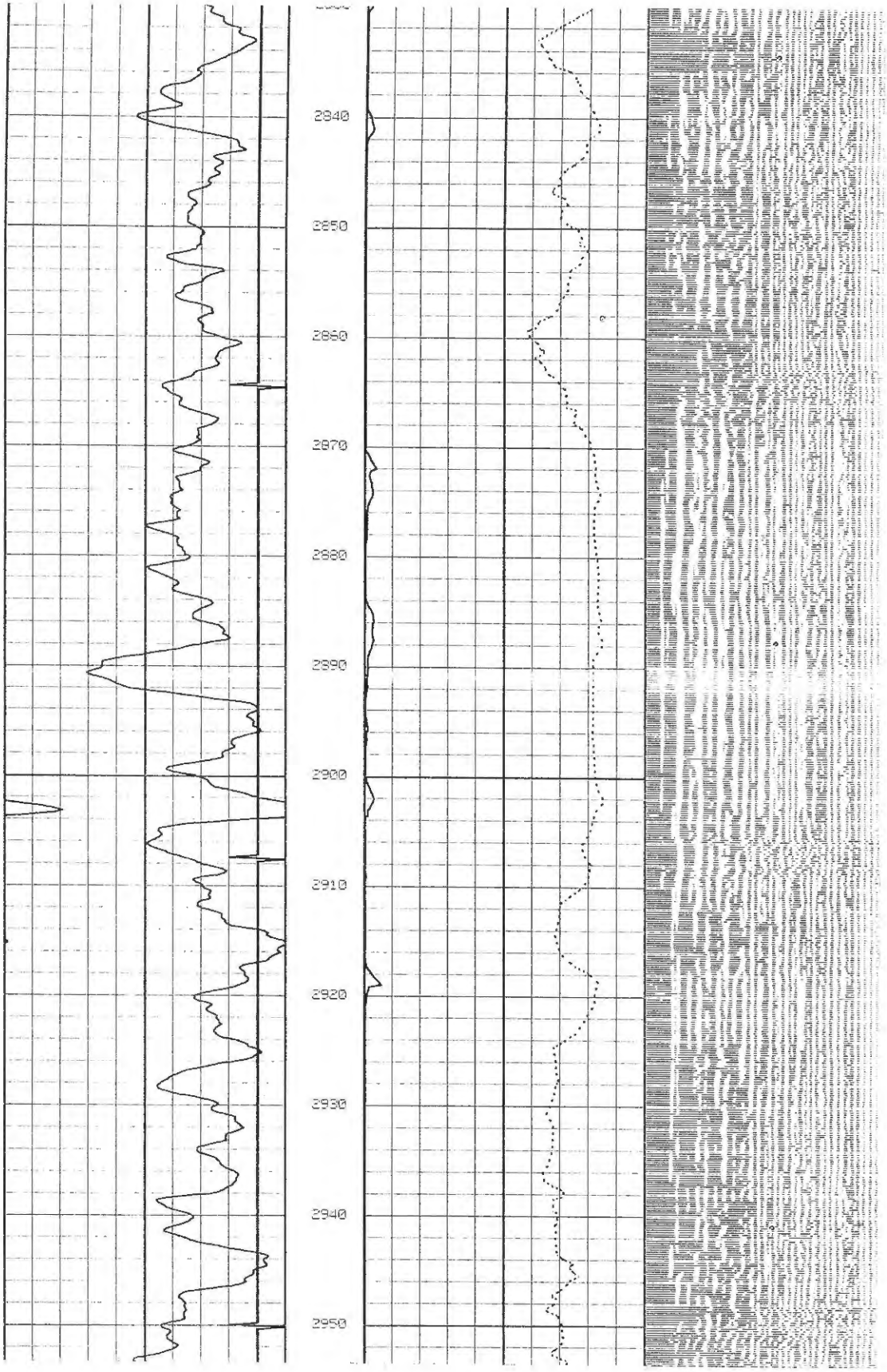
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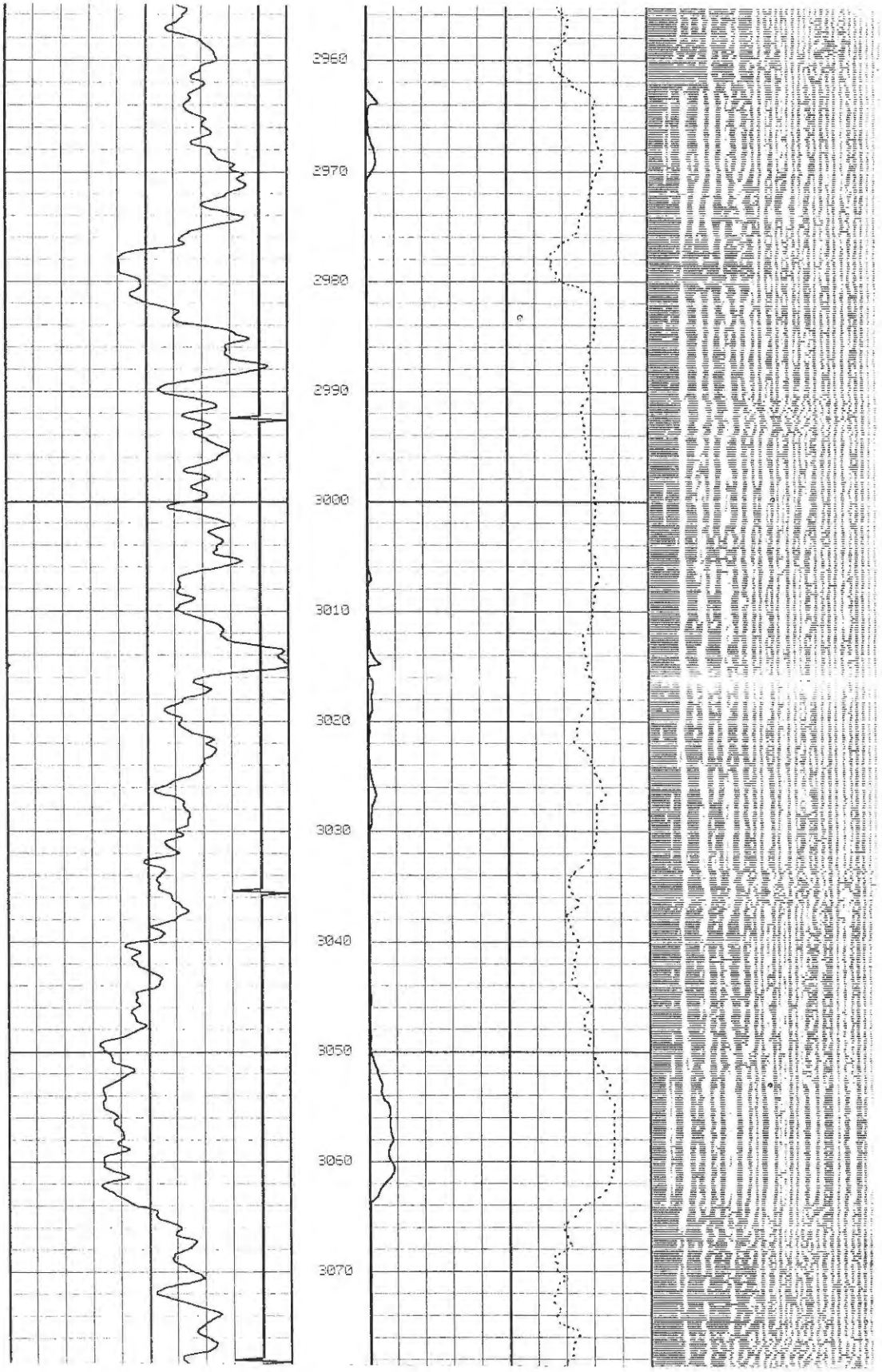
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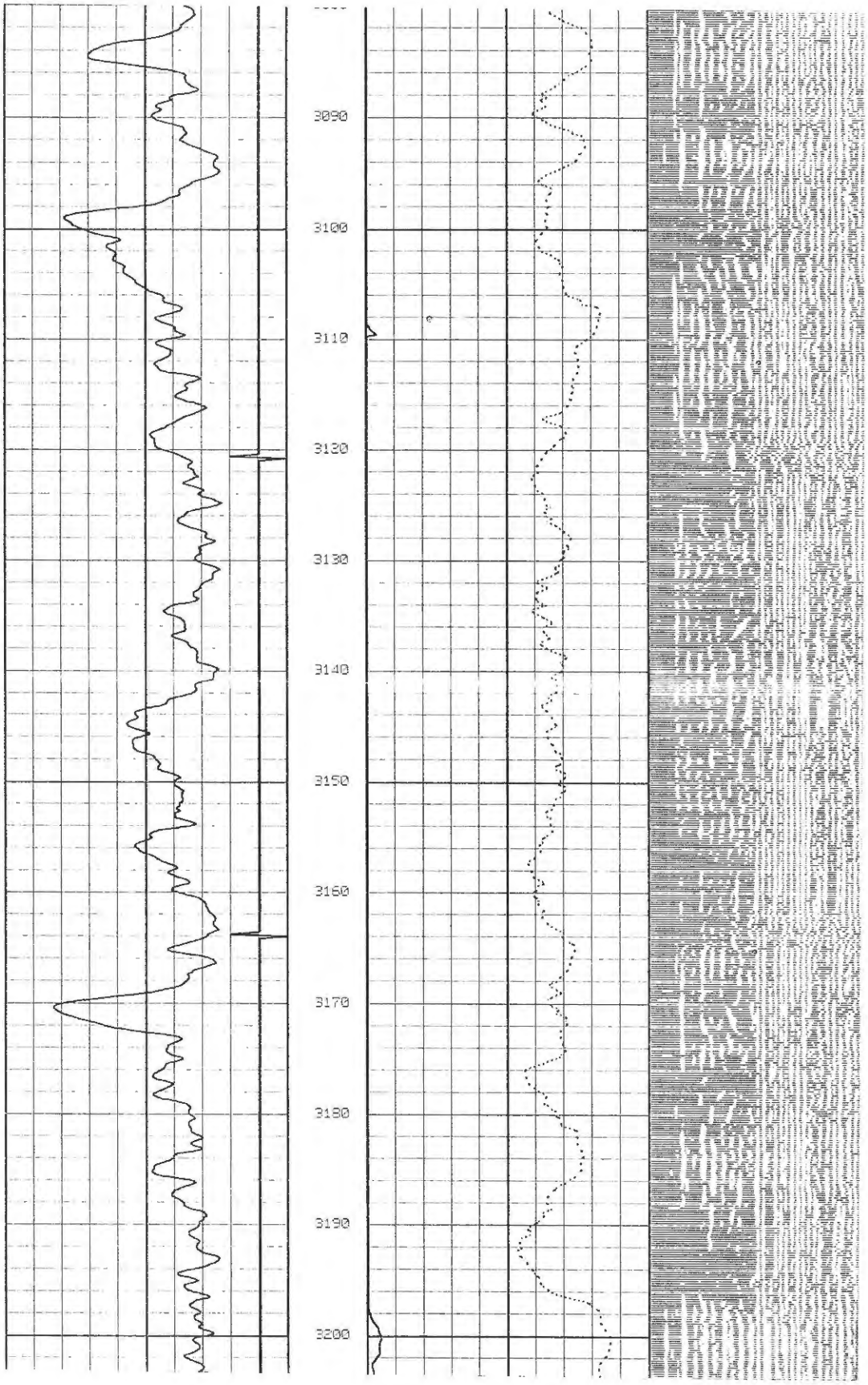
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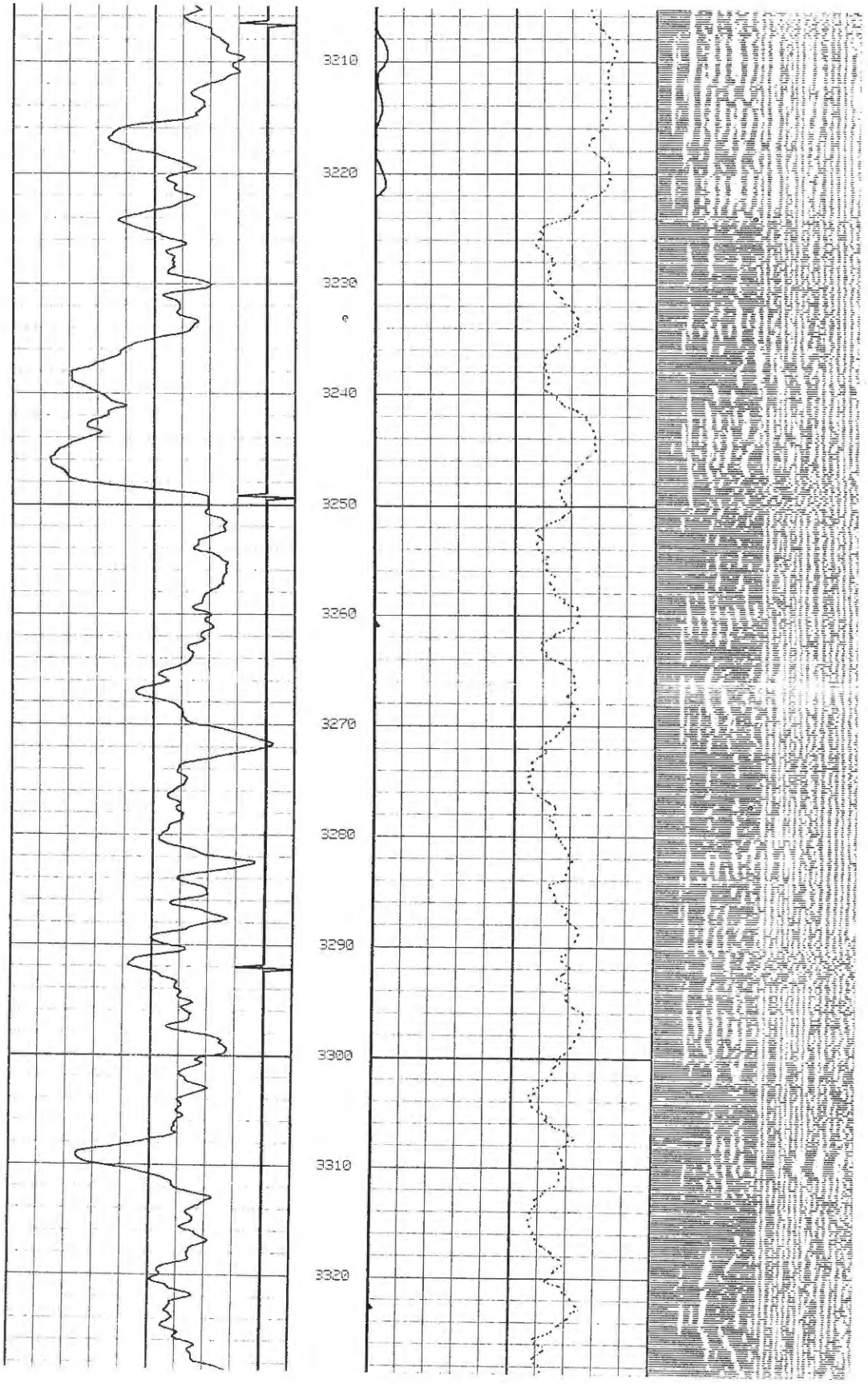
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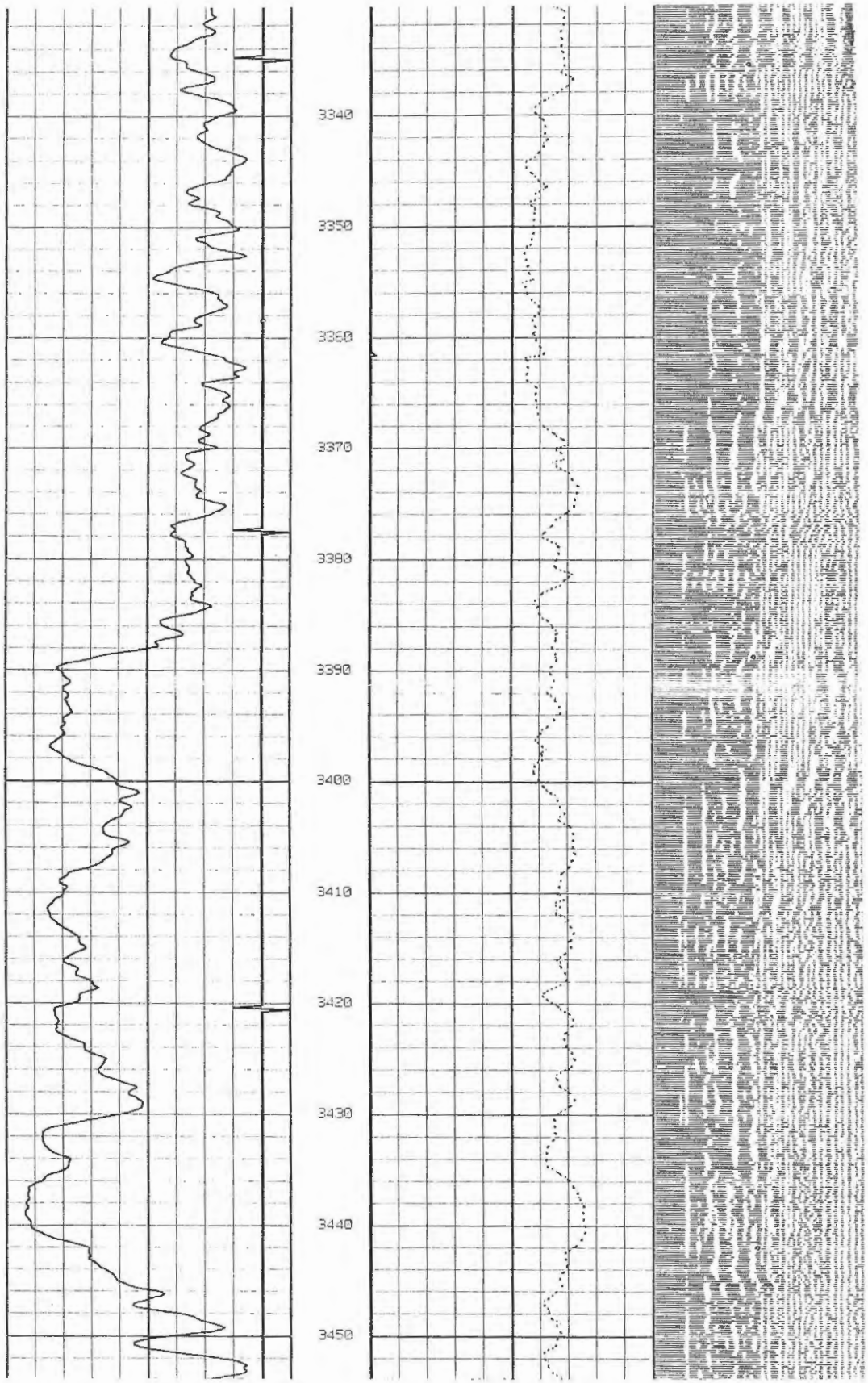
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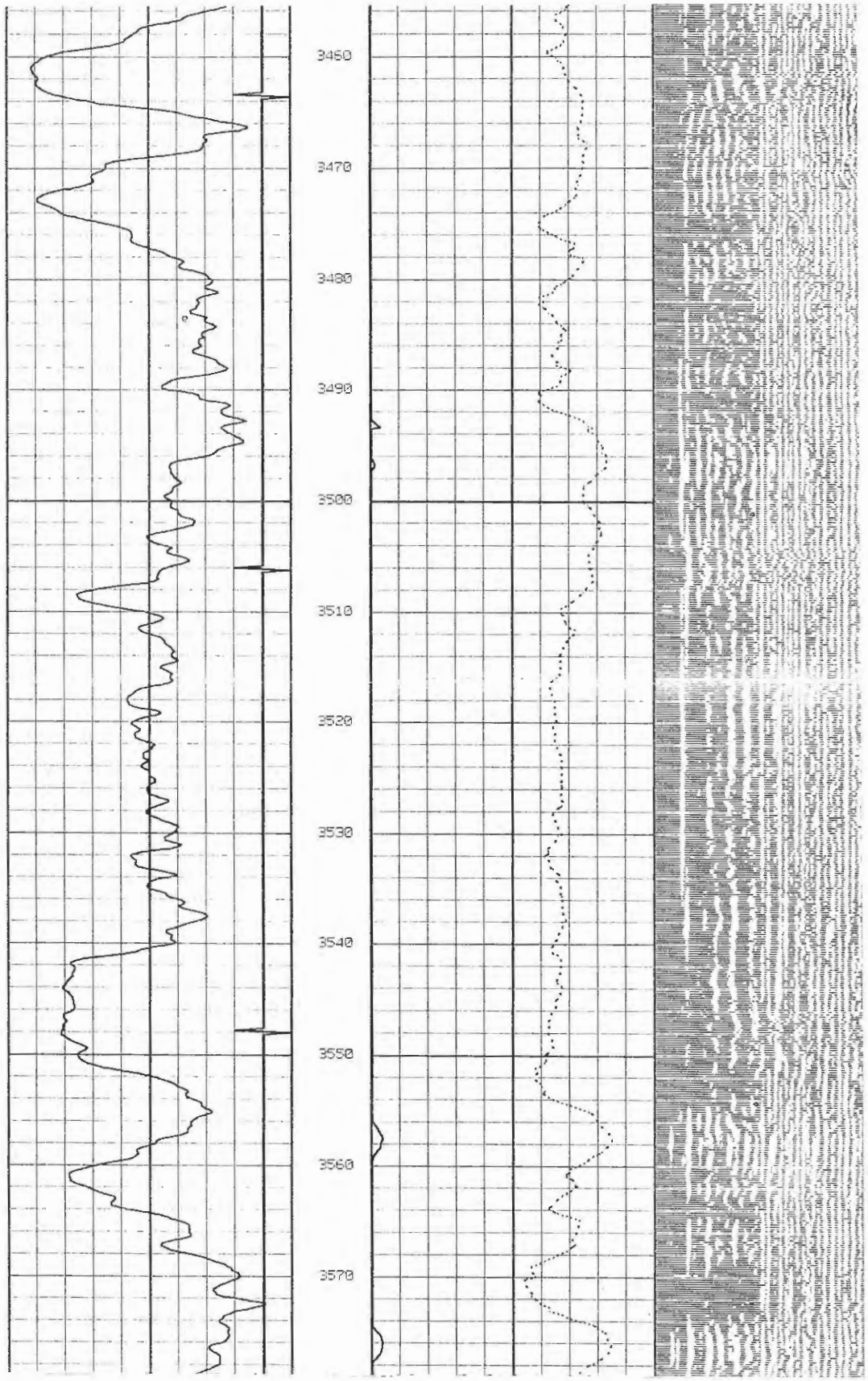
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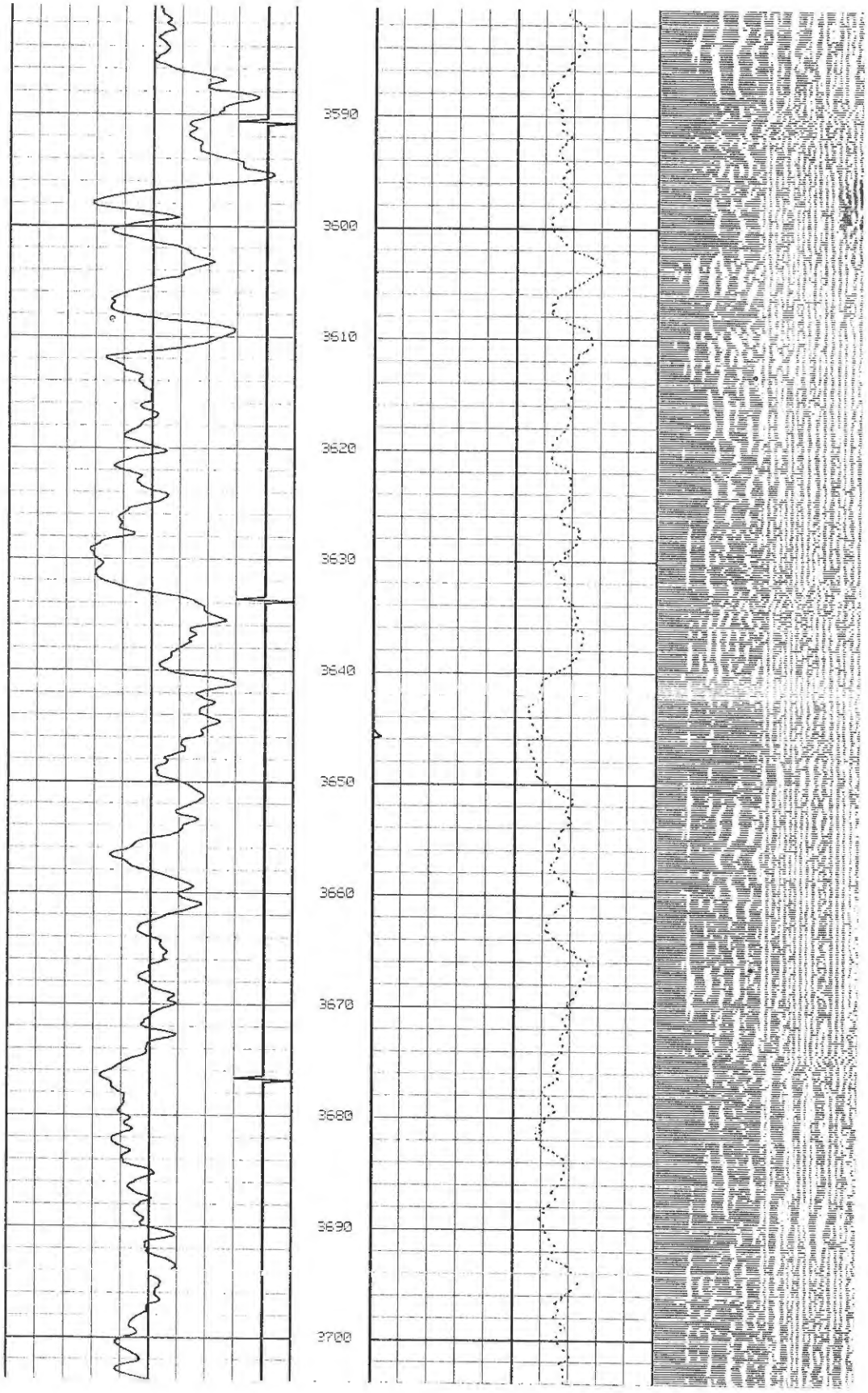
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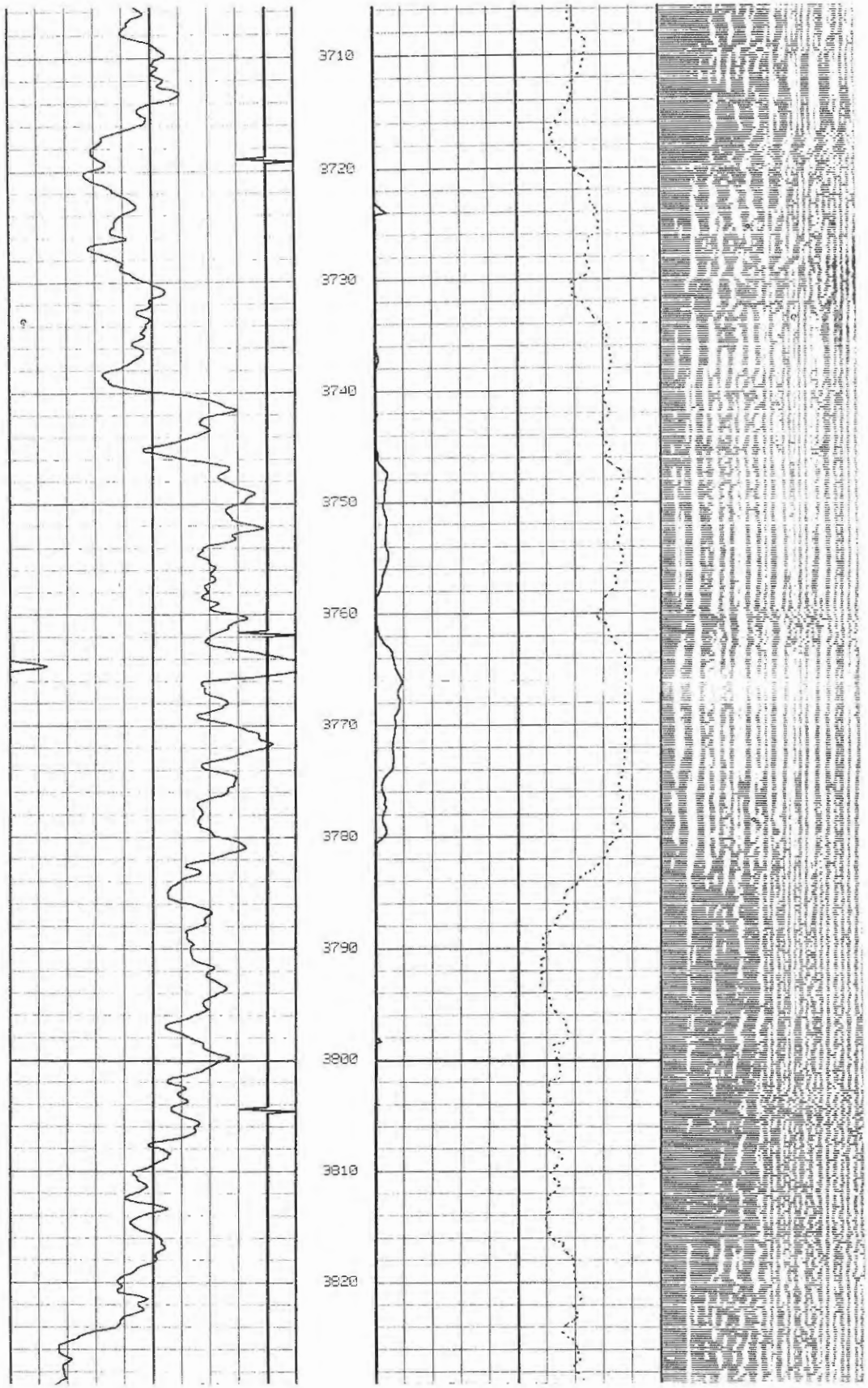
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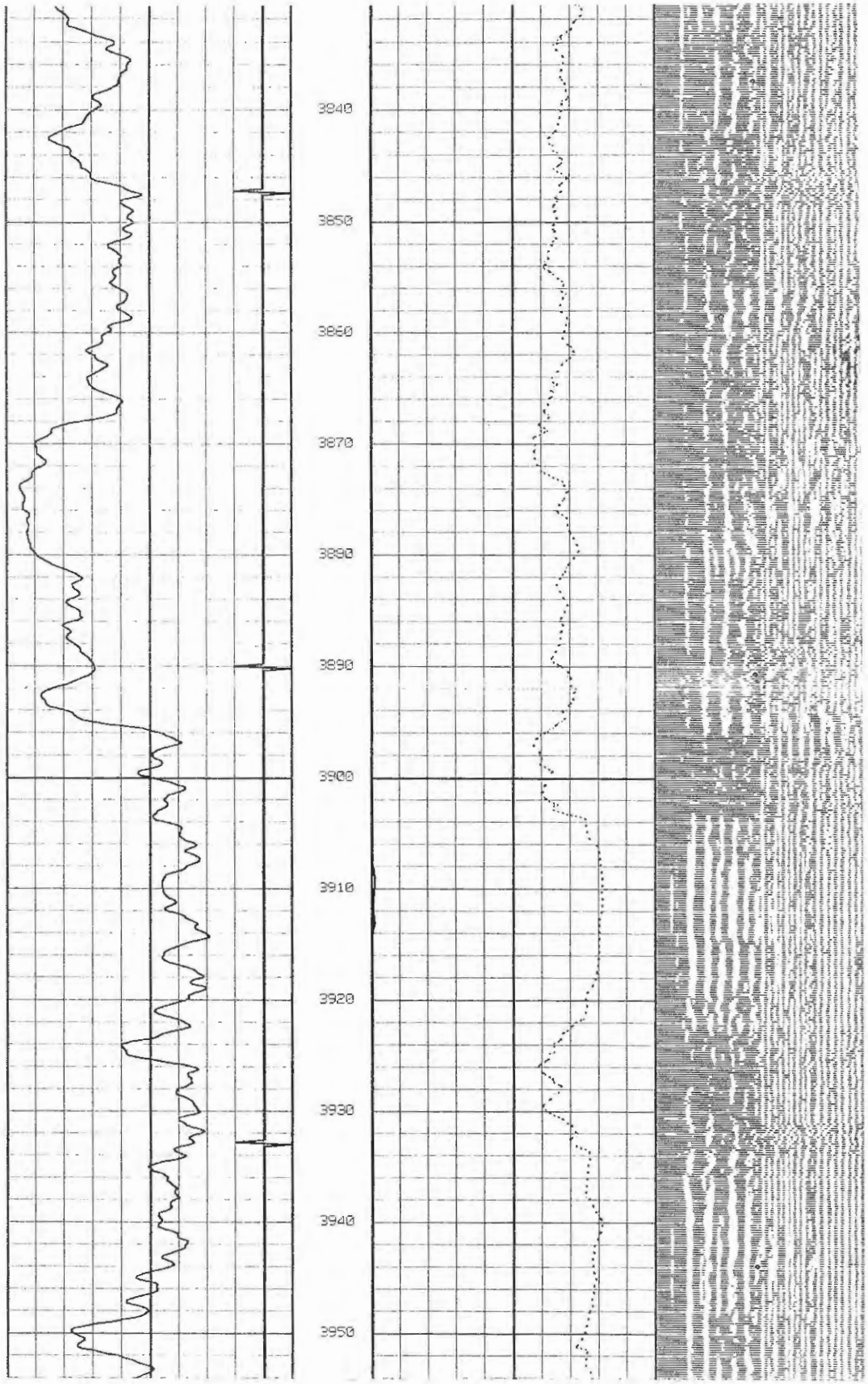
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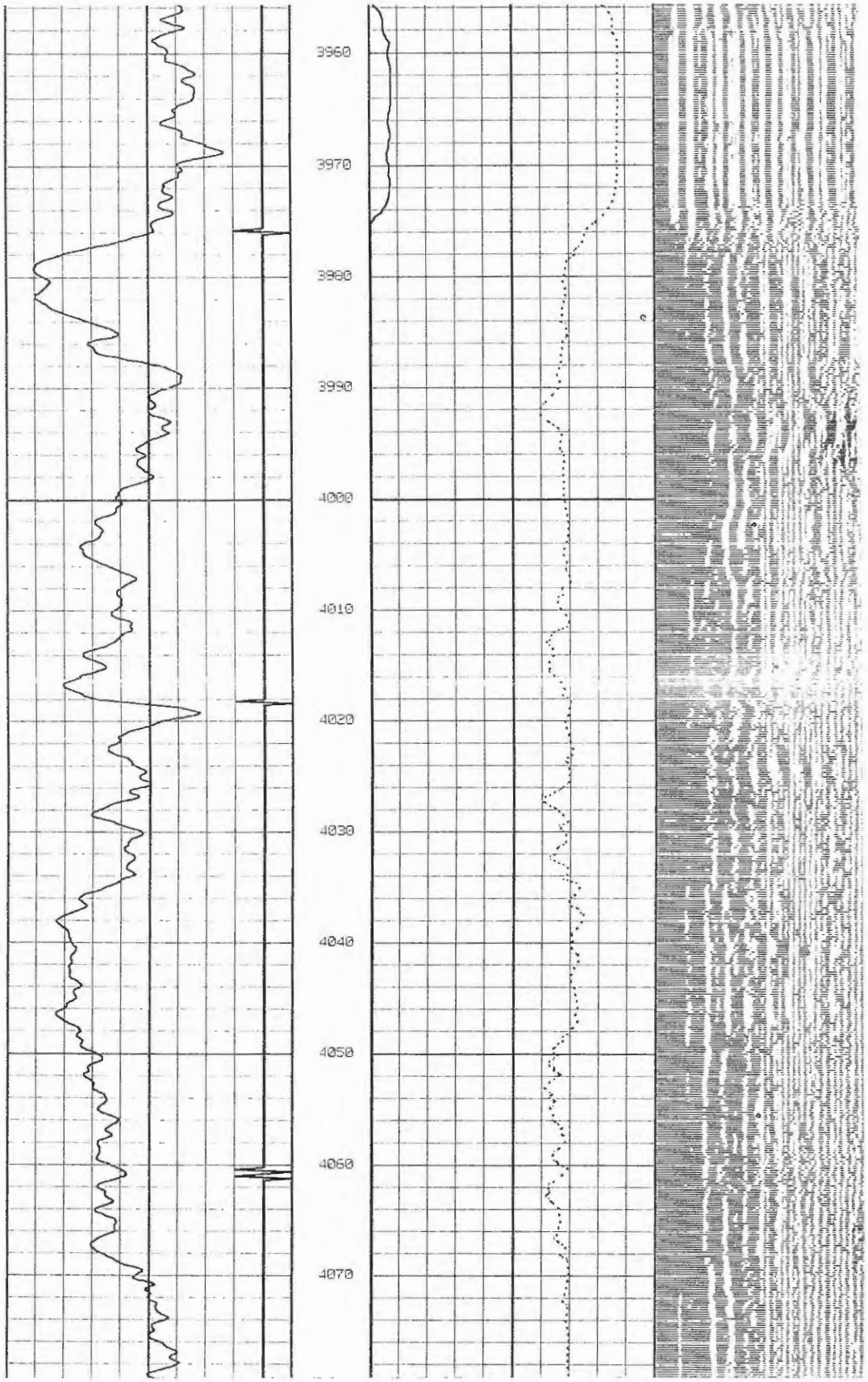
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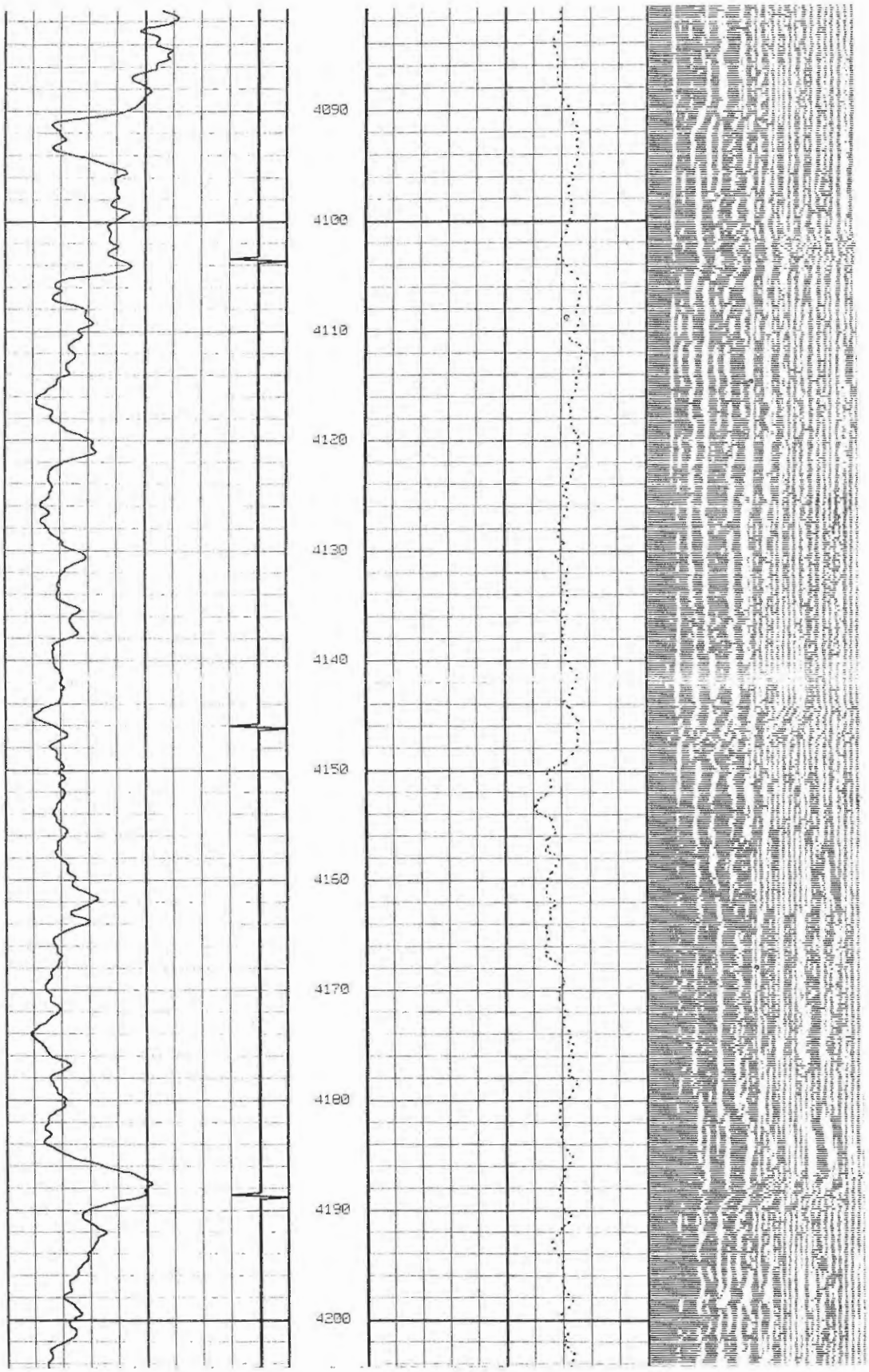
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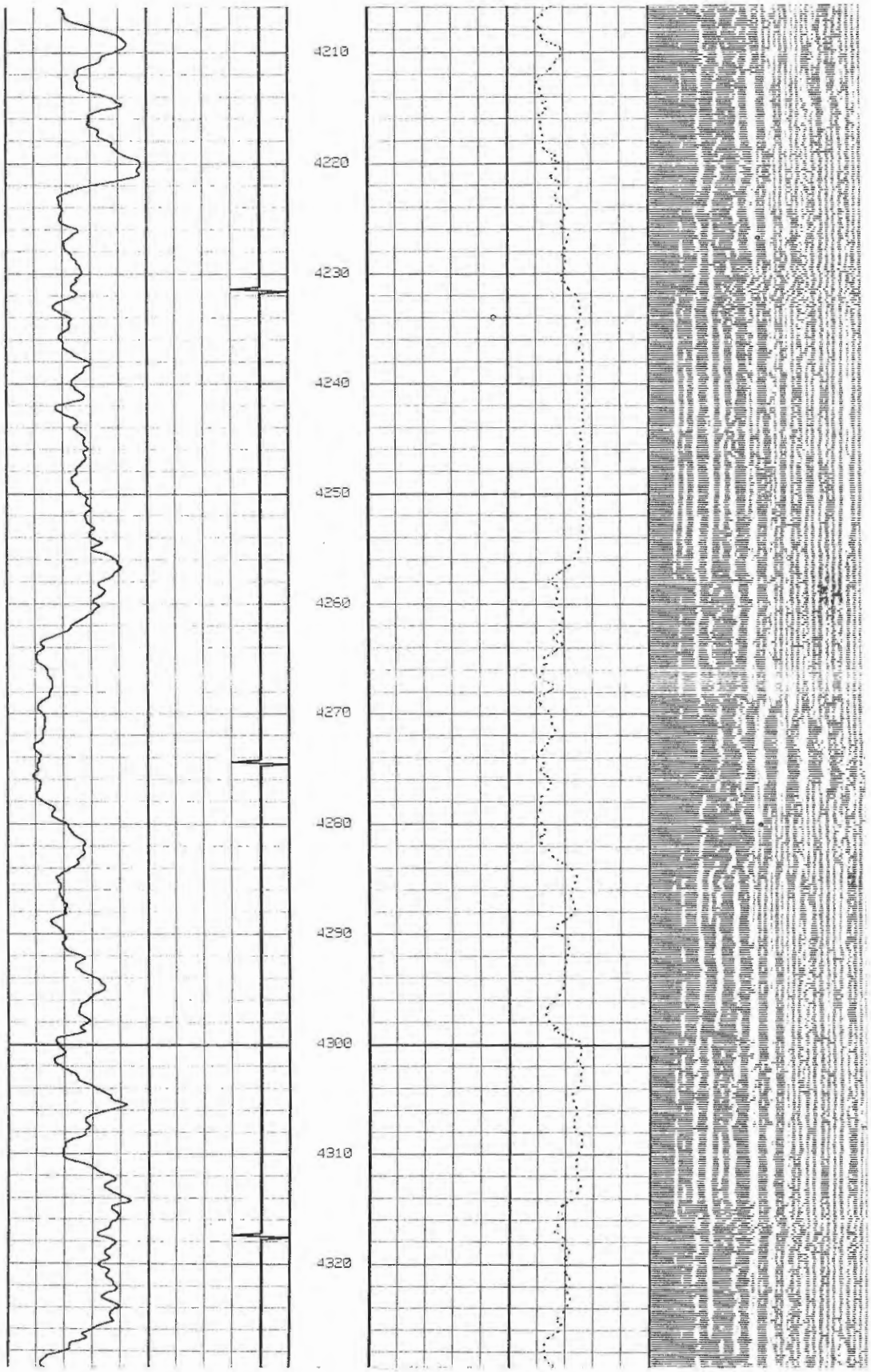
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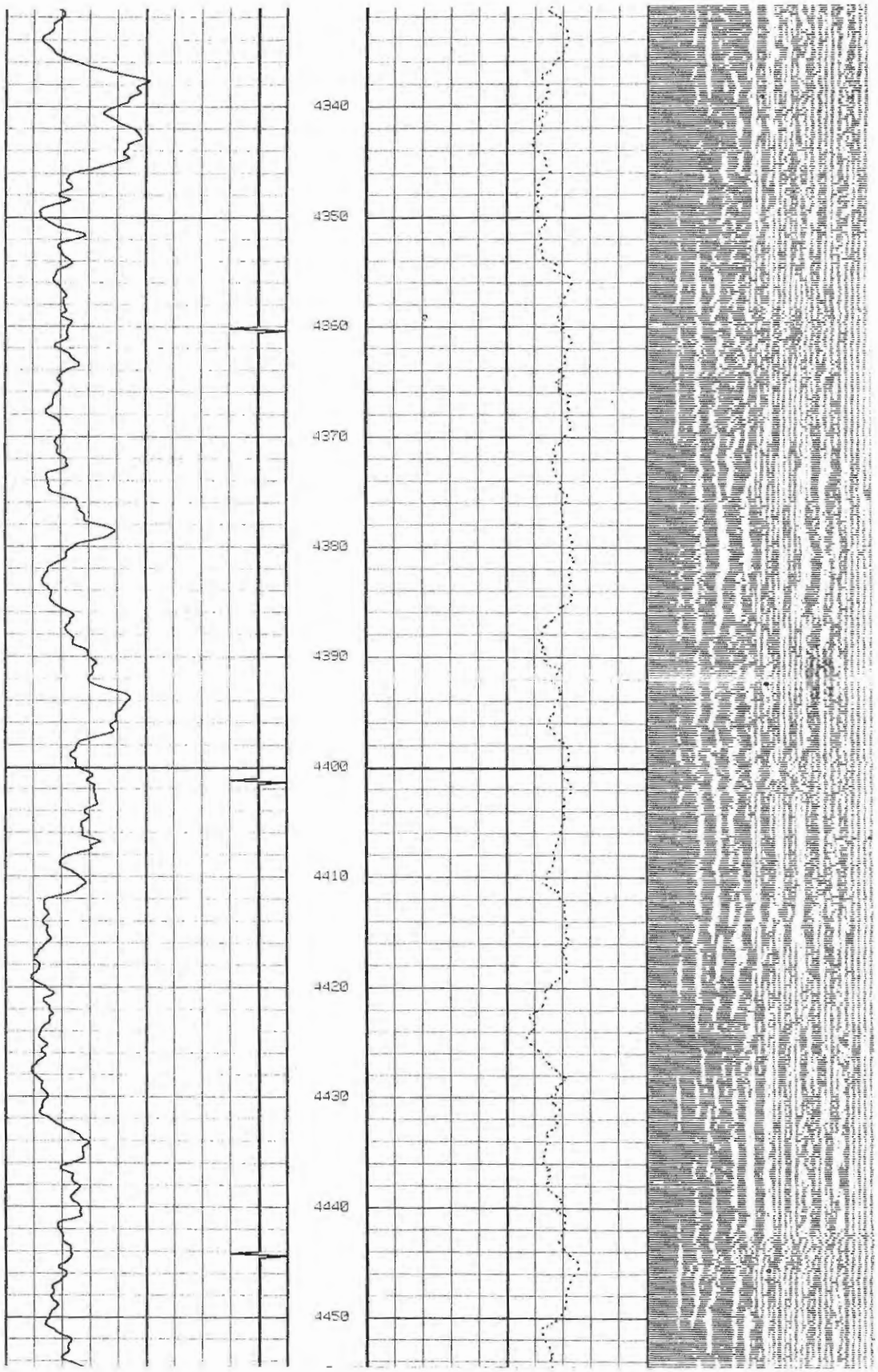
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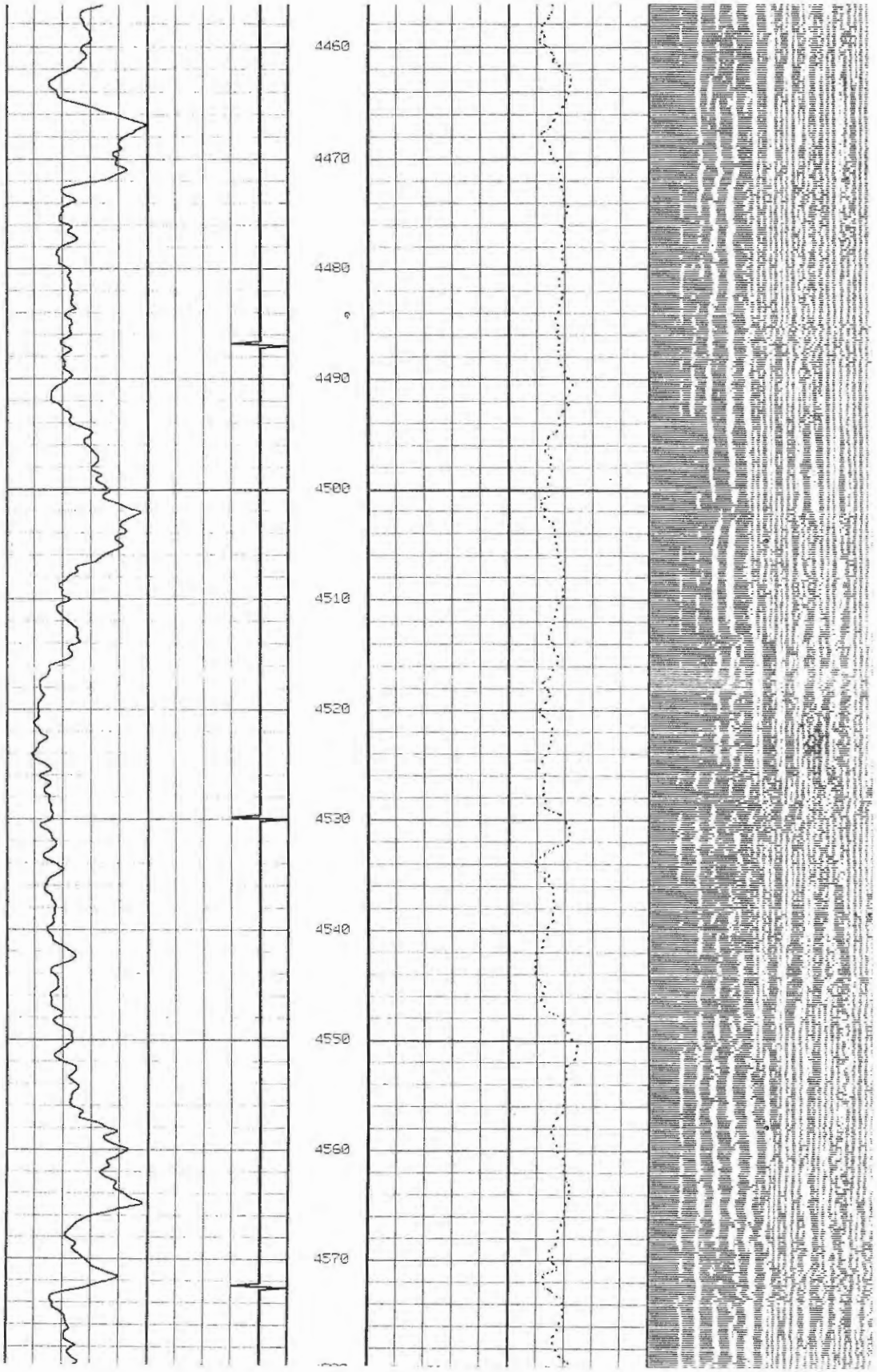
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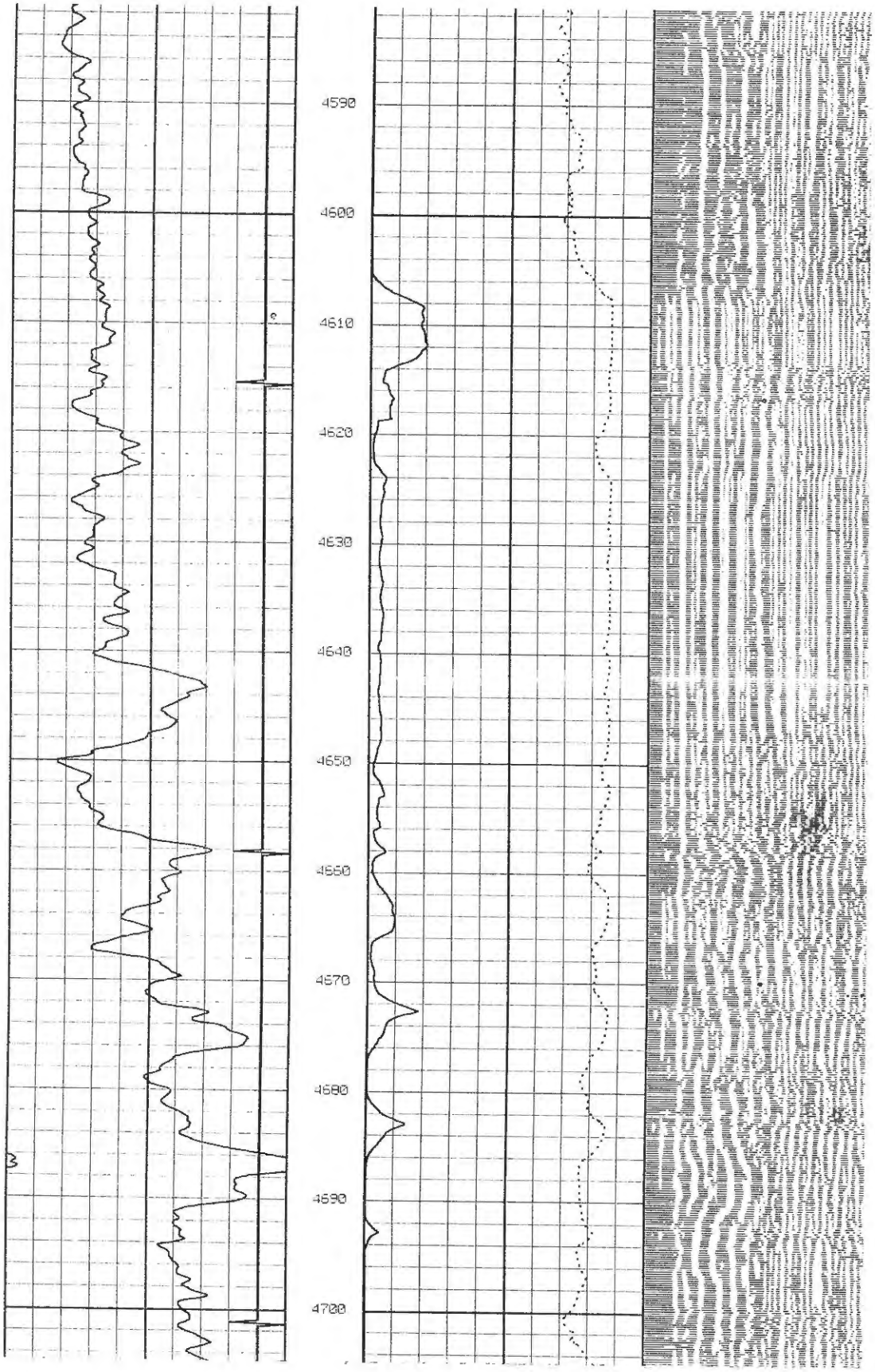
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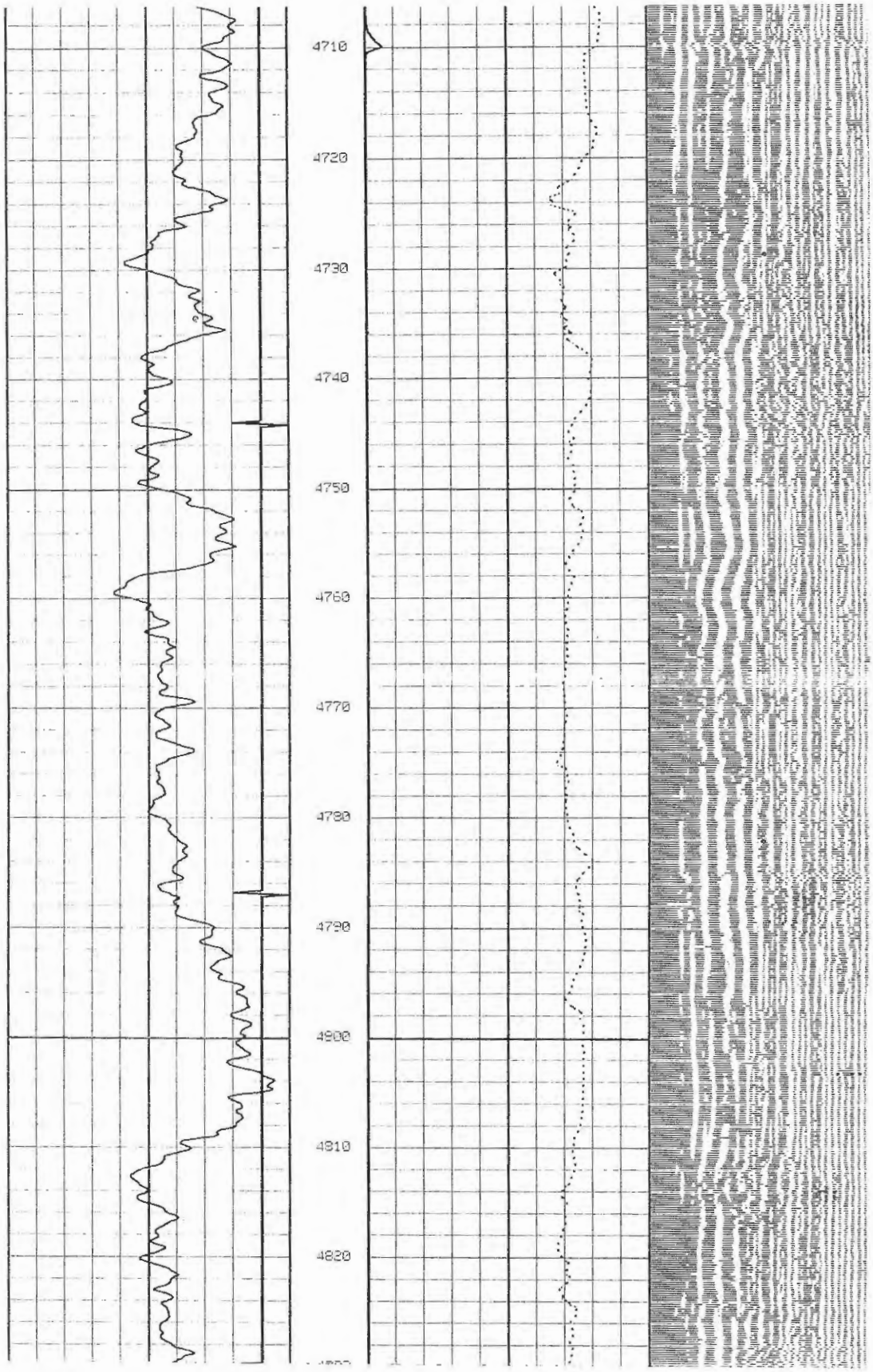
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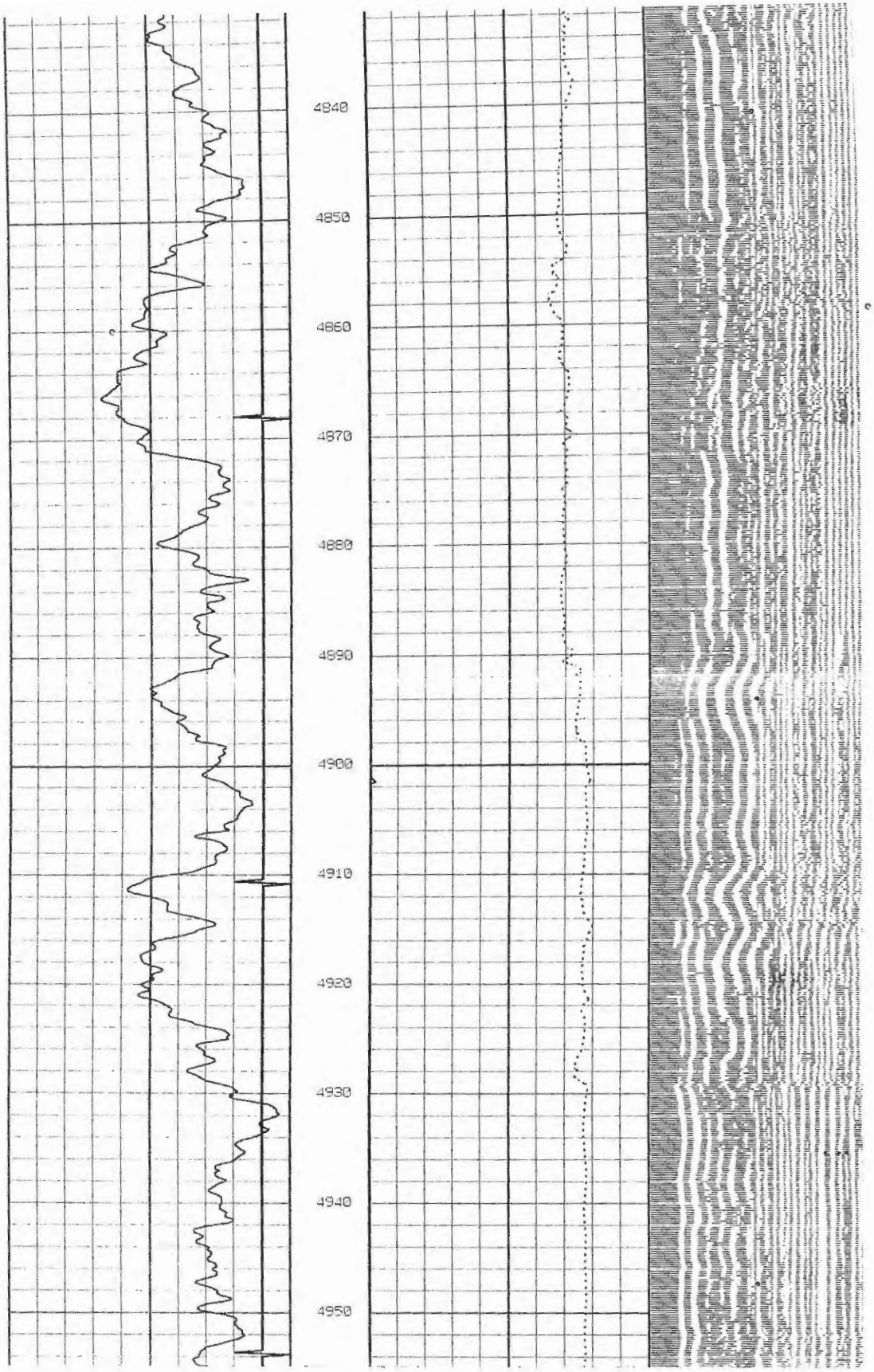
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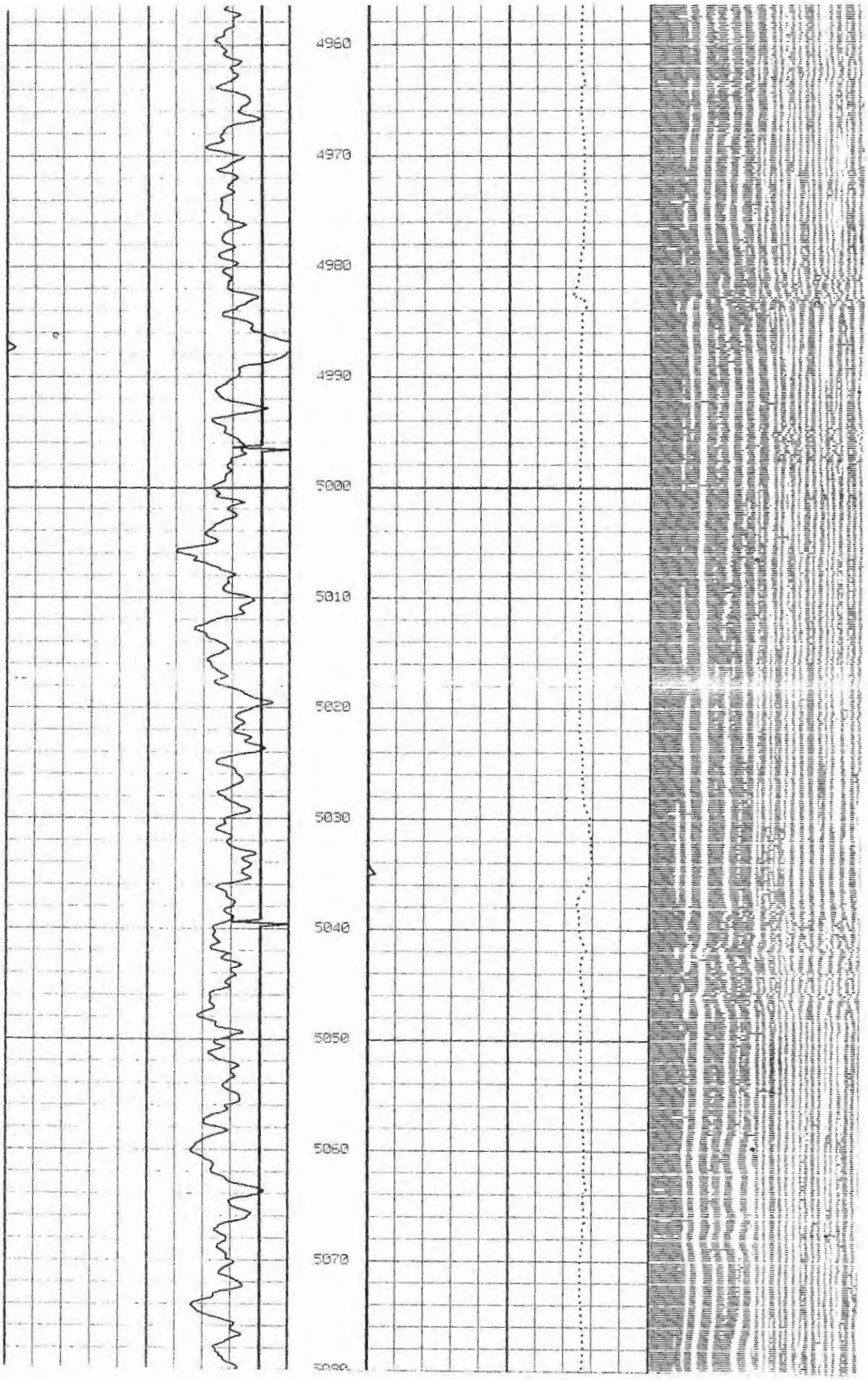
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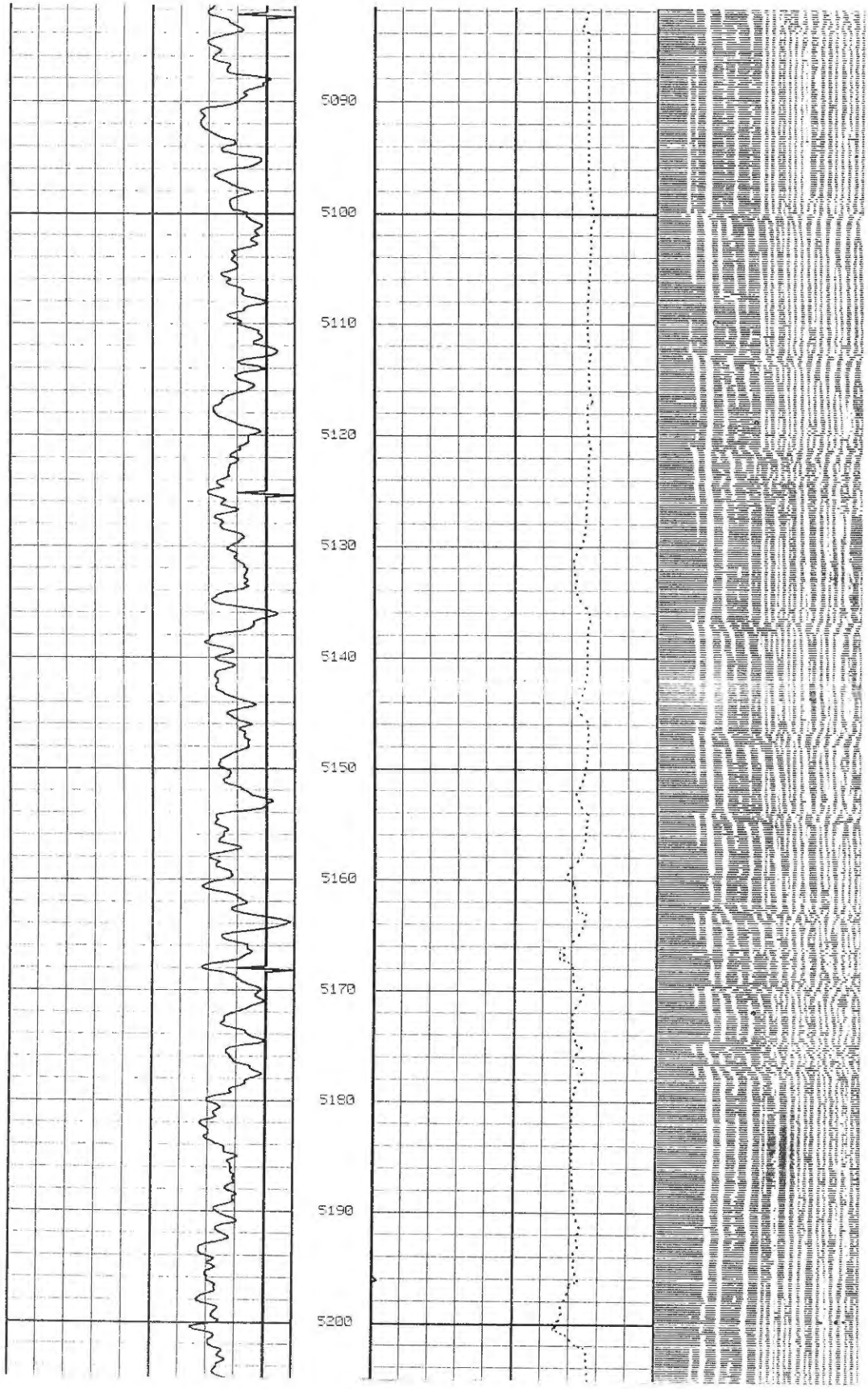
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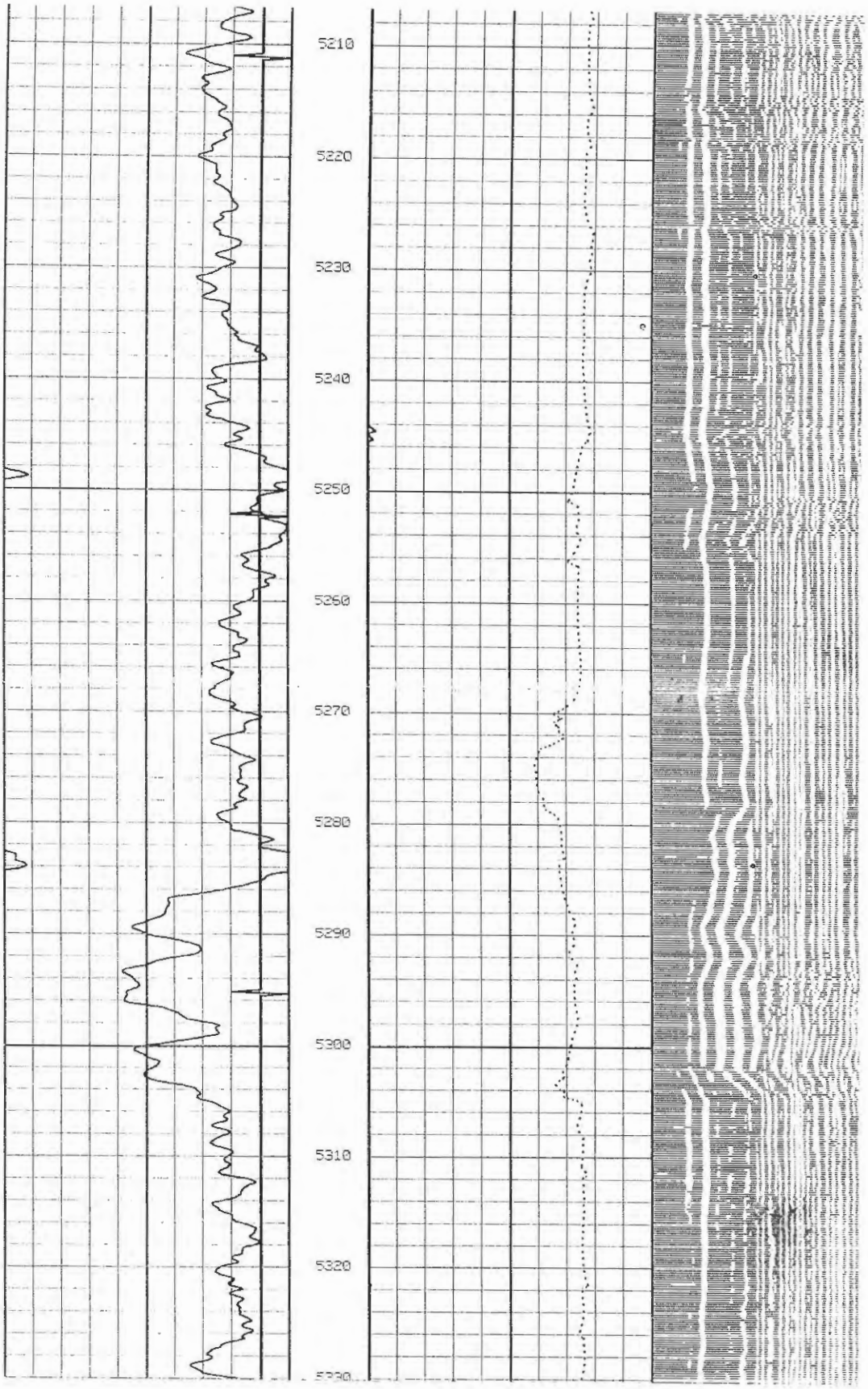
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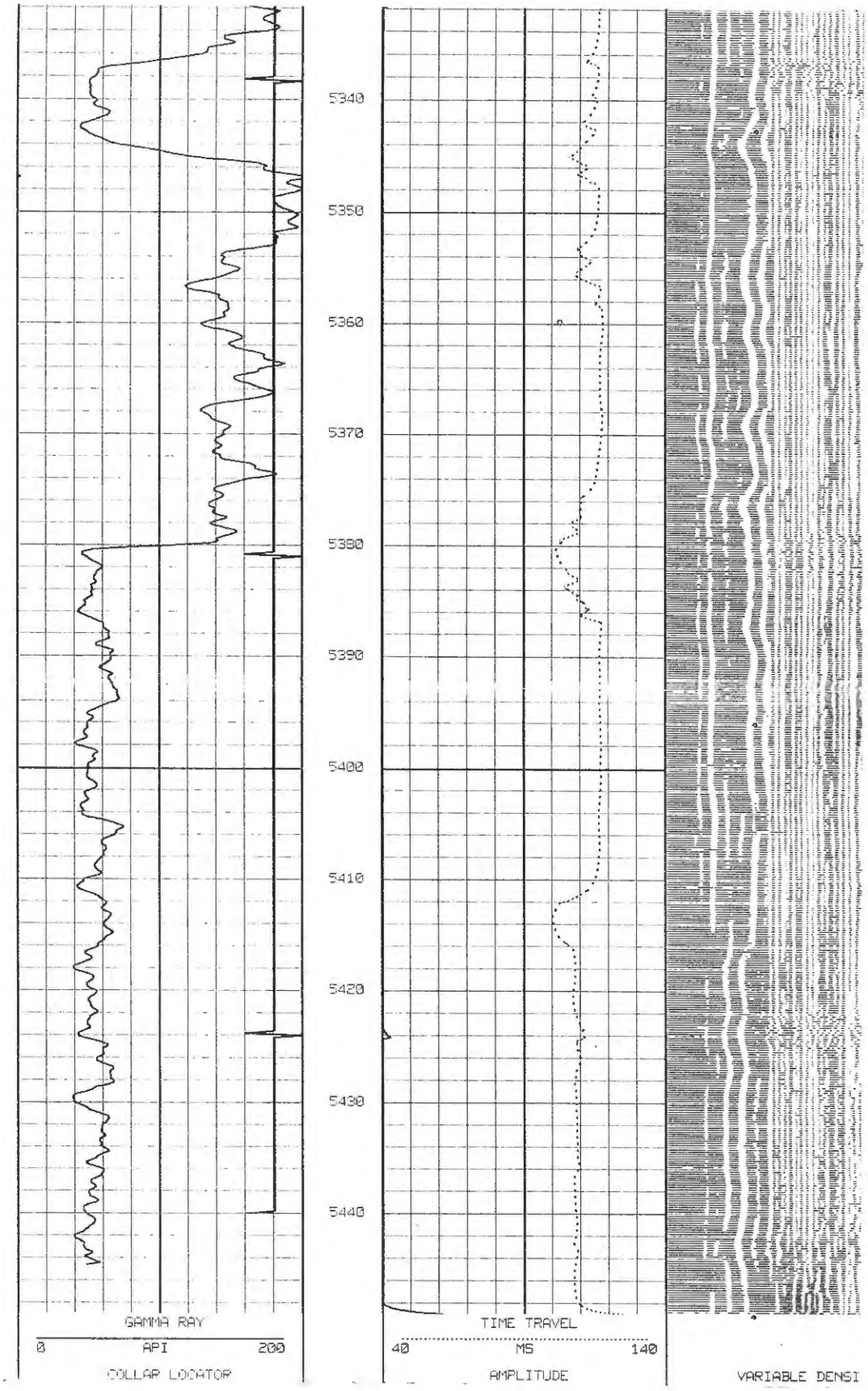
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STOP DEPTH 5449FT DATE: 12-29-98 TIME: 7:17a FILE: BPC01 PLAYBACK PROGRAM

HALLIBURTON®

JOB SUMMARY

ORDER NO. 70006

TICKET #	1179039
TICKET DATE	3-9-01
REGION	North America
NWA/COUNTRY	Northeast
BDA / STATE	Eastern
COUNTY	Buchanan
MBU ID / EMP #	Neo107 106560
EMPLOYEE NAME	S E Brown
PSL DEPARTMENT	Z L
ION	Norton
COMPANY	BPC
CUSTOMER REP / PHONE	Calvin Ward
TICKET AMOUNT	9,260.00
WELL TYPE	Coal De-Gas
API / UWI #	
WELL LOCATION	Council
DEPARTMENT	10003
JOB PURPOSE CODE	035 4½ cement Job
LEASE / WELL #	BPC-#1
SEC / TWP / RNG	

HES EMP NAME/EMP#/(EXPOSURE HOURS)	HRS	HES EMP NAME/EMP#/(EXPOSURE HOURS)	HRS	HES EMP NAME/EMP#/(EXPOSURE HOURS)	HRS	HES EMP NAME/EMP#/(EXPOSURE HOURS)	HRS
S.E. Brown 106560							
T. Watkins 106729							
C. White 106696							

HES UNIT NUMBERS	R/T MILES	HES UNIT NUMBERS	R/T MILES	HES UNIT NUMBERS	R/T MILES	HES UNIT NUMBERS	R/T MILES
420604 P.U.							
53559 T.Cm							
52613 T.D							

Form Name _____ Type: _____
Form Thickness _____ From _____ To _____
Packer Type _____ Set At _____
Bottom Hole Temp. _____ Pressure _____
Misc. Data _____ Total Depth _____

	CALLED OUT	ON LOCATION	JOB STARTED	JOB COMPLETED
DATE	3-9-01	3-9-01	3-9-01	3-9-01
TIME	12:00	16:15		

TOOLS AND ACCESSORIES

TYPE AND SIZE	QTY	MAKE
Float Collar		
Float Shoe		
Guide Shoe		
ntralizers		
ttom Plug		
Top Plug		
Head		
Packer		
Other		

WELL DATA

	NEW/USED	WEIGHT	SIZE	FROM	TO	MAX ALLOW
Casing	N	9.5	4½	G	5410	1500
Liner						
Liner						
Tbg/D.P.						
Tbg/D.P.						
Open Hole						SHOTS/FT.
Perforations						
Perforations						
Perforations						

MATERIALS

Treat Fluid _____ Density _____ Lb/Gal
Disp. Fluid _____ Density _____ Lb/Gal
Prop. Type _____ Size _____ Lb. _____
Prop. Type _____ Size _____ Lb. _____
Acid Type _____ Gal. _____ % _____
Acid Type _____ Gal. _____ % _____
Surfactant _____ Gal. _____ In _____
NE Agent _____ Gal. _____ In _____
Fluid Loss _____ Gal/Lb _____ In _____
Gelling Agent _____ Gal/Lb _____ In _____
Fric. Red. _____ Gal/Lb _____ In _____
Breaker _____ Gal/Lb _____ In _____
Blocking Agent _____ Gal/Lb _____
Perfpac Balls _____ Qty. _____
Other _____
Other _____
Other _____
Other _____

HOURS ON LOCATION

DATE	HOURS
3-9-01	2
TOTAL	2

OPERATING HOURS

DATE	HOURS
3-9-01	2
TOTAL	2

DESCRIPTION OF JOB

4½ Cement Job

ORDERED — HYDRAULIC HORSEPOWER — Avail. — Used
TREATED — AVERAGE RATES IN BPM — Disp. — Overall
FEET — CEMENT LEFT IN PIPE — Reason

CEMENT DATA

STAGE	SACKS	CEMENT	BULK/SKS	ADDITIVES	YIELD	LBS/GAL
	85	Standard	B	2% Gel, 3% salt, 5#/sk. Cal Seal, 7/10% Halad 322	1.64	14.0
	195	Standard	B	2% Gel, 3% salt, 5#/sk. Cal Seal, 7/10% Halad 322	1.64	14.0

Circulating _____ Displacement _____
Breakdown _____ Maximum _____
Average _____ Frac Gradient _____
Shut In: Instant _____ 5 Min _____ 15 Min _____

Preflush: Gal - BBl 40 Type 6% Gel
Load & Bkdn: Gal - BBl _____ Pad: BBl - Gal _____
Treatment Gal - BBl _____ Disp: BBl - Gal 86.6
Cement Slurr Gal - BBl 81.7
Total Volume Gal - BBl 215

Frac Ring #1	Frac Ring #2	Frac Ring #3	Frac Ring #4

THE INFORMATION STATED HEREIN IS CORRECT

CUSTOMER'S REPRESENTATIVE SIGNATURE [signature]

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JOB LOG

ORDER NO. 70006

TICKET #		TICKET DATE	
REGION: North America	NWA/COUNTRY	BDA / STATE	COUNTY
MBU ID / EMP #	EMPLOYEE NAME	PSL DEPARTMENT	
TION	COMPANY	CUSTOMER REP / PHONE	
TICKET AMOUNT	WELL TYPE	API / UWI #	
WELL LOCATION	DEPARTMENT	JOB PURPOSE CODE	
LEASE / WELL #	SEC / TWP / RNG		

HES EMP NAME/EMP#/(EXPOSURE HOURS)	HRS	HES EMP NAME/EMP#/(EXPOSURE HOURS)	HRS	HES EMP NAME/EMP#/(EXPOSURE HOURS)	HRS	HES EMP NAME/EMP#/(EXPOSURE HOURS)	HRS
SE Ramos 106560							
T Watkins 106729							
J White 106696							

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL)(GAL)	PUMPS T	PUMPS C	PRESS. (psi) Tbg	PRESS. (psi) Csg	JOB DESCRIPTION / REMARKS
	15:30							on location
	16:15							Truck on location
								Safety meeting/location Ass
								Rig up
								Safety meeting
								discuss Job Plan
	19:04							Start Job
							2000	Pressure test
		2	40				100	Pump Gel
		2	5				100	Wash H2O
		5	98				50	Pump cement
								Shut down + [illegible]
		5					400	displace plug
							1000	Land plug
								Release psi
	19:11							end Job
								wash up
								Rig down
								safety meeting
								off location

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Halliburton Energy Services, Inc.

TICKET TYPE	COMPANY CODE	HALLIBURTON ORDER NO.
Integrated Solutions	1100	1157957
CUSTOMER P.O. NO.	JOB DATE	PRIMARY SERVICE LOC.
440-WS-004	02/24/2001	Norton, VA, USA

SOLD TO

BUCHANAN PRODUCTION COMPANY
PO BOX 198
MAVISDALE VA 24627-0198
USA

SHIP TO

WELL OPERATOR
BPC BPC #BPC-1, BUCHANAN
LEASE NAME / OFFSHORE AREA
BPC
WELL NUMBER
#BPC-1
WELL PERMIT NO.

ADDRESS
-
CITY, STATE, ZIP CODE
COUNCIL VA 24260 US

SALES OFFICE	WELL TYPE	WELL CATEGORY	RIG NAME / NO.
Eastern BD	Coal De-Gas	Development	BUCHANAN PRODUCTION COMPANY

ITEM	MATERIAL / LOCATION	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
10	7521	CEMENT II 3/4" SURFACE CASING - BOM				
	Norton, VA, USA		1.00	JOB	0.00	0.00
		JP010				
20	1	MILEAGE FROM NEAREST HES BASE,/UNIT				
	Norton, VA, USA		25	MI	4.41	110.25
			25	MI	0.44-	11.03-
			25	MI	3.97	99.22
		000-117				
	With the following configuration:					
	Number of Units		1	unit		
30	2	MILEAGE FOR CEMENTING CREW,ZI				
	Norton, VA, USA		25	MI	2.60	65.00
			25	MI	0.26-	6.50-
			25	MI	2.34	58.50
		000-119				
	With the following configuration:					
	Number of Units		1	unit		

INVOICE INSTRUCTIONS

PAYMENT TERMS
Net due in 20 days

HALLIBURTON APPROVAL

HALLIBURTON OPERATOR / ENGINEER

CUSTOMER SIGNATURE

TOTAL FROM THIS PAGE	157.72
TOTAL FROM NEXT PAGE(S)	7,260.54
SUBTOTAL	7,418.26
TAXES	0.00
GRAND TOTAL	~~7,418.26~~ US Dollars

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Halliburton Energy Services, Inc.

ITEM	MATERIAL	LOCATION	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
40	16091		PUMPING CHARGE				
		Norton, VA, USA		1.00	EA	1,963.00	1,963.00
				1.00	EA	981.50-	981.50-
				1.00	EA	981.50	981.50
			001-016				
		With the following configuration:					
		DEPTH		400			
		FEET/METRES (FT/M)		FT			
50	114		R/A DENSOMETER W/CHART RECORDER,/JOB,ZI				
		Norton, VA, USA		1.00	JOB	625.00	625.00
				1.00	JOB	62.50-	62.50-
				1.00	JOB	562.50	562.50
			019-500				
		With the following configuration:					
		NUMBER OF UNITS		1	each		
60	74038		PLUG CONTAINER RENTAL-1st Day				
		Norton, VA, USA		1.00	EA	643.00	643.00
				1.00	EA	321.50-	321.50-
				1.00	EA	321.50	321.50
		With the following configuration:					
		DAYS OR FRACTION (MIN1)		1	Days		
70	142		AXIAL FLOW MIXER,W/O ADC,/JOB,ZI				
		Norton, VA, USA		1.00	EA	555.00	555.00
				1.00	EA	277.50-	277.50-
				1.00	EA	277.50	277.50
			046-070				
		With the following configuration:					
		NUMBER OF JOBS		1	Job		
80	3965		HANDLE&DUMP SVC CHRG, CMT&ADDITIVES,ZI				
		Norton, VA, USA		225.00	CF	2.47	555.75
				225.00	CF	0.25-	55.58-
				225.00	CF	2.22	500.17
			500-207				
		With the following configuration:					

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Halliburton Energy Services, Inc.

ITEM	MATERIAL / LOCATION	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
	NUMBER OF EACH		1	each		
90	76400	MILEAGE,CMTG MTLS DEL/RET PER/TON MI.MIN				
	Norton, VA, USA		25	MI	1.51	385.05
			25	MI	1.54-	38.51-
			25	MI	13.86	346.54
		500-306				
		MILEAGE,CMTG MTLS DEL/RET PER/TON MI.MIN				
	With the following configuration:					
	NUMBER OF TONS		10.20	ton		
100	100003150	PLUG,CMTG,TOP PLSTC,11 3/4 IN38-72#				
	Norton, VA, USA		1.00	EA	548.12	548.12
			1.00	EA	54.81-	54.81-
			1.00	EA	493.31	493.31
		XXXXXXX 402.15114				
		PLUG - CMTG - TOP PLASTIC - 11-3/4 IN.				
		38-72# - 10.420 MIN/11.150 MAX CSG ID				
		- SYNTHETIC SERVICE				
110	100003684	Cement- Class A Regular/Type 1 (Bulk)				
	Norton, VA, USA		~~210.00~~	~~SK~~	15.03	~~3,156.30~~
		235 sk	~~210.00~~	~~SK~~	1.50-	~~315.63-~~
			~~210.00~~	~~SK~~	13.53	~~2,840.67~~
		504-308516.00261				
		CEMENT - CLASS A - REGULAR OR TYPE 1				
		BULK				
120	101000092	CHEM,CALCIUM CHLORIDE,FLAKES				
	Norton, VA, USA		592.00	LB	1.31	775.52
			592.00	LB	0.13-	77.55-
			592.00	LB	1.18	697.97
		CHEMICAL - CALCIUM CHLORIDE - FLAKES				
130	100005049	Chemical - Flocele (25 lb sk)				
	Norton, VA, USA		53.00	LB	2.71	143.63
			53.00	LB	0.27-	14.36-
			53.00	LB	2.44	129.27
		XXXXXXX 890.50071				

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Halliburton Energy Services, Inc.

ITEM	MATERIAL / LOCATION	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
		FLOCELE - 3/8 - 25 LB SACK				
140	100064040	Chemical - Halliburton Gel (NOT BLENDED)				
	Norton, VA, USA		4.00	EA	13.51	54.04
			4.00	EA	1.35-	5.40-
			4.00	EA	12.16	48.64
		CHEM,HALL GEL,50 LB SACK				
		CHEMICAL - HALLIBURTON GEL - 50 LB				
		SACK - REQUIRES TWO 50 LB SACKS F/UNIT				
		OF ISSUE				
150	100005049	Chemical - Flocele (NOT BLENDED)				
	Norton, VA, USA		25.00	LB	2.71	67.75
			25.00	LB	0.27-	6.78-
			25.00	LB	2.44	60.97
		XXXXXXX 890.50071				
		FLOCELE - 3/8 - 25 LB SACK				
		INVOICE AMOUNT				7,418.26
		INVOICE TOTAL				**7,418.26**
						US Dollars

App E

VA - Permit App.

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

Operations Name: Well BPC 1
Application Number: 16698

APPLICATION FOR A NEW PERMIT, PERMIT MODIFICATION, OR TRANSFER OF PERMIT RIGHTS

Application Information:

Name: CNX Gas Company LLC
Address: 2481 John Nash Blvd
Bluefield, WV 24701
Telephone Number: (304)323-6500
Designated Agent: CT Corporation

Type of Application: Modification

Type of Operation: Waste Disposal-W

Operator's Bond Information:

Bond Number	Type	Amount	Institution
CMS233368	SUR	100000.00	RLI Insurance Company

Article 2 Board Requirements:

Field Order:
Does this application fall under a Field Order established by the Virginia Gas and Oil Board? No

Increased Density:
Is this well an increased density well for the unit? No

Pooling:
Is pooling Voluntary? Yes

Location Exception:
Is an exception to statewide spacing required by the board? No

Director Exception:
Is an exception to field order spacing required by the Director? No

Is location exception due to mining? No

Application Certification:

I, Jerry Boothe representing CNX Gas Company LLC

certify that all persons required to be notified under Section 45.1-361.30 of the Code of Virginia have been notified. Proof of notice is included as a part of this application. In the case of an application for a Permit, Permit Modification, or an application under 4 VAC 25-150-80, I hereby state that the Applicant named above has the right to conduct operations as set forth in the application and operations plan.

Title: Manager

Date: 1/20/2010

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

Operations Name: Well BPC 1
Application Number: 16698

NOTICE OF APPLICATION FOR A PERMIT OR PERMIT MODIFICATION

Take Notice of CNX Gas Company LLC, pursuant to Code of Virginia, Section 45.1-361.29, is filing this Notice and Application of a permit with the Virginia Division of Gas and Oil with respect to an operation on the Harrison-Wyatt LLC tract of 280 acres, more or less, CNX Gas Company LLC tract of 45 acres, more or less, Nannie Rose etal tract of 62.50 acres, more or less, Hurricane District, BUCHANAN City/County, Virginia.

Attached to this Notice of Application is a copy of the required plat or map, operations plan and other information required by the Director. The operations plan describes the work to be done and meets the requirements of Regulation 4 VAC 25-150-100.

You may have the right to file an objection to the proposed operations within fifteen (15) days from the receipt of this notice pursuant to the Code of Virginia, Section 45.1-361.35. A copy of this Code section is attached for your review. You must describe the specific practices you are objecting to and reference the appropriate part of Section 45.1-361.35 when submitting any objection.

Section 45.1-361.35.A "Objections to new or modification permits may be filed with the Director by those having standing as set out in Section 45.1-361.30. Such objections shall be filed within fifteen days of the objecting party's receipt of the notice required by Section 45.1-361.30. Persons objecting to a permit must state the reasons for their objections."

After receipt of a valid objection, an informal conference will be scheduled pursuant to the Code of Virginia Section 45.1-361.35.H.

Section 45.1-361.35.H "The Director shall fix a time and place for an informal fact finding hearing concerning such objections. The hearing shall not be scheduled for less than twenty nor more than thirty days after an objection is filed."

City/County: BUCHANAN District: Hurricane Quadrangle: BIG A MOUNTAIN

Waterway: Farm Name:

State Plane NAD 83 East / X	State Plane NAD 83 North / Y	Surface Elevation
10448295.6500	3574846.8900	1904.17

OBJECTIONS MUST BE FILED WITH

DEPARTMENT OF MINES, MINERALS AND ENERGY
DIVISION OF GAS AND OIL
P.O. BOX 159
Lebanon, VA 24266
276-415-9700

SECTION 45.1-361.35 - OBJECTIONS TO PERMITS; HEARINGS

A. Objections to new or modification permits may be filed with the Director by those having standing as set out in Section 45.1-361.30. Such objections shall be filed within fifteen days of the objecting party's receipt of the notice required by Section 45.1-361.30. Persons objecting to a permit must state the reasons for their objections.

B. The only objections to permits or permit modifications which may be raised by surface owners are:

1. The operations plan for soil erosion and sediment control is not adequate or effective;
2. Measures in addition to the requirement for a well's water-protection string are necessary to protect fresh water-bearing strata; and
3. The permitted work will constitute a hazard to the safety of any person.
4. Location of the coalbed methane well or coalbed methane well pipeline will unreasonably infringe on the surface owner's use of the surface, provided; however, that a reasonable alternative site is available within the unit, and granting the objection will not materially impair any right contained in an agreement, valid at the time of the objection, between the surface owner and the operator or their predecessors or successors in interest.

C. The only objections to permits or permit modifications which may be raised by royalty owners are whether the proposed well work:

1. Directly impinges upon the royalty owner's gas and oil interests; or
2. Threatens to violate the objecting royalty owner's property or statutory rights aside from his contractual rights; and
3. Would not adequately prevent the escape of the Commonwealth's gas and oil resources or provide for the accurate measurement of gas and oil production and delivery to the first point of sale.

D. Objections to permits or permit modifications may be raised by coal owners or operators pursuant to the provisions of Sections 45.1-361.11 and 45.1-361.12.

E. The only objections to permits or permit modifications which may be raised by mineral owners are those which could be raised by a coal owner under Section 45.1-361.11 provided the mineral owner makes the objection and affirmatively proves that it does in fact apply with equal force to the mineral in question.

F. The only objections to permits or permit modifications which may be raised by gas storage field operators are those in which the gas storage operator affirmatively proves that the proposed well work will adversely affect the operation of his State Corporation Commission certificated gas storage field; however, nothing in this subsection shall be construed to preclude the owner of nonstorage strata from the drilling of wells for the purpose of producing oil or gas from any stratum above or below the storage stratum.

G. The Director shall have no jurisdiction to hear objections with respect to any matter subject to the jurisdiction of the Board as set out in Article 2 (Section 45.1-361.13 et seq.) of this chapter. Such objections shall be referred to the Board in a manner prescribed by the Director.

H. The Director shall fix a time and place for an informal fact finding hearing concerning such objections. The hearing shall not be scheduled for less than twenty nor more than thirty days after the objection is filed. The Director shall prepare a notice of the hearing, stating all objections and by whom made, and send a copy of such notice by certified mail, return receipt requested, at least ten days prior to the hearing date, to the permit applicant and to every person with standing to object as prescribed by Section 45.1-361.30.

I. At the hearing, should the parties fail to come to an agreement, the Director shall proceed to decide the objection pursuant to those provisions of the Administrative Process Act (Section 9-6.14.1 et seq.) relating to informal fact finding hearings.

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

Operations Name: Well BPC 1
Application Number: 16698

PERSONS RECEIVING OFFICIAL NOTICE OF PERMIT APPLICATION OR PERMIT MODIFICATION

For the purposes of an application for a new permit or permit modification, list such persons by name and address on additional sheets as needed with the title, "Supplemental Sheet for Persons Receiving Official Notice of Permit Application" and indicate the category for each person or group affected.

Application for Well Work Permit:

- ☑ Surface, coal and mineral owners on the tract to be drilled
- ☑ Surface owners of record on tracts where the surface is to be disturbed
- ☑ Gas, oil and royalty owners within
  - ☑ (1) one-half the distance specified in Section 45.1-361.17
  - ☐ (2) one-half the distance to the nearest well completed in the same pool or
  - ☐ (3) within the drilling unit established by the Virginia Gas and Oil Board
- ☐ Coal operators who have a registered operation plan with the Department for activities located on the tract to be drilled
- ☐ All coal operators who have applied for or obtained a mining or prospecting permit with respect to tracts within 500' of the proposed well location
- ☐ All coal or mineral owners on tracts located within 500' of the proposed well location
- ☐ All Storage Field Operators Within 1250'
- ☐ Local Government pursuant to Section 45.1-361.30.E
- ☐ Public notice pursuant to Section 45.1-361.30.E, such as an affidavit of publication from the newspaper

Coalbed Methane Well Applications (In Addition to Above)

- ☐ All coal operators, coal owners or mineral owners within 750 feet of the proposed well location
- ☐ All coal operators who have applied for or obtained a mining or prospecting permit with respect to tracts within 750 feet of the proposed well location

Applications for Pipelines and Facilities

- ☐ All surface owners affected by the proposed operations

Applications for Ground Disturbing Geophysical Operations

- ☐ Surface owners on tracts where the surface is to be disturbed
- ☐ Coal owners, coal operators, and mineral owners on the tract(s) to be drilled
- ☐ Coal operators who have registered operations plans with the Department for activities located on the tract to be drilled

SUPPLEMENTAL SHEET(S) FOR PERSONS RECEIVING OFFICIAL NOTICE OF PERMIT APPLICATION PURSUANT TO SECTION 45.1-361.30

APPLICATIONS FOR WELL WORK PERMIT

A. Surface, coal and mineral owners on the tract to be drilled

CNX Gas Company LLC, , 2481 John Nash Blvd, Bluefield; WV 24701,

B. Surface owners of record on tracts where the surface is to be disturbed

Alpha Dungan, , 5740 Cornick Rd., Norfolk; VA 23502,
CNX Gas Company LLC, , 2481 John Nash Blvd, Bluefield; WV 24701,
Dwight Jackson, , P.O Box 603, Honaker; VA 24646,
Juanita Leedy, , 13916 St. Rt. 279, Oakhill; OH 45656,
Sara Ratliff, , 8703 Lovers Gap Road, Vansant; VA 24656,
Virginia Tiller, , P.O Box 2382, Grundy; VA 24614,

C. Gas, oil and royalty owners within

1. one-half the distance specified in Section 45.1-361.17

CNX Gas Company LLC, , 2481 John Nash Blvd, Bluefield; WV 24701,
Harrison-Wyatt, LLC, c/o Wyatt Buick Pontiac Inc., PO Box 11000, Danville; VA 24543,

2. one-half the distance to the nearest well completed in the same pool

N/A

3. within the drilling unit established by the Virginia Gas and Oil Board

N/A

D. Coal operators who have a registered operation plan with the Department for activities located on the tract to be drilled

N/A

E. All coal operators who have applied for or obtained a mining or prospecting permit with respect to tracts within 500' of the proposed well location

N/A

F. All coal or mineral owners on tracts located within 500' of the proposed well location

N/A

G. All Storage Field Operators Within 1250'

N/A

H. Local Government pursuant to Section 45.1-361.30.E

N/A

I. Public notice pursuant to Section 45.1-361.30.E, such as an affidavit of publication from the newspaper

N/A

COALBED METHANE WELL APPLICATION IN ADDITION TO ABOVE

J. All coal operators, coal owners or mineral owners within 750 feet of the proposed well location

N/A

K. All coal operators who have applied for or obtained a mining or prospecting permit with respect to tracts within 750 feet of the proposed well location

N/A

APPLICATIONS FOR PIPELINES AND FACILITIES

L. All surface owners affected by the proposed operations

N/A

APPLICATIONS FOR GROUND DISTURBING GEOPHYSICAL OPERATIONS

M. Surface owners on tracts where the surface is to be disturbed

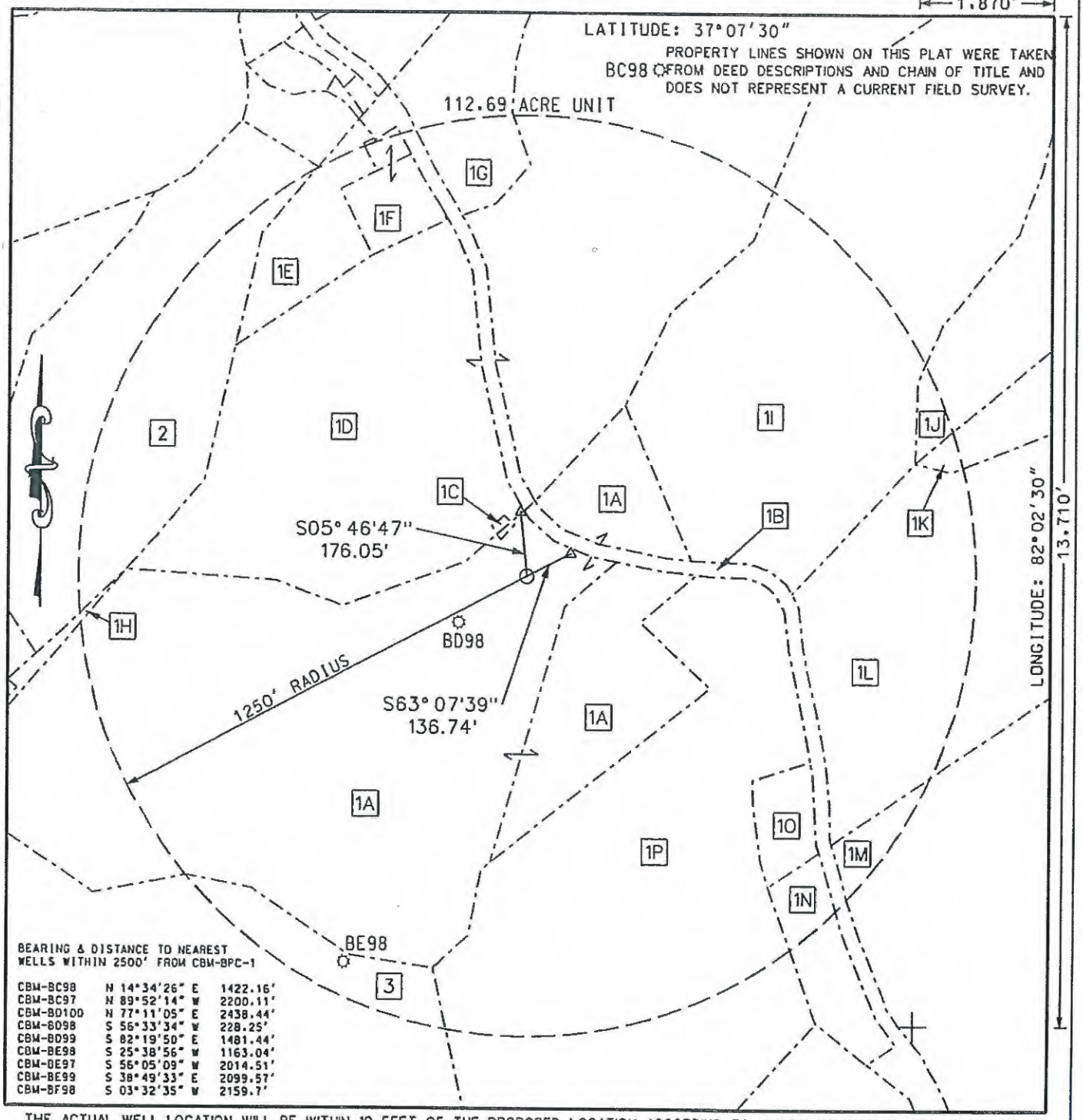
N/A

N. Coal owners, coal operators, and mineral owners on the tract(s) to be drilled

N/A

O. Coal operators who have registered operations plans with the Department for activities located on the tract to be drilled

N/A



BEARING & DISTANCE TO NEAREST WELLS WITHIN 2500' FROM CBW-BPC-1

CBW-BC98	N 14°34'26" E	1422.16'
CBW-BC97	N 89°52'14" W	2200.11'
CBW-BD100	N 77°11'05" E	2438.44'
CBW-BD98	S 56°33'34" W	228.25'
CBW-BD99	S 82°19'50" E	1481.44'
CBW-BE98	S 25°38'56" W	1163.04'
CBW-DE97	S 56°05'09" W	2014.51'
CBW-BE99	S 38°49'33" E	2099.57'
CBW-BF98	S 03°32'35" W	2159.7'

THE ACTUAL WELL LOCATION WILL BE WITHIN 10 FEET OF THE PROPOSED LOCATION ACCORDING TO 4 VAC 25-150-290 AND 45.1-361.30.

WELL LOCATION PLAT

Company CNX Gas Company LLC Well Name or Number BPC-1

Tract No. Harrison-Wyatt, LLC, Big Axe Tract 10 (280.00 Acre Tract) Scale: 1" = 400'

County BUCHANAN District HURRICANE Quadrangle BIG A MOUNTAIN Date 01-19-10

Elevation 1903.27' Well Elevation Determined By Trig. Levels From CONSOL Inc. Benchmarks

Well Coordinates N 293,968.99 E 965,309.08 (Virginia State Plane - South Zone - NAD 27)

Well Coordinates N 3,574,846.89 E 10,448,295.65 (Virginia State Plane - South Zone - NAD 83)

This plat is a new plat X ; an updated plat _____ ; or a final plat _____

+ Denotes the location of a well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown.

Form DGO-GO-7
Rev. 9/91

David Allen Miller

Licensed Professional Engineer or Licensed Land Surveyor

(Affix Seal)

COMMONWEALTH OF VIRGINIA
DAVID ALLEN MILLER 01/19/10
Lic. No. 002523
LAND SURVEYOR

CNX GAS COMPANY LLC
UNIT BPC1
Tract Identifications

1. Harrison-Wyatt, LLC, Big Axe Tract 10 (280.00 Acre Tract) – Minerals
   Jewell Smokeless Coal Corporation – Coal in Tiller Seam and Above Leased
   CNX Gas Company LLC – Oil, Gas and CBM Leased
   104.98 acres 93.1582%

1A. CNX Gas Company LLC – Surface Owner
1B. Commonwealth of Virginia – Surface Owner
1C. Unknown Surface Owner (CEMETERY)
1D. Nannie Rose, et al – Surface Owner
1E. Mintie C. Hess – Surface Owner
1F. Unknown Surface Owner
1G. Unknown Surface Owner
1H. Unknown Surface Owner
1I. Unknown Surface Owner
1J. Garland Austin, et al – Surface Owner
1K. Hampton E. Austin, et ux – Surface Owner
1L. James J. Combs, et al – Surface Owner
1M. Curtis Austin, et ux – Surface Owner
1N. Shelia Owens – Surface Owner
1O. Unknown Surface Owner
1P. Ervin J. Combs – Surface Owner

2. Harrison-Wyatt, LLC, Big Axe Tract 5 (175.00 Acre Tract) – Minerals
   Jewell Smokeless Coal Corporation – Coal in Tiller Seam and Above Leased
   CNX Gas Company LLC – Oil, Gas and CBM Leased
   Mintie C. Hess – Surface
   5.67 acres 5.0315%

3. Harrison-Wyatt, LLC, Big Axe Tract 6-1 (80.00 Acre Tract) – Minerals
   CNX Gas Company LLC – Oil, Gas and CBM Leased
   Earl D. Johnson, Jr., et al – Surface
   2.04 acres 1.8103%

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

Operations Name: Well BPC 1

Application Number: 16698

TECHNICAL DATA SHEET FOR PERMIT APPLICATIONS UNDER SECTION 45.1-361.29

☐ the information is related to the conversion of a VVH to a CBM under 4 VAC 25-150-580.

Geological Target Formation: SHALE

Estimated Depth of Completed Well : 5624.0

GEOLOGICAL DATA (ESTIMATE)

Predict:

Description	FileName
Schematic	BPC 1 schematic.pdf

Proposed Casing/Tubing Program

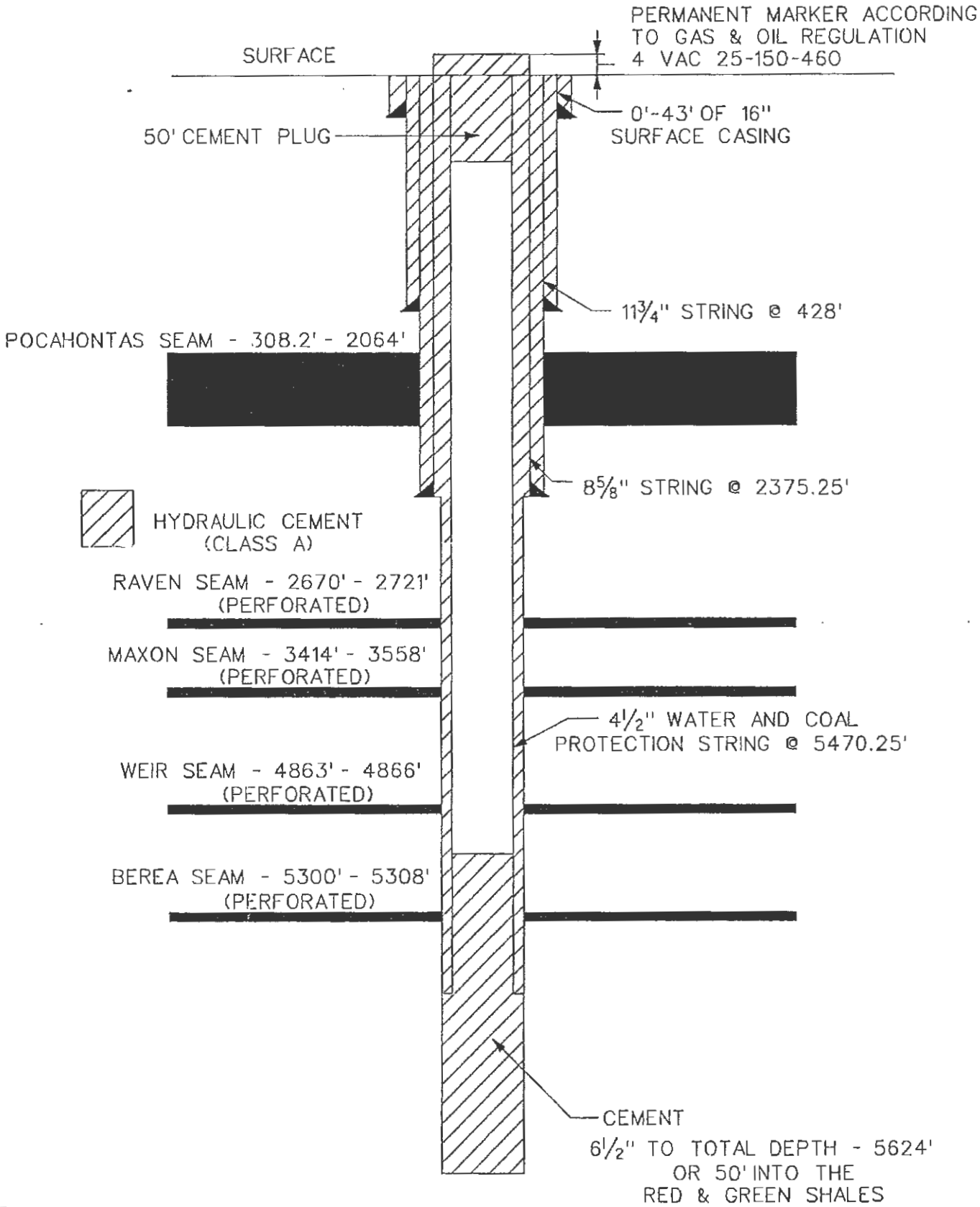
	Size	Depth	Cement Details
Conductor	16	43	Cemented to Surface
Surface/Water Prot. Casing	4 1/2	5470.25	Cemented to Surface
Coal Protection Casing	4 1/2	5470.25	Cemented to Surface
Other Casing	11 3/4	428	Cemented to Surface
Other Casing	8 5/8	2375.25	Cemented to Surface
Other Casing			
Production Casing	4 1/2	5470.25	Cemented to Surface
Tubing			

DGO-GO-11(b)

CNX GAS COMPANY LLC

CBM-BPC-1

PROPOSED PLUGGING AND ABANDONMENT SCHEMATIC



1/5/10

...\B\BPC-1.dgn 1/5/2010 3:12:40 PM

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

Operations Name: Well BPC 1

TECHNICAL DATA SHEET FOR PERMIT MODIFICATION TO PLUG OR REPLUG

Under Code of Virginia, Section 45.1-361.34, the proposed plugging work is for the purpose listed below:

Abandonment of the well or corehole by the operator

The date when the plugging or re-plugging is proposed to be commenced

Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

Operations Name: Well BPC 1

Application Number: 16698

OPERATIONS PLAN

PRE-DEVELOPMENT SITE CONDITIONS:

Existing Land Use: Forest, Mining

Set-back variance requested: ☐Yes ☑No

Located on DMLR permit(s): ☐Yes ☑No

Active underground mining located within ☐500' ☐200' of proposed well location or ☑No Mining

Is the topography different from that depicted on the attached topographic map(s): ☐Yes ☑ No

Ground Water Analysis Attached: ☐Yes ☐To be submitted prior to drilling
☑Not required (No Groundwater found within 500' of proposed well or corehole)

Source Water Analysis Attached: ☐Yes ☐To be submitted prior to drilling
☐Not required (using municipal water source) ☑Not required (using onsite water source)

Provide a statement of the acres to be disturbed to the nearest 1/10 of an acre subject to this application:

1.40

CONSTRUCTION PLANS

☑Not less than 1" - 400' topographic map depicting all existing and proposed access roads to be upgraded or constructed. Anticipated culvert sizes, locations, and the approximate final road grades shall be shown on the proposed roads. Adjoining state and county maintained roads and previously permitted roads which will be used in conjunction with the proposed roads shall be labeled for reference purposes.

☐Not less than 1" - 50' site map with cross section(s) indicating the elevations before and after construction, the drilling pad size, the location of all drainage and erosion/sediment control structures, topsoil stockpiles and pits.

☐Not less than 1" - 600' topographic map showing the total length of the proposed pipelines with notations of the pipeline diameter. This map shall show the location of all proposed drips, tanks and associated facilities (if applicable) and shall indicate where the pipe is to be buried or on the surface. The anticipated grades after construction for the ground disturbing sections of the pipeline rights-of-way shall also be shown on the map or an associated section profiles.

☐Identify on attached maps any adjacent land, man-made or public safety features which would be at risk because of proposed operations as Red Zone(s) as required by 45 VAC 25-150-100(B).

Description	FileName
Exhibit 1	BPC1 Injection well Ex. 1.dwg
Exhibit 2	BPC1 Injection well Ex. 2.dwg
Exhibit 3	BPC1 Injection well Ex. 3.dwg

WORK PLANS

Stimulation plan attached: ☐Yes ☐Does Not Apply

Analysis of mud medium/drilling medium/oil based fluid medium attached/filed:

☐Yes ☑Does Not Apply ☐On File with DGO

SPCC Plan Required by EPA: ☐Yes ☑No

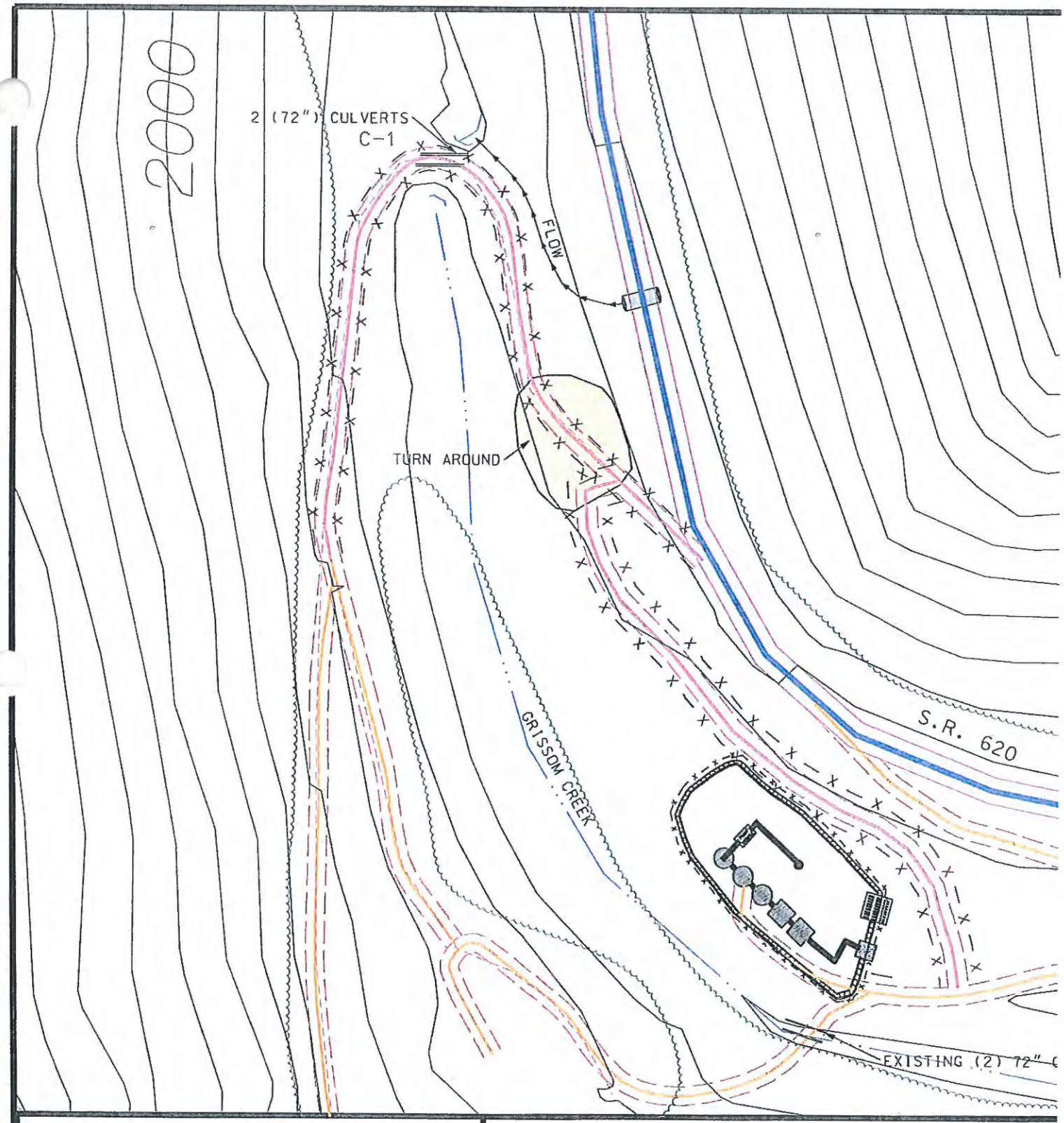
Pit Identification:

Pit Name	Date Added	Date Removed

PROVIDE INFORMATION OR ATTACHEMENTS PERTAINING TO SITE SPECFIC INFORMATION THAT IS NOT ADDRESSED ABOVE

Description	FileName

Directions to site:



LEGEND

- STATE ROAD
- COUNTY ROAD
- EXISTING ROAD
- NEW ROAD
- CULVERT
- [1] NEW ROAD SEGMENT
- - x — x — x — NEW ROAD SEGMENT

NOTE:

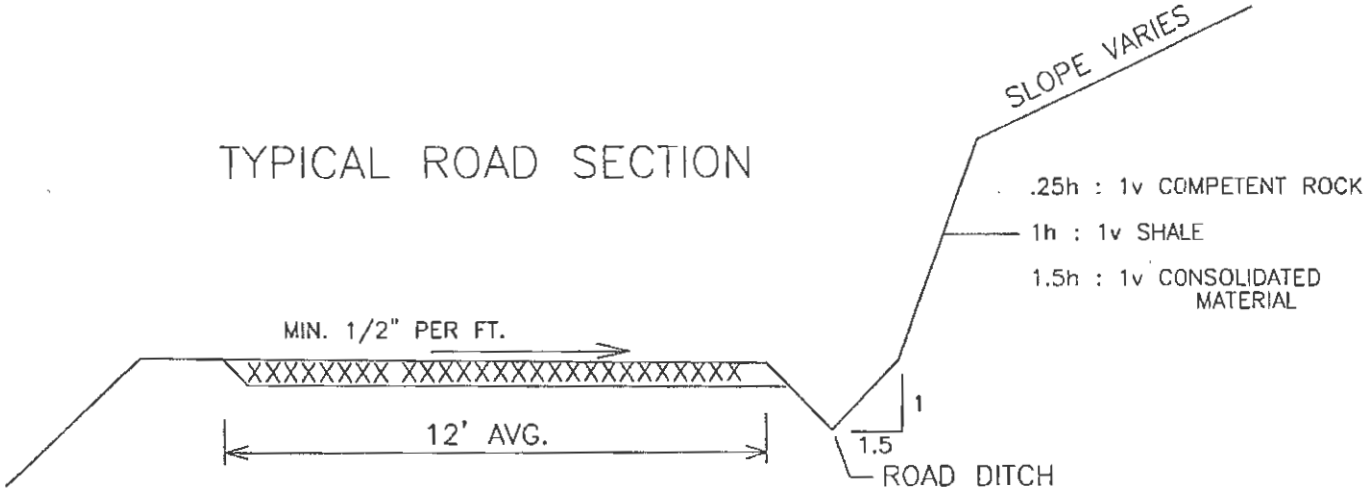
STRAW BALES SHALL BE INSTALLED & MAINTAINED AT THE INLET AND OUTLET OF ALL CULVERTS AND AT ALL DRAINAGE WINDOWS UNTIL THE DISTURBED AREA IS STABILIZED.

ACCESS ROAD LOCATION FROM HANDHELD GPS BY CNX GAS CO.

NEW RO
☐ LEN
1 12

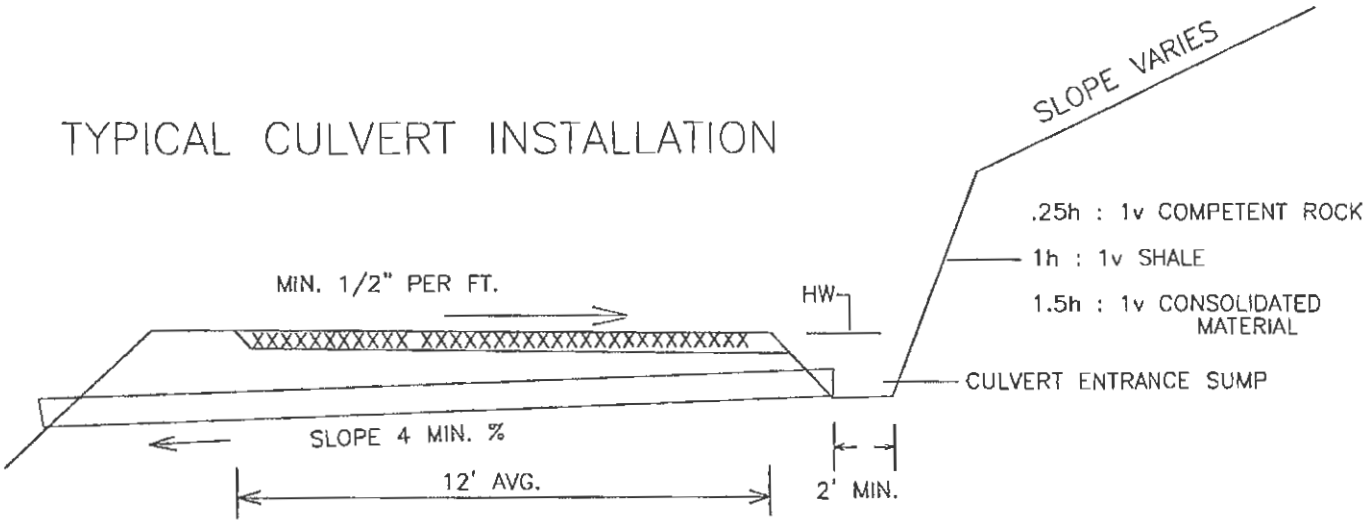
LAT: 37
LON: 8

TYPICAL ROAD SECTION

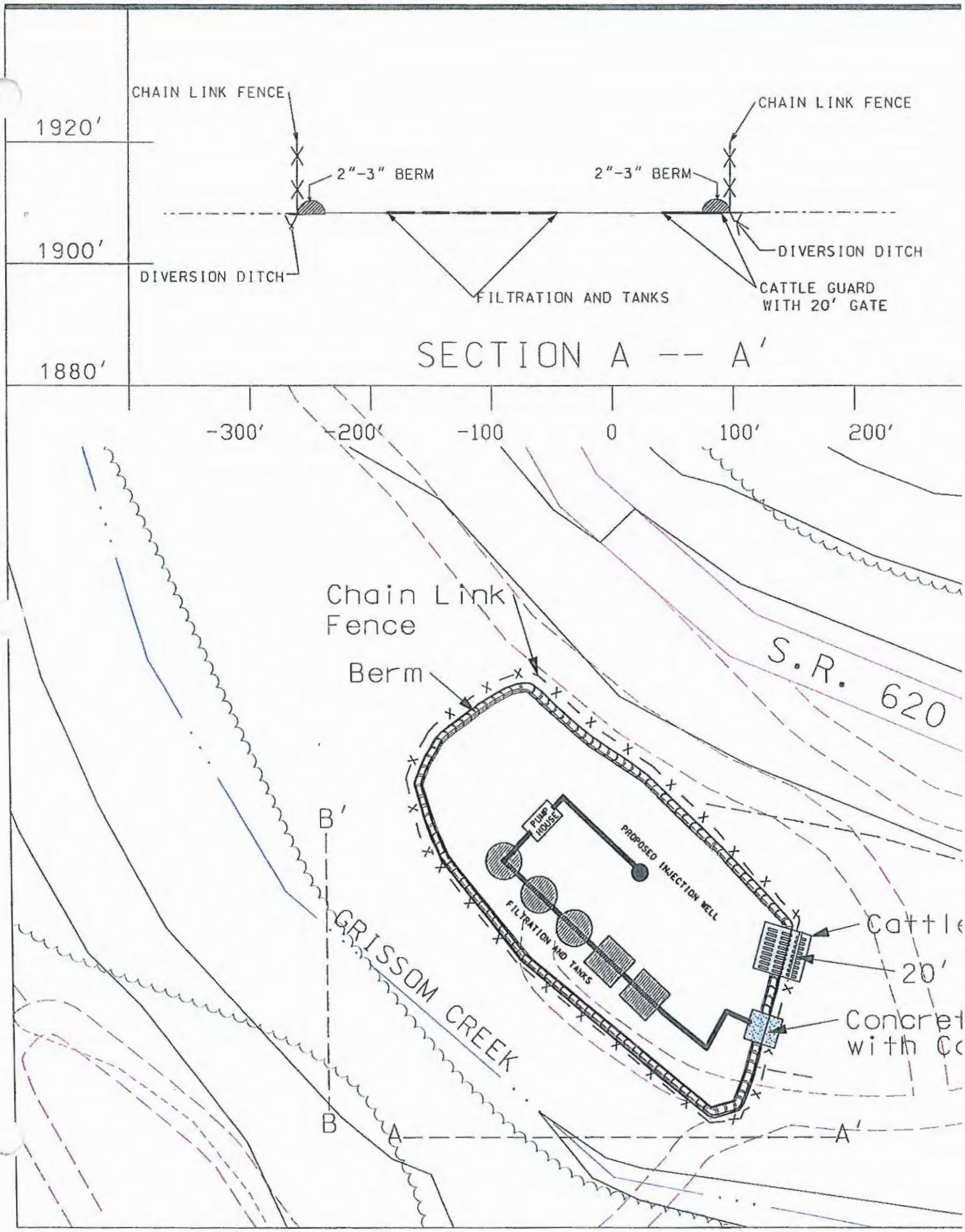


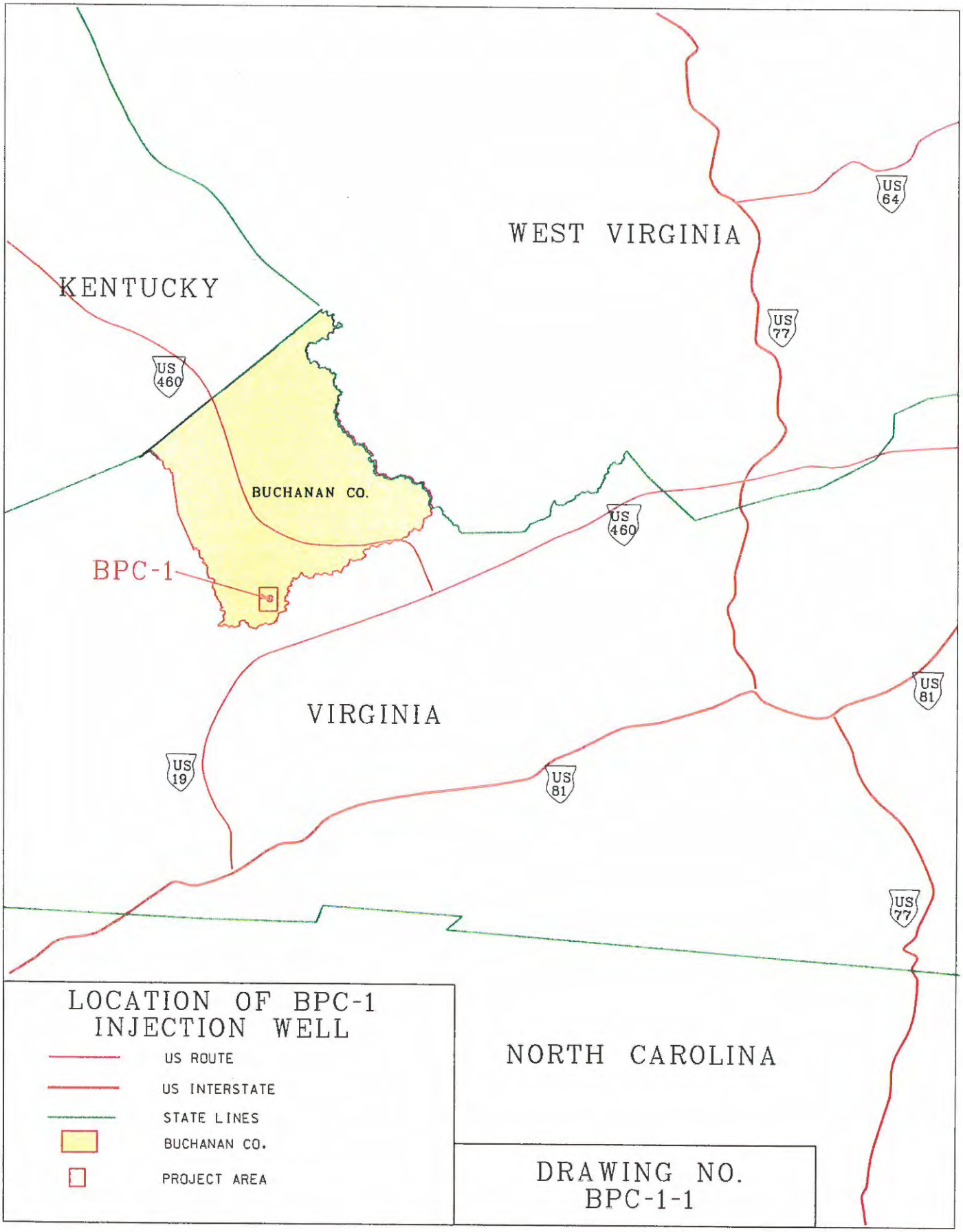
NOTE: SLOPE AND DEPTH OF ALL ROAD DITCHES SHALL BE SUFFICIENT TO HANDLE ANTICIPATED RUNOFF.

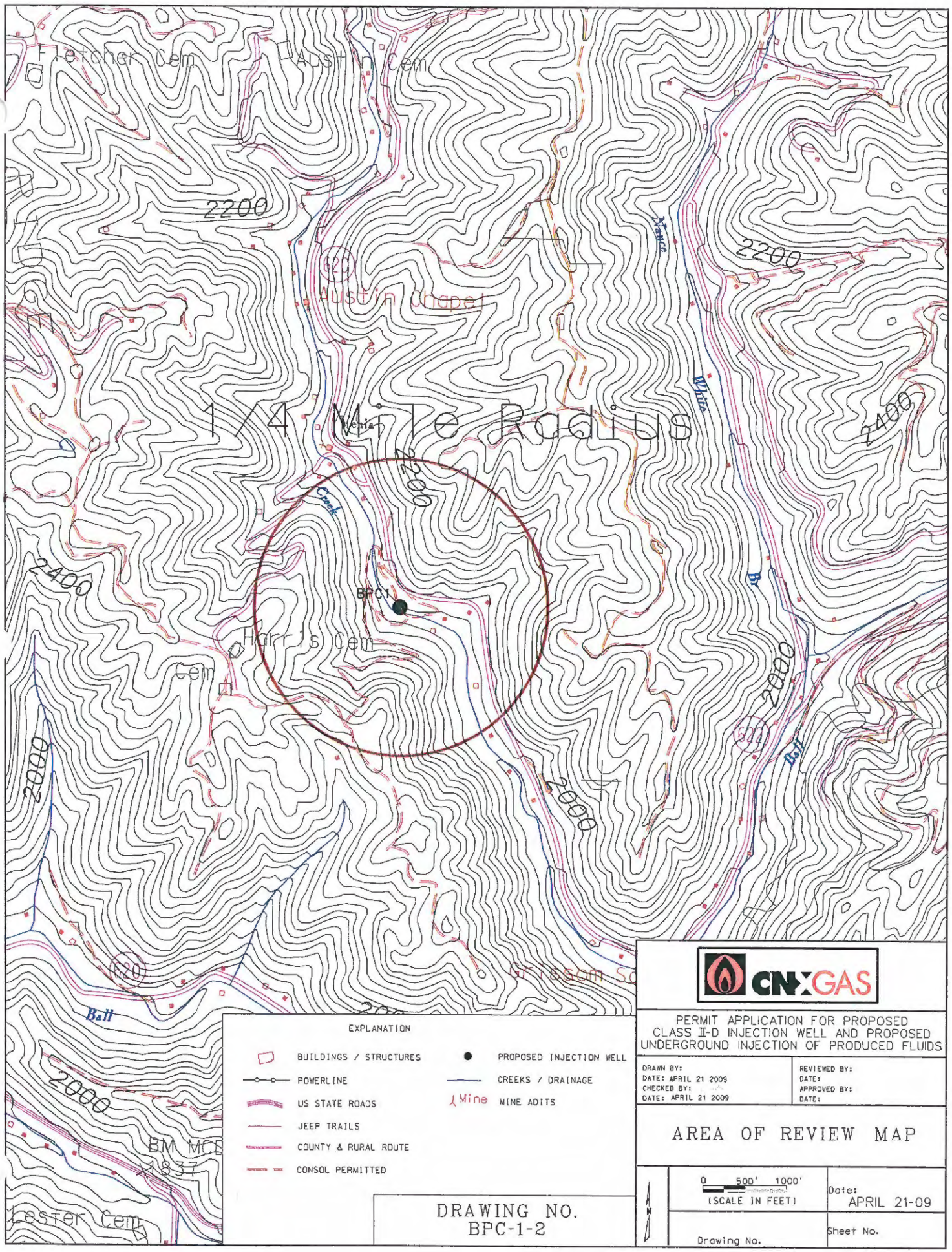
TYPICAL CULVERT INSTALLATION

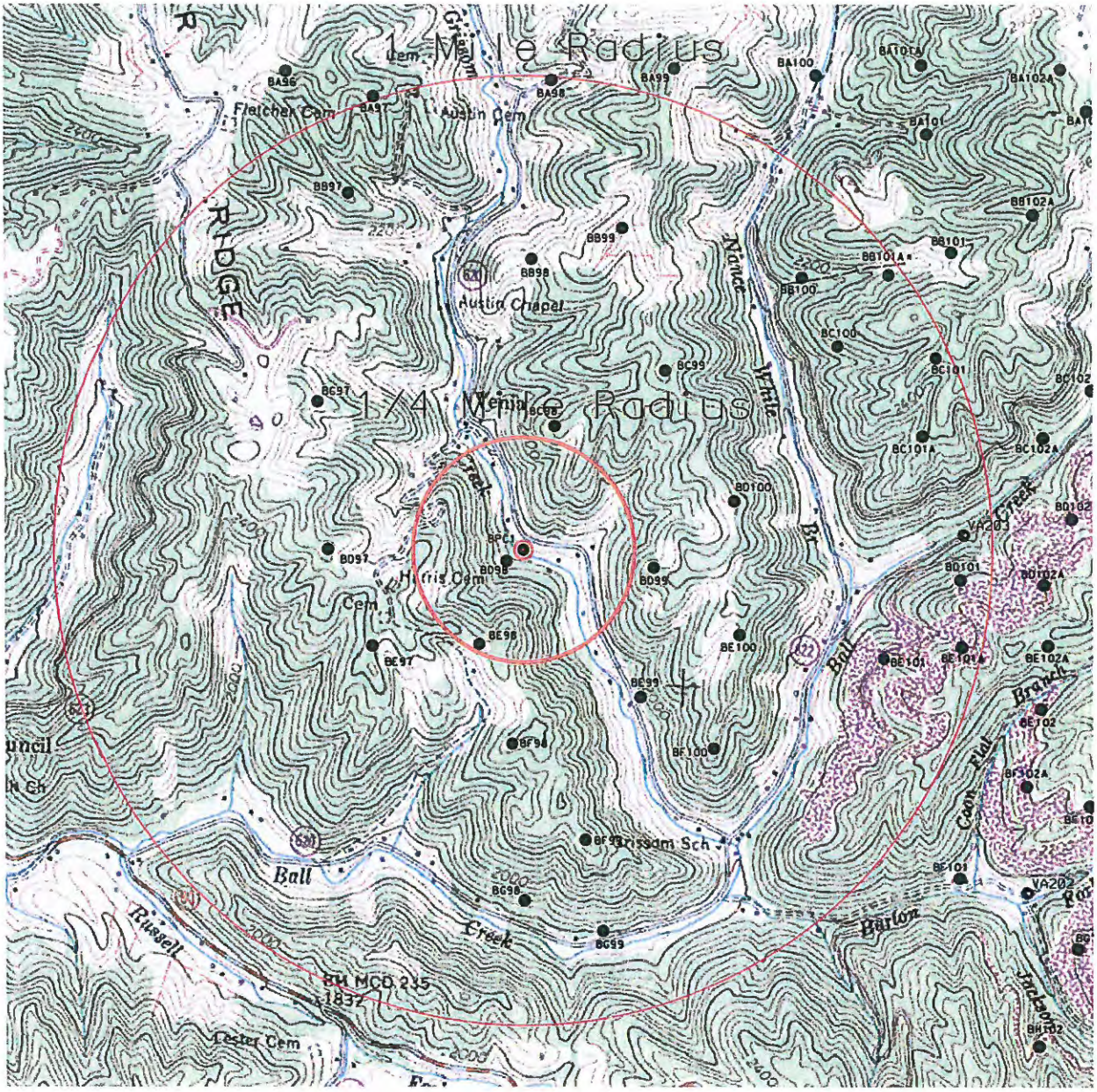


NOTES: STRAW BALES TO BE PLACED AT ENTRANCE AND OUTLET OF ALL CULVERTS UNTIL AREA IS STABILIZED.
EROSION & SEDIMENT CONTROL WILL BE HANDLED BY WINDROW BRUSH OR SILT FENCING.


CHAIN LINK FENCE
CHAIN LINK FENCE
1920'
2"-3" BERM
2"-3" BERM
1900'
DIVERSION DITCH
DIVERSION DITCH
FILTRATION AND TANKS
CATTLE GUARD
WITH 20' GATE
SECTION A -- A'
1880'
-300'
-200'
-100
0
100'
200'
Chain Link
Fence
Berm
S.R. 620
B'
PUMP HOUSE
PROPOSED INJECTION WELL
FILTRATION AND TANKS
GRISSOM CREEK
Cattle
20'
Concret
with Co
B
A
A'


WEST VIRGINIA
KENTUCKY
VIRGINIA
NORTH CAROLINA
BUCHANAN CO.
BPC-1
US 64
US 77
US 460
US 460
US 81
US 19
US 81
US 77
LOCATION OF BPC-1
INJECTION WELL
US ROUTE
US INTERSTATE
STATE LINES
BUCHANAN CO.
PROJECT AREA
DRAWING NO.
BPC-1-1


Fletcher Cem
Austin Cem
2200
(620)
Austin Chapel
Nance
White
2200
1/4 Mile Radius
2400
Creek
2200
BPC1
2400
Harris Cem
Cem
Br
2000
(622)
Ball
2000
2000
(620)
Gresson Sc
Ball
2000
BM MCD
1837
Lester Cem
EXPLANATION
BUILDINGS / STRUCTURES
POWERLINE
US STATE ROADS
JEEP TRAILS
COUNTY & RURAL ROUTE
CONSOL PERMITTED
PROPOSED INJECTION WELL
CREEKS / DRAINAGE
Mine MINE ADITS
DRAWING NO.
BPC-1-2
CNXGAS
PERMIT APPLICATION FOR PROPOSED
CLASS II-D INJECTION WELL AND PROPOSED
UNDERGROUND INJECTION OF PRODUCED FLUIDS
DRAWN BY:
DATE: APRIL 21 2009
CHECKED BY:
DATE: APRIL 21 2009
REVIEWED BY:
DATE:
APPROVED BY:
DATE:
AREA OF REVIEW MAP
0 500' 1000'
(SCALE IN FEET)
Date:
APRIL 21-09
Drawing No.
Sheet No.



LEGEND

VA203 — CORE WELL I.D. & LOCATION (ONE TOTAL)

● COALBED METHANE WELLS (28 TOTAL)

○ PROPOSED INJECTION WELL (BPC 1)

DRAWING NO.
BPC-1-3

CNXGAS

PERMIT APPLICATION FOR PROPOSED CLASS II-D INJECTION WELL AND PROPOSED UNDERGROUND INJECTION OF PRODUCED FLUIDS

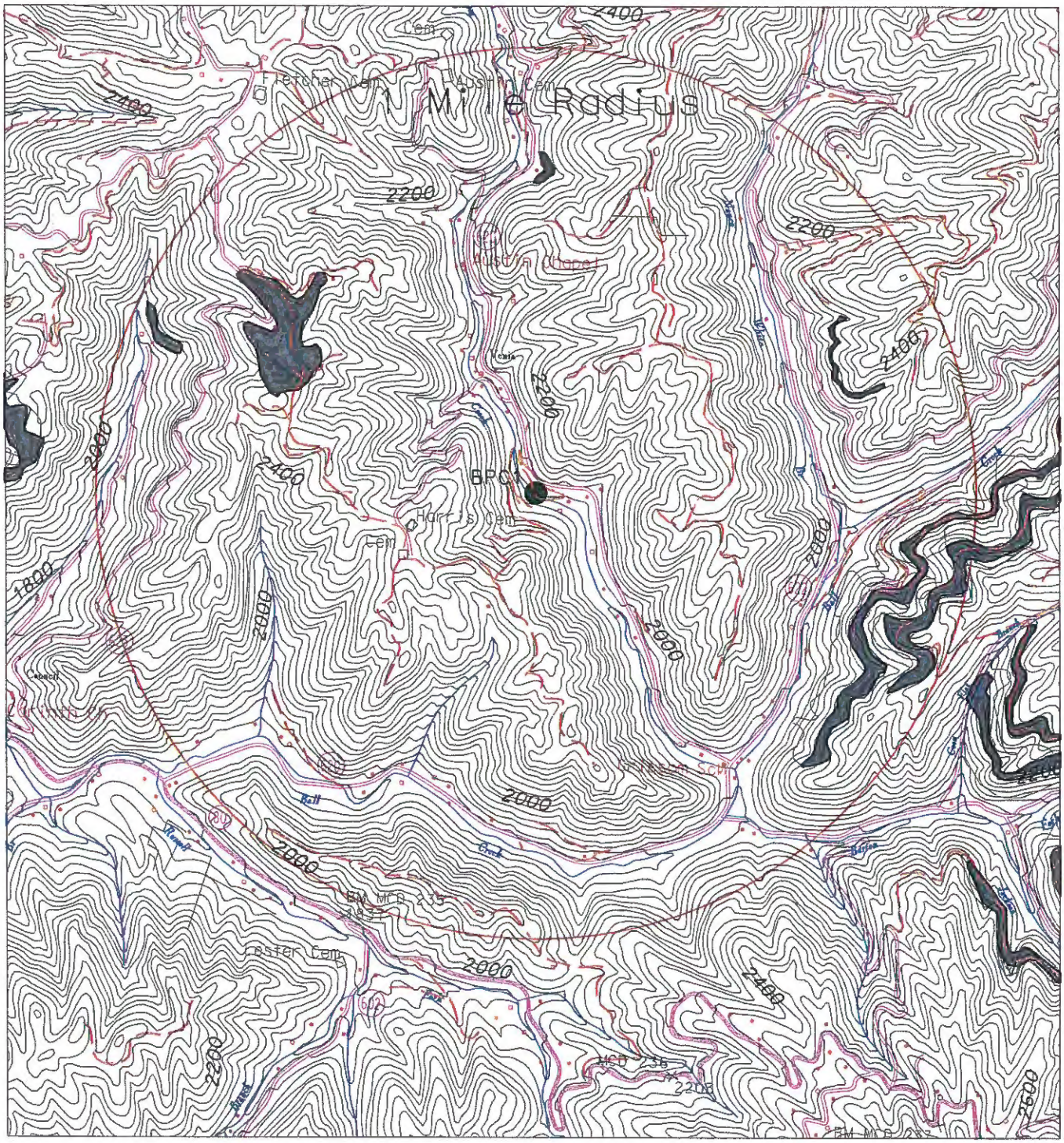
DRAWN BY: DALE CONN DATE: MAR. 30 2009 CHECKED BY: TIM HORN DATE:	REVIEWED BY: DATE: APPROVED BY: DATE:

WELL LOCATION MAP

0 500' 1000'
(SCALE IN FEET)

Date: MAR 30 09

Sheet No. BPC1-3



EXPLANATION

- BUILDINGS / STRUCTURES
- POWERLINE
- US STATE ROADS
- JEEP TRAILS
- COUNTY & RURAL ROUTE
- CONSOL PERMITTED
- PROPOSED INJECTION WELL
- CREEKS / DRAINAGE
- EXISTING STRIP MINING
- Mine MINE ADITS

DRAWING NO.
BPC-1-4

CNXGAS

PERMIT APPLICATION FOR PROPOSED CLASS II-D INJECTION WELL AND PROPOSED UNDERGROUND INJECTION OF PRODUCED FLUIDS

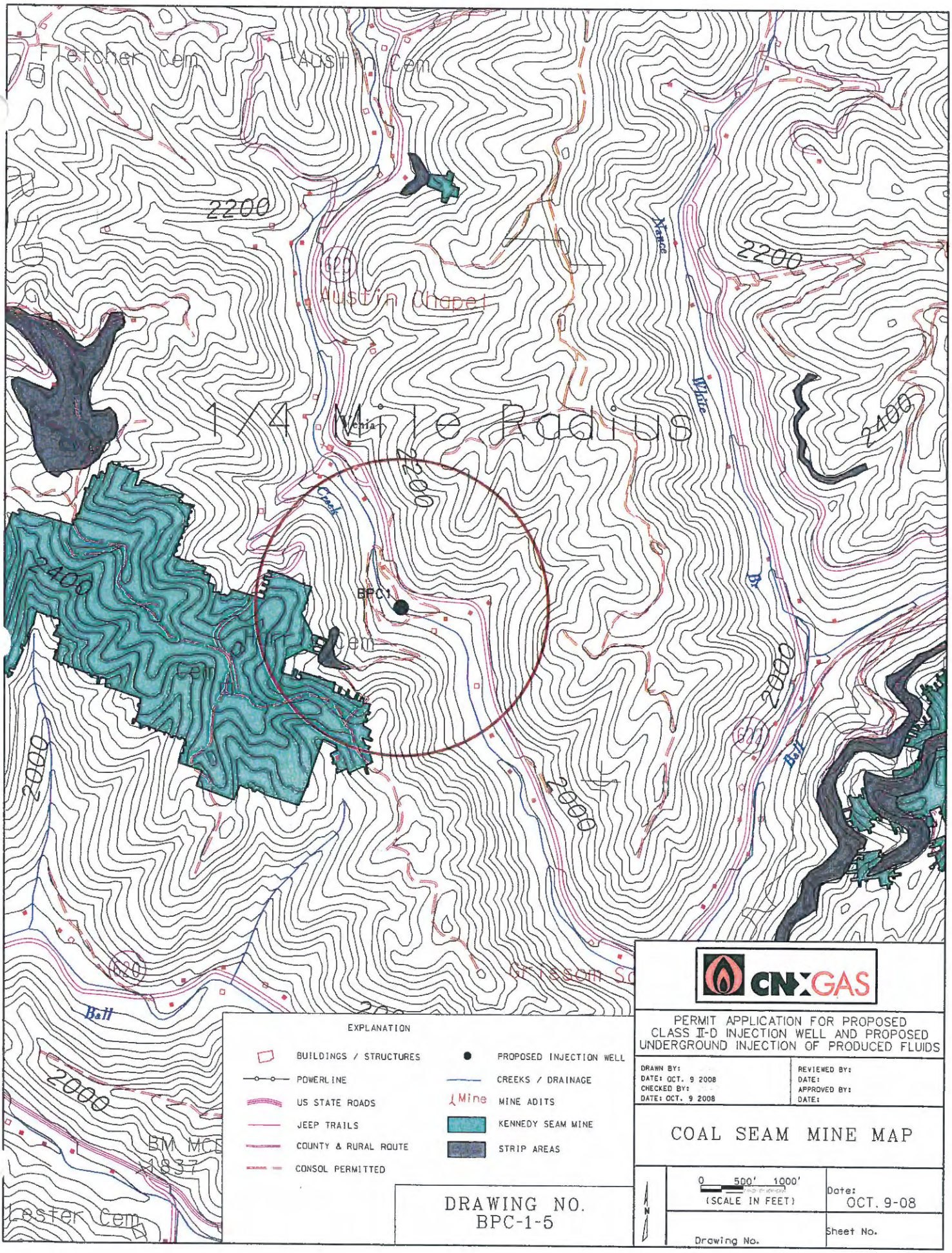
DRAWN BY:	REVIEWED BY:
DATE:	DATE:
CHECKED BY:	APPROVED BY:
DATE:	DATE:

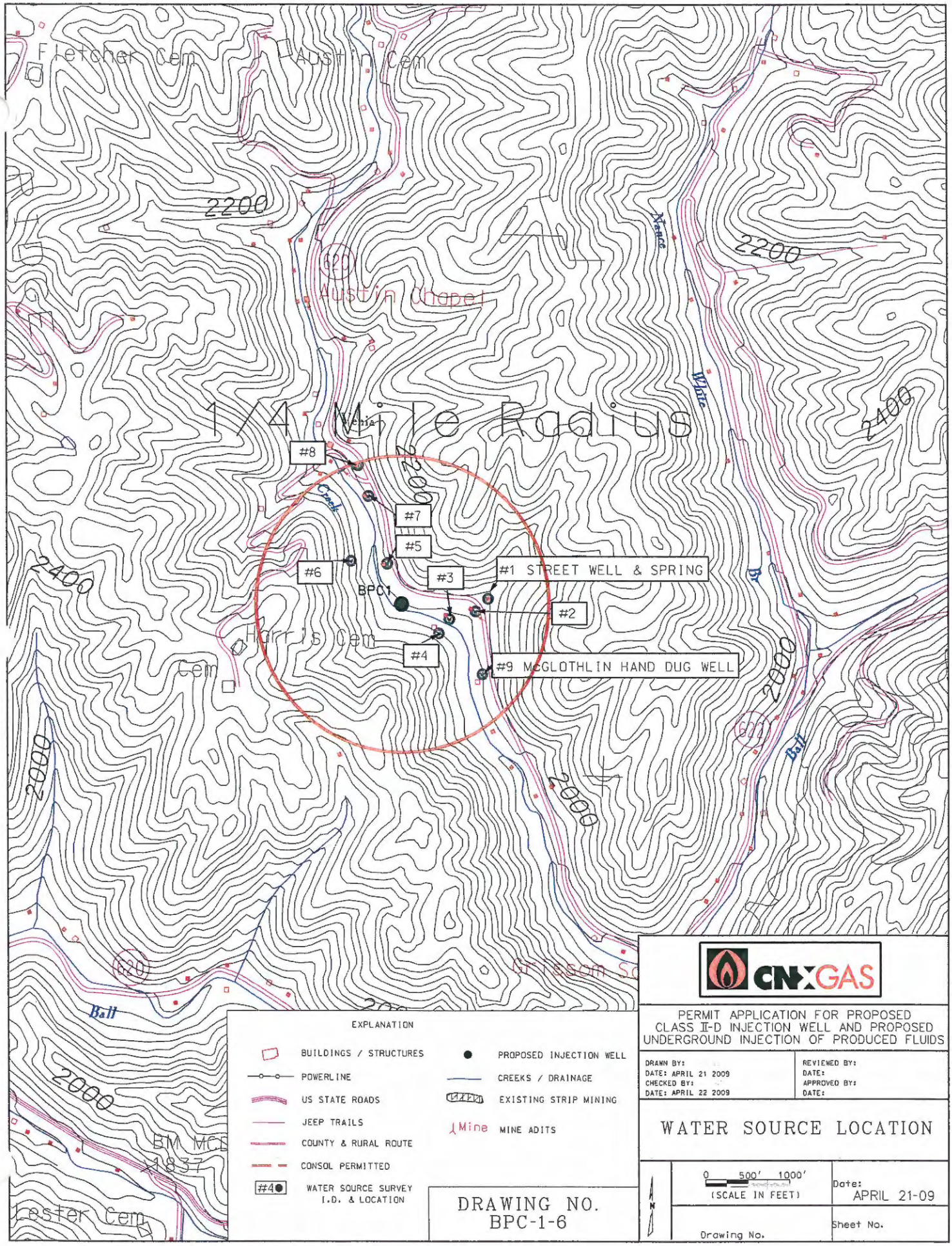
SURFACE FEATURE MAP

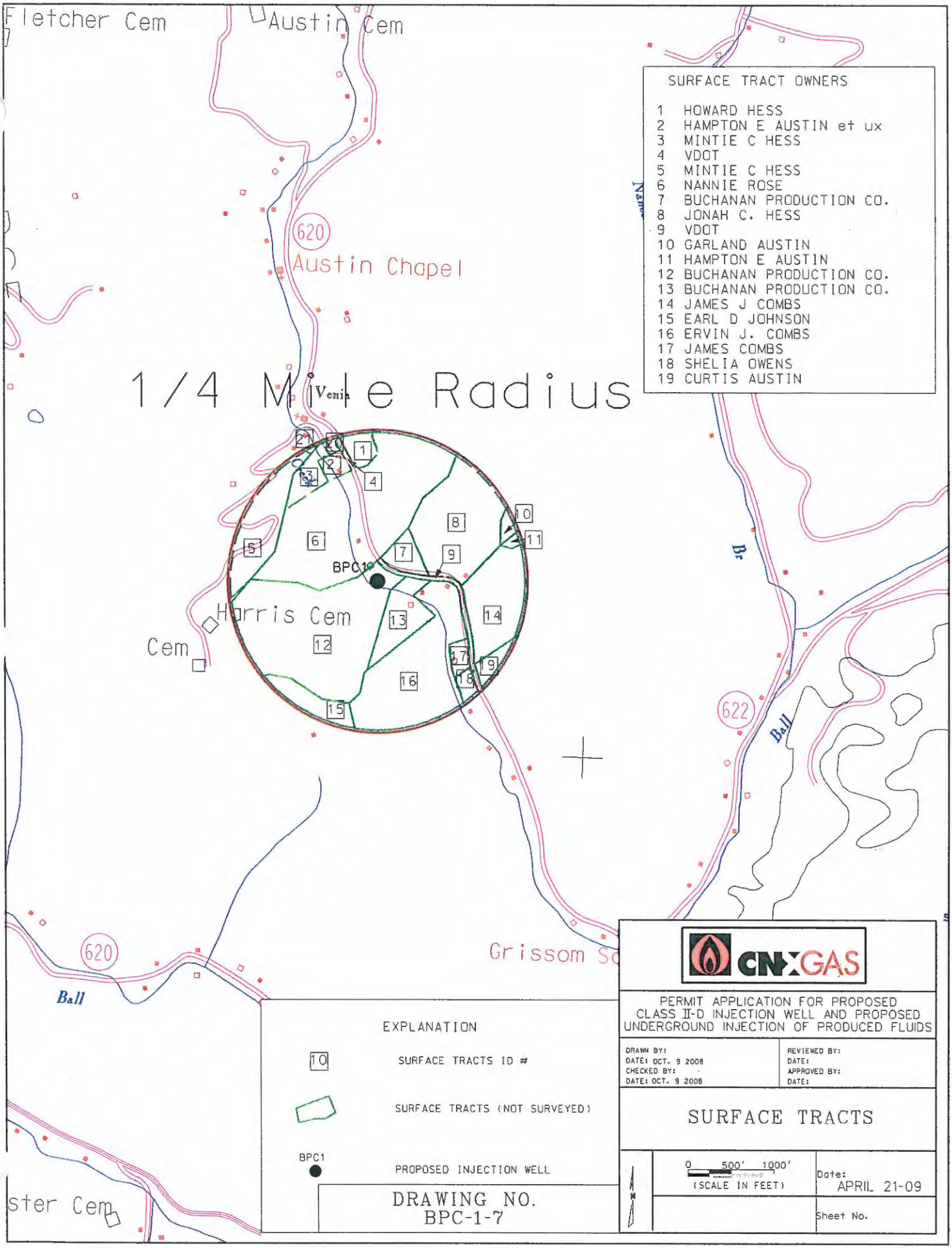
0 500' 1000'
(SCALE IN FEET)

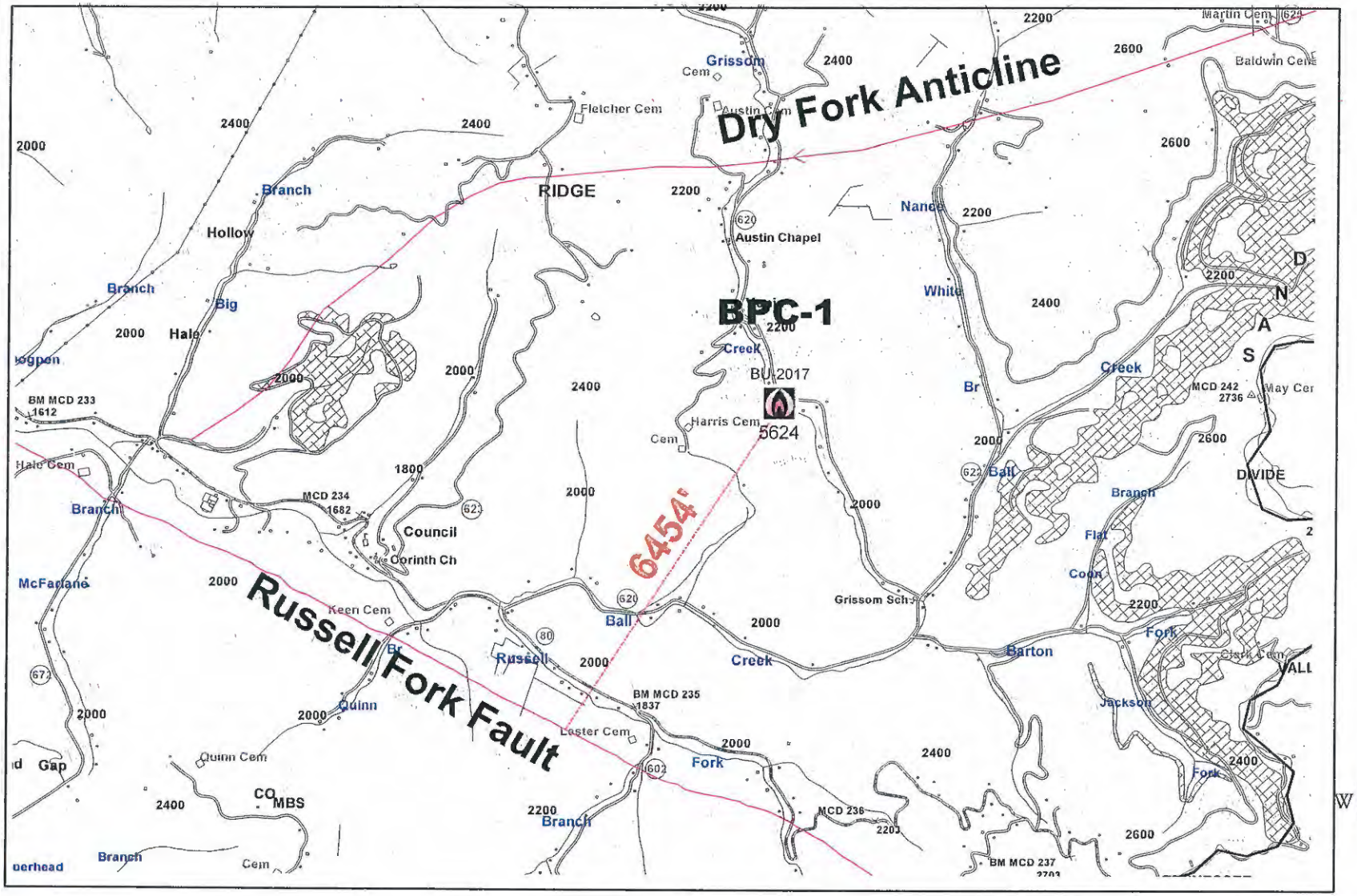
Date: MAR. 27 09

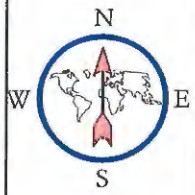
BPC1-4
Sheet No.


Fletcher Cem
Austin Cem
2200
Austin Chapel
1/4 Mile Radius
Vein
Creek
BPC1
2400
2000
Ball
White
France
Griesom Sc
BM MCE
1837
Lester Cem
EXPLANATION
BUILDINGS / STRUCTURES
POWERLINE
US STATE ROADS
JEEP TRAILS
COUNTY & RURAL ROUTE
CONSOL PERMITTED
PROPOSED INJECTION WELL
CREEKS / DRAINAGE
Mine
MINE ADITS
KENNEDY SEAM MINE
STRIP AREAS
DRAWING NO.
BPC-1-5
CNXGAS
PERMIT APPLICATION FOR PROPOSED
CLASS II-D INJECTION WELL AND PROPOSED
UNDERGROUND INJECTION OF PRODUCED FLUIDS
DRAWN BY:
DATE: OCT. 9 2008
CHECKED BY:
DATE: OCT. 9 2008
REVIEWED BY:
DATE:
APPROVED BY:
DATE:
COAL SEAM MINE MAP
0 500' 1000'
(SCALE IN FEET)
Date:
OCT. 9-08
Drawing No.
Sheet No.
N


Fletcher Cem
Austin Cem
2200
Austin Chapel
Nance
White
2200
1/4 Mile Radius
#8
#7
#5
#6
BPC1
#3
#1 STREET WELL & SPRING
#2
#4
#9 McGLOTHLIN HAND DUG WELL
2400
2400
Harris Cem
Cem
2000
2000
2000
2000
Ball
Grisson Sc
Ball
2000
BM MCE
1837
Lester Cem
EXPLANATION
BUILDINGS / STRUCTURES
POWERLINE
US STATE ROADS
JEEP TRAILS
COUNTY & RURAL ROUTE
CONSOL PERMITTED
#4 WATER SOURCE SURVEY I.D. & LOCATION
PROPOSED INJECTION WELL
CREEKS / DRAINAGE
EXISTING STRIP MINING
Mine MINE ADITS
DRAWING NO.
BPC-1-6
CNXGAS
PERMIT APPLICATION FOR PROPOSED
CLASS II-D INJECTION WELL AND PROPOSED
UNDERGROUND INJECTION OF PRODUCED FLUIDS
DRAWN BY:
DATE: APRIL 21 2009
CHECKED BY:
DATE: APRIL 22 2009
REVIEWED BY:
DATE:
APPROVED BY:
DATE:
WATER SOURCE LOCATION
0 500' 1000'
(SCALE IN FEET)
Date:
APRIL 21-09
Drawing No.
Sheet No.


Fletcher Cem
Austin Cem
620
Austin Chapel
1/4 Mile Radius
Venia
BPC1
Harris Cem
Cem
622
Ball
Grissom Sc
620
Ball
ster Cem
SURFACE TRACT OWNERS
1 HOWARD HESS
2 HAMPTON E AUSTIN et ux
3 MINTIE C HESS
4 VDOT
5 MINTIE C HESS
6 NANNIE ROSE
7 BUCHANAN PRODUCTION CO.
8 JONAH C. HESS
9 VDOT
10 GARLAND AUSTIN
11 HAMPTON E AUSTIN
12 BUCHANAN PRODUCTION CO.
13 BUCHANAN PRODUCTION CO.
14 JAMES J COMBS
15 EARL D JOHNSON
16 ERVIN J. COMBS
17 JAMES COMBS
18 SHELIA OWENS
19 CURTIS AUSTIN
EXPLANATION
10 SURFACE TRACTS ID #
SURFACE TRACTS (NOT SURVEYED)
BPC1 PROPOSED INJECTION WELL
DRAWING NO.
BPC-1-7
CNXGAS
PERMIT APPLICATION FOR PROPOSED
CLASS II-D INJECTION WELL AND PROPOSED
UNDERGROUND INJECTION OF PRODUCED FLUIDS
DRAWN BY:
DATE: OCT. 9 2008
CHECKED BY:
DATE: OCT. 9 2008
REVIEWED BY:
DATE:
APPROVED BY:
DATE:
SURFACE TRACTS
0 500' 1000'
(SCALE IN FEET)
Date:
APRIL 21-09
Sheet No.





BPC1-8

CNX GAS

Buchanan County, VA
Nora Field

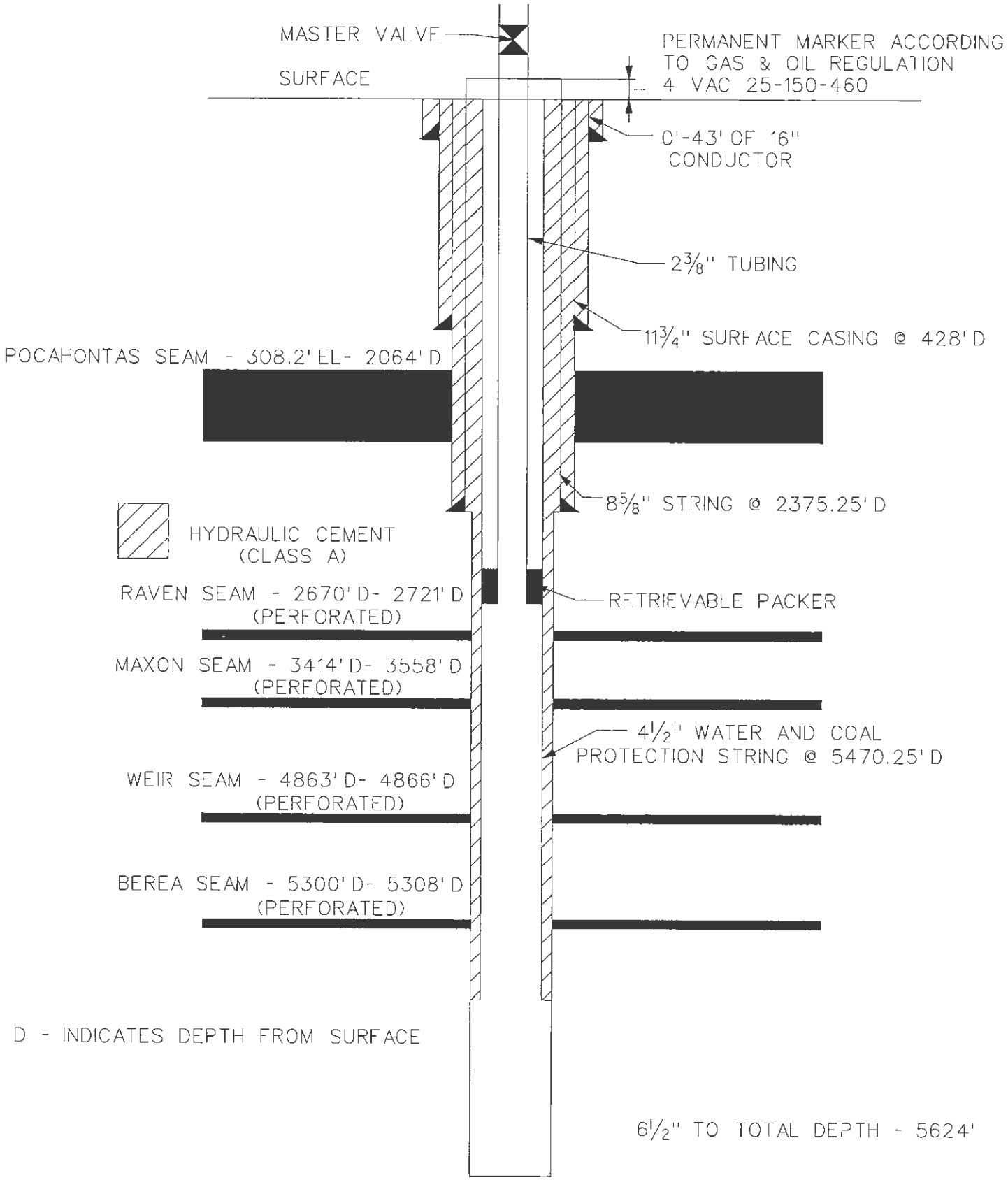
Author: CDO		Date: 2 June, 2009
	Scale: 1" = 2500'	

CNX GAS COMPANY LLC

DGO-GO-11(b)

CBM-BPC-1

PROPOSED OPERATION SCHEMATIC



4/9/10 DRAWING NO. BPC-1-9-A

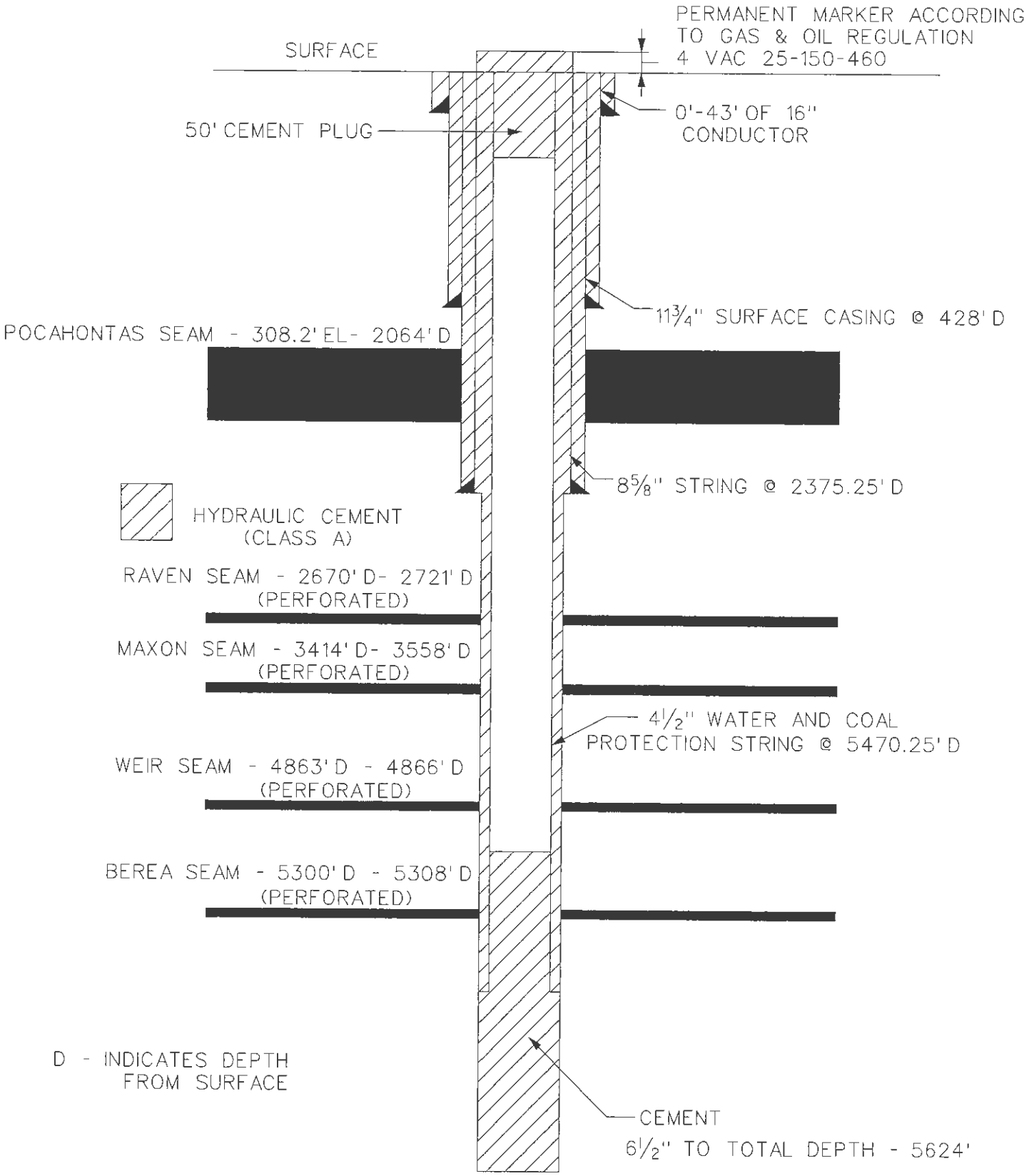
...\B\BPC-1schematic2.dgn 5/5/2010 10:55:04 AM

DGO-GO-11(b)

CNX GAS COMPANY LLC

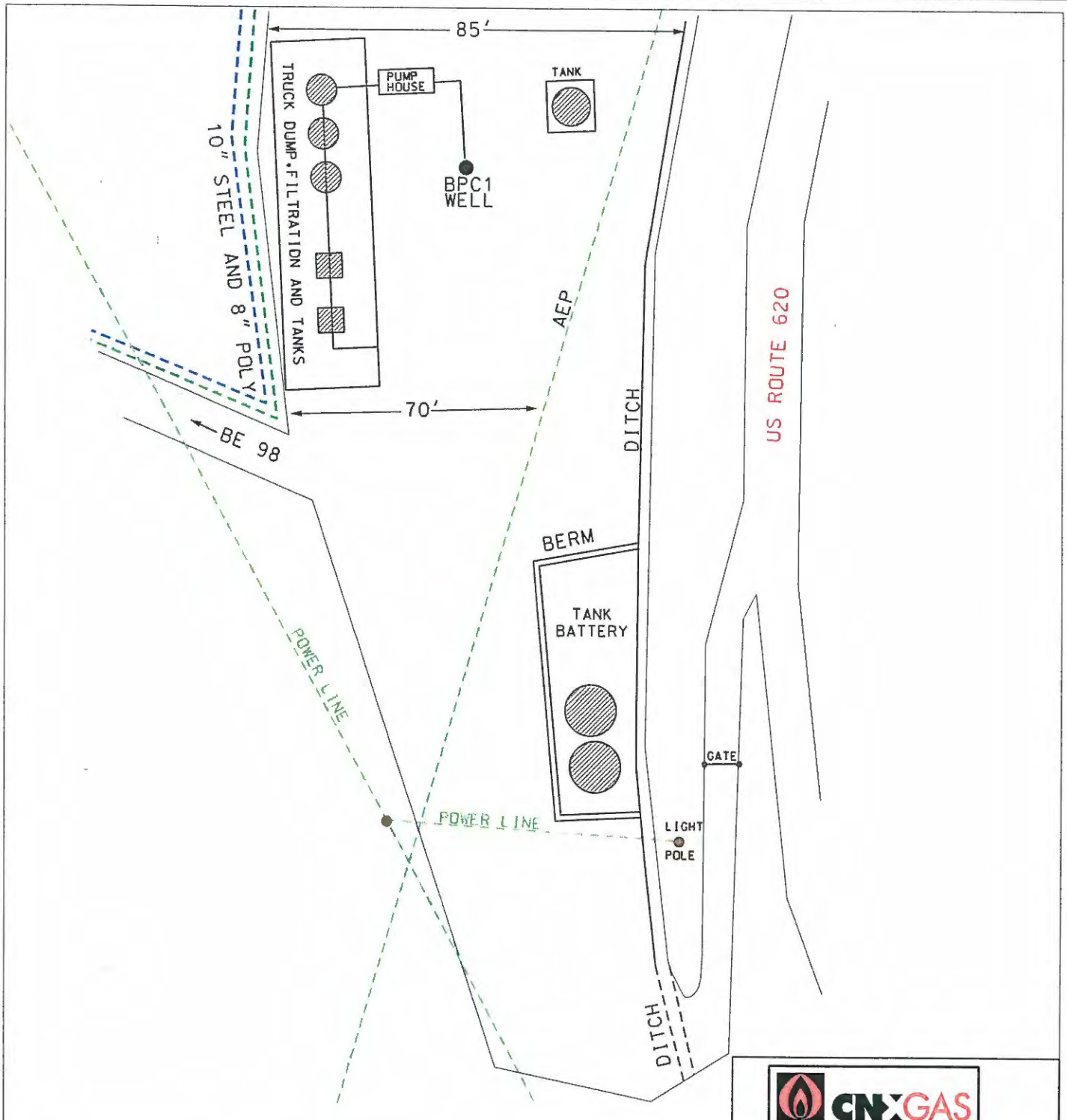
CBM-BPC-1

PROPOSED PLUGGING AND ABANDONMENT SCHEMATIC



4/1/10 DRAWING NO. BPC-1-9

...\B\BPC-1schematic.dgn 5/5/2010 10:55:29 AM



CNXGAS

PROPOSED BPC 01
INJECTION WELL
10-6-08

DRAWN BY: DALE CONN DATE: APRIL 20 2009 CHECKED: BY TIM HORN DATE: APRIL 21 2009	REVISED BY DATE: APPROVED BY: DATE:

SITE PLAN

EXPLANATION

- 10" STEEL PIPE LINE
- 8" POLY PIPE LINE
- POWER LINES
- BPC1 — PROPOSED INJECTION WELL

DRAWING NO.
BPC-1-10

N

NOT TO SCALE

Date: APRIL 20-09

Sheet No.