FACT SHEET

Applicant:	Aethon Energy Operating LLC 12377 Merit Drive, Suite 1200 Dallas, TX 75251 (214) 890-3654
Project Proposal:	Permit to drill one Class V Stratigraphic Test Well
Type of Facility:	N/A
Well Names:	Flowering Peach Well No. 001
Project Location:	Section 06, Township 02 North, Range 08 West, of Vernon Parish
Facility Local Address:	N/A
Application No.:	44668
Docket No.:	IMD 2024-09

Project Summary: The following information is prepared according to the requirements of Statewide Order No. 29-N-1, (LAC 43:XVII, Subpart 1) to briefly set forth the principal facts and significant policy questions considered in preparing a draft permit concerning an application by Aethon Energy Operating LLC (Aethon) to drill one Class V stratigraphic test well in Vernon Parish, Louisiana.

The application is for the drilling of one proposed Class V stratigraphic test well. The total depth of the well is at a depth of approximately 9,510 feet below ground level.

The acquisition of geotechnical data is proposed to occur in the drilling of this well. No disposal of waste via injection will occur.

General Information: Aethon proposes to collect geotechnical cores and other applicable information.

The base of the lowermost underground source of drinking water (USDW) is approximately 2,475 feet below ground level. There are 9 registered water wells located within a one mile radius of the proposed well location. The principal regional aquifers in the area comprise of the confined Williamson Creek Aquifer, Carnahan Bayou Aquifer, and Catahoula Aquifer below.

The complete application consists of the application form (Form UIC-25 Stratigraphic Test); technical attachments describing the geology, hydrology, construction, completion, and financial responsibility estimate.

The draft permit conditions were based on applicable rules and regulations as set forth in Statewide Order No. 29-N-1 (LAC: 43:XVII, Subpart 1) as amended. Such rules provide for the protection and non-endangerment of USDW regarding the permitting, drilling, completing, operating and maintaining of Classes I (nonhazardous waste), III, IV, and V injection well operations in the State of Louisiana.

Application Locations: An application package is available for inspection at the Louisiana Office of Conservation, Injection and Mining Division, LaSalle Building, 617 North Third Street, Room 817, Baton Rouge, LA 70802 from 8:00 am until 4:30 pm, Monday through Friday. To view, please ask for the Aethon Energy Operating LLC Class V Permit Application identified at the beginning of this document. The application package is also available at the Louisiana Department of Energy and Natural Resources, Class VI Carbon Sequestration website.

For information regarding the public hearing or any information concerning the application, refer to the Public Notice for Docket No. IMD 2024-09, or call Jeff Miller at (225) 342-5587, Monday through Friday, between the hours of 8:00 a.m. to 4:30 p.m.

Comment Period: The public comment period officially commences Friday, September 27, 2024 at 8:00 a.m. and concludes, November 8, 2024 at 4:30 p.m. Submit all comments in writing to Jeff Miller, Louisiana Office of Conservation, Injection and Mining Division, 617 N. 3rd St, Baton Rouge, LA 70802. Comments may also be e-mailed to info@la.gov. Please reference Aethon Energy Operating LLC Class V Permit, Application Number 44668, Docket No. IMD 2024-09.

Public Hearing: The public hearing will be held Thursday, November 7, 2024, 6:00 pm in the Hall at the Leesville Municipal Golf Course, 331 Country Club Rd, Leesville, LA 71446.

JEFF LANDRY
GOVERNOR

TYLER PATRICK GRAY
SECRETARY

BENJAMIN C. BIENVENU
COMMISSIONER OF CONSERVATION

State of Louisiana

DEPARTMENT OF ENERGY AND NATURAL RESOURCES
OFFICE OF CONSERVATION

September 20, 2024

Jason Moxley
Aethon Energy Operating LLC (A1760)
12377 Merit Drive, Suite 1200
Dallas, TX 75251

*** * * APPROVAL TO CONSTRUCT * * ***

RE: Stratigraphic Test Well – New Drill
Flowering Peach Well No. 001
Wildcat-No LA Shreveport Dist Field
Vernon Parish

Application No. 44668
Serial No. **TBD**
API No. **TBD**
Sec/Twn/Rng: 006/02N/08W

Dear Mr. Moxley:

The application by Aethon Energy Operating LLC (A1760) to drill a Class V stratigraphic test well has met the interim requirements for permitting such a well. The issuance of this Permit to Construct constitutes a final permit decision regarding the construction of this well. You are hereby granted approval to perform the work as described in the application. The approved work must be completed by ___**TBD**___ __, 2025.

Aethon Energy Operating LLC is to notify the Conservation Enforcement Specialist (CES) for Vernon Parish, William Carnes at (225) 405-7470, Monday through Friday, or by calling the Injection and Mining Division at (225) 342-5515 at least 72 hours prior to commencement of work. At least 48 hours before the casing test of the long string, contact the CES to schedule a witnessed casing test.

Within twenty (20) days after completion of the work, submit the documentation requested in the enclosed Reporting Requirements to the Injection and Mining Division. PLEASE READ THE ENCLOSURES CAREFULLY.

Please be reminded that for future work on the well, a work permit approval must be obtained from this office before repairing, stimulating, plugging, or otherwise working on this well.

Yours very truly,

Benjamin C. Bienvenu
Commissioner of Conservation

Stephen H. Lee, Director
Injection and Mining Division

Enclosures

OFFICE OF CONSERVATION

IMD REPORTING REQUIREMENTS >> Class V Stratigraphic Test

Drilling and construction of the well must be completed within one (1) year from the date of the permit approval letter, otherwise, the permit will expire. **Before the expiration of the permit, the operator must notify the Injection and Mining Division (IMD) if a time extension will be requested or if well will not be drilled.**

The approved application describes how the well is to be constructed. Changes in the approved construction, such as well surface location, well depth, or casing setting depths, will require prior written approval from IMD. Failure to obtain prior written approval will be cause for revoking the permit.

At least forty-eight (48) hours prior to commencement of work, the appropriate Conservation Enforcement Specialist (CES) identified below must be contacted. If you are unable to reach the CES, please call the Injection and Mining Division at (225) 342-5515 between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday.

Application No.	**44668**	Serial No.	**TBD**
CES Name	**William Carnes**	CES Phone No.	**(225) 405-7470**

Within twenty (20) days after completion of the well, the completion documents listed below must be filed with IMD for review and approval in compliance with the regulations. Please place the well's Serial Number on the log headings.

- A Class V Well History and Work Résumé Report (Form UIC-42 STRAT TEST) with an original signature from an authorized representative of the operating company and two photocopies of the form (front and back). The Form UIC-42 can be saved, filled-out, and printed by going to www.dnr.louisiana.gov/consforms >> Injection & Mining Division >> Form UIC-42.
- Two (2) copies of the wellbore schematic depicting the completed well.
- Two (2) copies of the electric log used to identify the USDW.
- Two (2) copies of the cement bond log for each respective casing string.
- An original AFFIDAVIT OF TEST OF CASING IN WELL (Form CSG-T) signed by a company representative and witnessed by a third party for each casing. Provide a copy of the properly labeled pressure chart if the Form CSG-T does not have a witnessed signature. Include the well name, well serial number, casing size, test start time and stop time, date of test, and signature of company representative. The Form CSG-T can be downloaded from www.dnr.louisiana.gov/consforms >> Injection & Mining Division >> Form CSG-T.

Send the above required documentation together in **ONE PACKAGE** to:

Office of Conservation- 9th Floor
Injection & Mining Division
617 North 3rd Street
Baton Rouge, LA 70802

44668

CLASS V STRAT TEST WELL PERMIT APPLICATION

OFFICE OF CONSERVATION
INJECTION & MINING DIVISION
617 N. Third St., 9th FLOOR
BATON ROUGE, LA 70802

Injection-Mining@la.gov
(225) 342-5515

UIC-25 STRAT TEST | **PLEASE READ APPLICATION INSTRUCTIONS** | **TYPE ONLY**

1. APPLICATION TYPE: (Check One)

☑ DRILL AND COMPLETE NEW CLASS V WELL ☐ CONVERT AN EXISTING WELL TO CLASS V

☐ OTHER (SPECIFY):

2. IDENTIFY WELL USE

To acquire geotechnical information

3. IDENTIFY FUTURE WELL USE (i.e. Conversion to Class VI, monitor well, P&A, etc.)

Conversion to Class VI or monitoring well

4. OWNER/OPERATOR NAME	5. OC OPERATOR CODE
Aethon Energy Operating LLC	A1760

6. OWNER/OPERATOR MAILING ADDRESS	7. CITY, STATE, ZIP CODE
12377 Merit Dr; Ste. 1200	Dallas, TX 75251

8. TELEPHONE NO	9. E-MAIL ADDRESS
214-750-3820	regulatory@aethonenergy.com

10. WELL NAME	11. WELL NO	12. WELL SERIAL NO (Well Conversions Only)
Flowering Peach	1	

13. FIELD NAME	14. FIELD CODE
Wildcat - NO LA Shreveport District	9715

15. PARISH NAME	16. SECTION	17. TOWNSHIP	18. RANGE
Vernon	06	2N	8W

19. LOCATION COORDINATES (GCS, NAD 27)

LATITUDE:	31 °	10 MIN	30.07 SEC
LONGITUDE:	93 °	13 MIN	29.20 SEC

20. STATE PLANE COORDINATES (LAMBERT, NAD 27)

☑ NORTH ZONE ☐ SOUTH ZONE

X: 1773316.29 Y: 185672.80

21. LEGAL LOCATION DESCRIPTION (FROM LOCATION PLAT):

SW QUARTER (SW/4) OF THE SE QUARTER (SE/4) OF SECTION 6-T2N, R8W
268' FSL & 1930' FEL

OFFICE OF CONSERVATION

JUN 12 2024

INJECTION & MINING DIVISION

44608

22. LIST PERMITS, LICENSES, OR APPROVALS THE APPLICANT HAS RECEIVED OR APPLIED FOR WHICH SPECIFICALLY AFFECT THE APPLICANT'S LEGAL OR TECHNICAL ABILITY TO CARRY OUT THE PROPOSED ACTIVITY. INCLUDE IDENTIFICATION NUMBER OF APPLICATIONS OR, IF ISSUED, THE IDENTIFICATION NUMBER OF THE PERMIT, LICENSE, OR OTHER APPROVALS.

Regulatory Program or Agency	Permits, Licenses, Construction, Project Approval Identification

23. WELL CASING / CEMENT DATA

CASING SIZE (OD-INCHES)	HOLE DIAMETER (INCHES)	CASING WEIGHT (LB/FT)	CASING GRADE	CASING SETTING DEPTHS TOP	CASING SETTING DEPTHS BOTTOM	TOTAL SACKS	SACKS CEMENT (Lead/Tail)	TYPE (Lead/Tail)	YIELD (CU FT/SACK) (Lead/Tail)	CEMENT TOP
20	20	106.5	X-42	0	80'	0	0	DRIVEN	0	DRIVEN
10.75	13.5	40.5	J-55	0	3200'	1419	1130/289	35:65 POZ A/CLASS A	1.79/1.26	SURFACE

ALL WELL DEPTHS SHOULD BE GIVEN IN MD

24. BASE OF USDW (FT):	25. REFERENCE E-LOG FOR USDW (SERIAL NUMBER):
2430	130795

26. WELL TOTAL DEPTH (FT):	27. PLUGBACK DEPTH (FT):	28. TUBING SIZE & DEPTH:	29. PACKER SIZE & DEPTH:
9510			

INJECTIVITY TEST INFORMATION (IF APPLICABLE)

30. INJECTION ZONE DEPTHS		31. COMPLETION/PERFORATION DEPTHS	
Top:	Bottom:	Top:	Bottom:

32. REFERENCE E-LOG FOR INJECTION ZONE INFO (SERIAL NUMBER):

33. WELL COMPLETION ☑ OPEN HOLE ☐ PERFORATIONS ☐ SCREEN

34. TEST MATERIAL (e.g. nitrogen, brine, etc):	35. MAXIMUM TEST PRESSURE (psi):	36. TOTAL INJECTION VOLUME (bbls):
CO_2 is prohibited as a Class V test material		

37. Is the Well Located on Indian Lands or Other Lands Owned by or under the Jurisdiction or Protection of the Federal Government?	☐ YES ☑ NO
38. Is the Well Located on State Water Bottoms or Other Lands Owned by or under the Jurisdiction or Protection of the State of Louisiana?	☐ YES ☑ NO
39. If the proposed well is associated with a potential Class VI geologic sequestration project, does the applicant own the mineral rights at the proposed well locations?	☐ YES ☑ NO
40. If no, has written notification been provided to the mineral owner(s)?	☑ YES ☐ NO

OFFICE OF CONSERVATION

JUN 12 2024

INJECTION & MINING DIVISION

44668

41. AGENT OR CONTACT AUTHORIZED TO ACT ON BEHALF OF THE APPLICANT DURING THE PROCESSING OF THIS APPLICATION

NAME: JULIAN FISHER

COMPANY: AETHON ENERGY OPERATING LLC

MAILING ADDRESS: 12377 MERIT DR; STE. 1200; DALLAS, TX 75251

TELEPHONE NUMBER: 214-750-3820

E-MAIL ADDRESS: regulatory@aethonenergy.com

42. CERTIFICATION BY WELL OWNER/OPERATOR

I certify that as the owner/operator of the injection well, the person identified in Item No. 37 above is authorized to act on my behalf during the processing of this application, to submit additional information as requested, and to give oral statements in support of this application. I will grant an authorized agent of the Office of Conservation entry onto the property to inspect the injection well and related appurtenances as per LSA-R.S. 30:4. I agree to operate the well in accordance with Office of Conservation guidelines. I further certify under penalty of law that I have 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 possibility of fine or imprisonment or both (LSA-R.S. 30:17).

Print Name of Well Owner/Operator	Print Title of Company Official (as applicable)
AETHON ENERGY OPERATING LLC	CHIEF HSE OFFICER

Signature of Well Owner/Operator	Date
	06/06/2024

OFFICE OF CONSERVATION

JUN 12 2024

INJECTION & MINING DIVISION

44668

CLASS V STRAT TEST WELL PERMIT APPLICATION

OFFICE OF CONSERVATION
INJECTION & MINING DIVISION
617 N. Third St., 9th FLOOR
BATON ROUGE, LA 70802

Injection-Mining@la.gov
(225) 342-5515

UIC-25 STRAT TEST **PLEASE READ APPLICATION INSTRUCTIONS** **TYPE ONLY**

1. APPLICATION TYPE: (Check One)

☑ DRILL AND COMPLETE NEW CLASS V WELL ☐ CONVERT AN EXISTING WELL TO CLASS V

☐ OTHER (SPECIFY):

2. IDENTIFY WELL USE

To acquire geotechnical information

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Conversion to Class VI or monitoring well

4. OWNER/OPERATOR NAME	5. OC OPERATOR CODE
Aethon Energy Operating LLC	A1760

6. OWNER/OPERATOR MAILING ADDRESS	7. CITY, STATE, ZIP CODE
12377 Merit Dr; Ste. 1200	Dallas, TX 75251

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214-750-3820	regulatory@aethonenergy.com

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Flowering Peach	1	

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Vernon	06	2N	8W

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☑ NORTH ZONE ☐ SOUTH ZONE

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268' FSL & 1930' FEL

OFFICE OF CONSERVATION

JUN 12 2024

INJECTION & MINING DIVISION

44668

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Regulatory Program or Agency	Permits, Licenses, Construction, Project Approval Identification

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ALL WELL DEPTHS SHOULD BE GIVEN IN MD

24. BASE OF USDW (FT):	25. REFERENCE E-LOG FOR USDW (SERIAL NUMBER):		
2430	130795		
26. WELL TOTAL DEPTH (FT):	**27. PLUGBACK DEPTH (FT):**	**28. TUBING SIZE & DEPTH:**	**29. PACKER SIZE & DEPTH:**
9510			

INJECTIVITY TEST INFORMATION (IF APPLICABLE)

30. INJECTION ZONE DEPTHS		31. COMPLETION/PERFORATION DEPTHS	
Top:	Bottom:	Top:	Bottom:

32. REFERENCE E-LOG FOR INJECTION ZONE INFO (SERIAL NUMBER):

33. WELL COMPLETION ☑ OPEN HOLE ☐ PERFORATIONS ☐ SCREEN

34. TEST MATERIAL (e.g. nitrogen, brine, etc):	35. MAXIMUM TEST PRESSURE (psi):	36. TOTAL INJECTION VOLUME (bbls):
CO_2 is prohibited as a Class V test material		

37. Is the Well Located on Indian Lands or Other Lands Owned by or under the Jurisdiction or Protection of the Federal Government?	☐ YES ☑ NO
38. Is the Well Located on State Water Bottoms or Other Lands Owned by or under the Jurisdiction or Protection of the State of Louisiana?	☐ YES ☑ NO
39. If the proposed well is associated with a potential Class VI geologic sequestration project, does the applicant own the mineral rights at the proposed well locations?	☐ YES ☑ NO
40. If no, has written notification been provided to the mineral owner(s)?	☑ YES ☐ NO

OFFICE OF CONSERVATION

JUN 12 2024

INJECTION & MINING DIVISION

44668

41. AGENT OR CONTACT AUTHORIZED TO ACT ON BEHALF OF THE APPLICANT DURING THE PROCESSING OF THIS APPLICATION

NAME: JULIAN FISHER

COMPANY: AETHON ENERGY OPERATING LLC

MAILING ADDRESS: 12377 MERIT DR; STE. 1200; DALLAS, TX 75251

TELEPHONE NUMBER: 214-750-3820

E-MAIL ADDRESS: regulatory@aethonenergy.com

42. CERTIFICATION BY WELL OWNER/OPERATOR

I certify that as the owner/operator of the injection well, the person identified in Item No. 37 above is authorized to act on my behalf during the processing of this application, to submit additional information as requested, and to give oral statements in support of this application. I will grant an authorized agent of the Office of Conservation entry onto the property to inspect the injection well and related appurtenances as per LSA-R.S. 30:4. I agree to operate the well in accordance with Office of Conservation guidelines. I further certify under penalty of law that I have 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 possibility of fine or imprisonment or both (LSA-R.S. 30:17).

Print Name of Well Owner/Operator	Print Title of Company Official (as applicable)
AETHON ENERGY OPERATING LLC	CHIEF HSE OFFICER

Signature of Well Owner/Operator	Date
	06/06/2024

OFFICE OF CONSERVATION

JUN 12 2024

INJECTION & MINING DIVISION

JOHN BEL EDWARDS
GOVERNOR

State of Louisiana

DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION

THOMAS F. HARRIS
SECRETARY

MONIQUE M. EDWARDS
COMMISSIONER OF CONSERVATION

November 9,2023

JASON MOXLEY
AETHON ENERGY OPERATING LLC (A1760)
12377 MERIT DR., SUITE 1200
DALLAS ,TX 75251-0000

RE: INITIAL APPLICATION REVIEW
FLOWERING PEACH
Well No 001
Field WILDCAT-NO LA SHREVEPORT DIST
Parish VERNON

Application No. 44668
SN

API #
CLASS V-NEW

Gentleman:

Your Application concerning the above referenced well has been received by this Office. This is your receipt for that Application and a processing fee of 252 dollars charged in accordance with the provisions of Section 21 of Chapter 1 as enacted by Act No. 66 of 1959.

This receipt DOES NOT constitute approval of your Application; therefore no work should begin on this until a notice of Permit approval has been received.

Please refer to the Application number indicated above in any further communications with this Office concerning your Application.

Approved By: Gloria Roscoe

044668

AETHON

November 7, 2023

Office of Conservation
Injection and Minding Division
LaSalle Building
617 North Third Street, Suite 817
Baton Rouge, LA 70802-5428

Re: Class V Injection Well Permit – Flowering Peach No. 1

Dear Mr. Lee,

Attached for your review is the completed UIC-25 application for the drilling and completion of Aethon Energy Operating LLC's stratigraphic test well, the Flowering Peach No. 1, located in Vernon Parish. If you have any questions regarding this submission, please contact me at jmoxley@aethonenergy.com or 214-890-3654.

Sincerely,

Aethon Energy Operating, LLC
Jason Moxley
Director, HSE

OFFICE OF CONSERVATION

NOV 09 2023

INJECTION & MINING DIVISION

044668

Table of Contents

044668

A. APPLICATION FEE

Submit the non-refundable application fee for each well per LAC 43:XIX.Chapter 7

An invoice will be issued by LDNR for the application fee.

Company Name: Aethon Energy Operating, LLC
Address: 12377 Merit Dr. Suite 1200
City, State, Zip: Dallas, TX. 75251
Phone: 214-750-3820

B. ATTACHMENTS

B.1 ONE FORM UIC-25 WITH ORIGINAL SIGNATURE

Form UIC-25 will be uploaded to SONRIS as part of the permit application. The "original" signature page will be mailed as a separate document to LDNR.

Office of Conservation Injection & Mining Division
617 North Third Street
Baton Rouge, LA 70802-5428

FORM UIC-25 STRAT TEST

CLASS-V WELL PERMIT APPLICATION

1. APPLICATION TYPE: (Check One)

- ☑ DRILL AND COMPLETE NEW CLASS-V WELL
- ☐ CONVERT AN EXISTING WELL TO CLASS-V
- ☐ OTHER (SPECIFY):

LOUISIANA DEPARTMENT OF NATURAL RESOURCES - OFFICE OF CONSERVATION

INJECTION & MINING DIVISION
Injection-Mining@la.gov
(225) 342-5515

2. IDENTIFY WELL USE

To acquire geotechnical information

3. IDENTIFY FUTURE WELL USE (i.e. Conversion to Class VI, monitor well, P&A, etc.)

Conversion to Class VI or monitoring well

4. OWNER/OPERATOR NAME	5. OOC OPERATOR CODE
Aethon Energy Operating LLC	A1760

6. OWNER/OPERATOR MAILING ADDRESS	7. CITY, STATE, ZIP CODE
12377 Merit Dr. Suite 1200	Dallas, TX, 75251

8. TELEPHONE NO.	9. E-MAIL ADDRESS
214-750-3820	regulatory@aethonenergy.com

10. WELL NAME	11. WELL NO.	12. WELL SERIAL NO. (Well Conversions Only)
Flowering Peach	1	

13. FIELD NAME	14. FIELD CODE
WILDCAT - NO LA SHREVEPORT DIST	9715

15. PARISH NAME	16. SECTION	17. TOWNSHIP	18. RANGE
Vernon	06	2N	8W

19. LOUISIANA COORDINATE ZONE (Check One)

☑ NORTH ZONE ☐ SOUTH ZONE

For Item Numbers 20 Through 25, Give Coordinates in Louisiana Coordinate System 1927 and 1983

20. LATITUDE (NORTH) NAD 1927	21. LONGITUDE (WEST) NAD 1927	22. LOUISIANA LAMBERT (X-Y) COORDINATES (NAD 1927)
N31° 10 ' 30.07"	W93° 13' 29.20"	X: 1773316.29 Y: 185672.80

23. LATITUDE (NORTH) NAD 1983	24. LONGITUDE (WEST) NAD 1983	25. LOUISIANA LAMBERT (X-Y) COORDINATES (NAD 1983)
N31° 10' 30.74"	W93° 13' 29.79"	X: 3054103.50 Y: 246378.03

26. LIST PERMITS, LICENSES, OR APPROVALS THE APPLICANT HAS RECEIVED OR APPLIED FOR WHICH SPECIFICALLY AFFECT THE APPLICANT'S LEGAL OR TECHNICAL ABILITY TO CARRY OUT THE PROPOSED ACTIVITY. INCLUDE IDENTIFICATION NUMBER OF APPLICATIONS OR, IF ISSUED, THE IDENTIFICATION NUMBER OF THE PERMIT, LICENSE, OR OTHER APPROVALS.

Regulatory Program or Agency	Permits, Licenses, Construction, Project Approval Identification

OFFICE OF CONSERVATION

FEB 08 2024

INJECTION & MINING DIVISION

27. WELL CASING / CEMENT DATA

CASING SIZE (OD-INCHES)	HOLE DIAMETER (INCHES)	CASING WEIGHT (LB/FT)	CASING GRADE	CASING SETTING DEPTHS TOP	CASING SETTING DEPTHS BOTTOM	TOTAL SACKS	SACKS CEMENT (Lead/Tail)	TYPE (Lead/Tail)	YIELD (CU FT/SACK) (Lead/Tail)	CEMENT TOP
20	20	106.5	X-42	0	95'	0	0	Driven	0	Driven
10.75	13.5	40.5	J-55	0	3,200'	1,419	1,130/289	35:65 Poz:A/Class A	1.79/1.26	Surface

28. BASE OF USDW	29. WELL TOTAL DEPTH	30. PLUGBACK DEPTH	31. TUBING SIZE & DEPTH	32. PACKER SIZE & DEPTH
2,430'	9,510'			

33. INJECTION ZONE DEPTHS (if applicable)
Top: Bottom:

34. COMPLETION/PERFORATION DEPTHS (if applicable)
Top: Bottom:

35. WELL COMPLETION (Check One)
■ OPEN HOLE ☐ PERFORATIONS
☐ SCREEN

INJECTIVITY TEST INFORMATION (if applicable)

36. TEST MATERIAL (e.g. nitrogen, brine, etc):
******CO2 is prohibited as a Class V test material******

37. MAXIMUM TEST PRESSURE (psi):

38. TOTAL INJECTION VOLUME (barrels):

39. Is the Well Located on Indian Lands or Other Lands Owned by or under the Jurisdiction or Protection of the Federal Government? ☐ YES ☑ NO

40. Is the Well Located on State Water Bottoms or Other Lands Owned by or under the Jurisdiction or Protection of the State of Louisiana? ☐ YES ☑ NO

41. AGENT OR CONTACT AUTHORIZED TO ACT ON BEHALF OF THE APPLICANT DURING THE PROCESSING OF THIS APPLICATION

NAME: Aethon Energy Operating LLC
MAILING ADDRESS: 12377 Merit Dr. Suite 1200
CITY, STATE, ZIP CODE: Dallas, TX, 75251
TELEPHONE NUMBER: 214-750-3820 FAX NUMBER:
E-MAIL ADDRESS: regulatory@aethonenergy.com

OFFICE OF CONSERVATION
FEB 08 2024
INJECTION & MINING DIVISION

42. CERTIFICATION BY WELL OWNER/OPERATOR

I certify that as the owner/operator of the injection well, the person identified in Item No. 40 above is authorized to act on my behalf during the processing of this application, to submit additional information as requested, and to give oral statements in support of this application. I will grant an authorized agent of the Office of Conservation entry onto the property to inspect the injection well and related appurtenances as per LSA-R.S. 30:4. I agree to operate the well in accordance with Office of Conservation guidelines. I further certify under penalty of law that I have 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 possibility of fine or imprisonment or both (LSA-R.S. 30:17).

Print Name of Well Owner/Operator	Print Title of Company Official (as applicable)
Aethon Energy Operating LLC	Chief HSE Officer

Signature of Well Owner/Operator	Date
	1/30/24

044668

I. **SUBMIT THE FOLLOWING AS A COMPLETE APPLICATION PACKAGE FOR A CLASS-V WELL:**

A. Application Fee: Submit the non-refundable application fee for each well per LAC 43:XIX.Chapter 7.

B. Include the following as applicable:

1. One Form UIC-25 STRAT TEST with original signature;
   a. Should there be no existing field designation, please use the following dependent upon which Office of Conservation district the well is to be located in (click here to see the district outlines):
      - WILDCAT-SO LA LAFAYETTE DIST (9727)
      - WILDACT-NO LA SHREVEPORT DIST (9715)
      - WILDCAT-NO LA MONROE DIST (9709)
2. Two original Form MD-10-R-A for each existing well to be converted (if conversion is proposed);
3. One original Certified Location Plat showing the location of each Class-V well location;
   a. Please be sure to comply with the requirements of the IMD-GS-10 Policy
4. Injection test fluid analysis (if injection is proposed);
5. An annotated copy of an electric well log of the nearest offset well that shows the Underground Source of Drinking Water (USDW);
6. An annotated copy of an electric well log of the nearest offset well that shows the proposed injection zone (if injection is proposed);
7. Work prognosis for drilling, completing, and testing the well;
8. Schematic(s) of the Class-V well showing:
   a. Casing diameter, specifications, material (PVC, steel, etc.), and depth,
   b. Screen type, length, material, slot or opening size,
   c. Injection tubing size inside casing (if any),
   d. Hole diameter (bit size),
   e. Amount and type of cement used and depths to top and bottom of cement,
   f. Wellhead showing all fittings,
   g. Discharge line diameter and connection to wellhead,
   h. Well house (if any).
   Schematics should be stamped and signed by a Louisiana-registered Professional Engineer (PE) as appropriate
9. Financial surety will be required for Class V per LAC.XIX.104.C.5. Bonding costs will be the estimated cost for the actual plugging and abandonment (P&A) of the well.
   a. Please provide a P&A procedure, schematic, and 3rd party cost estimate.
      ** The acceptance of the P&A procedure will not constitute approval to P&A the well to those standards and will strictly be used to verify the 3rd party estimate**

OFFICE OF CONSERVATION

NOV 09 2023

INJECTION & MINING DIVISION

II. **REQUIREMENTS OF A PERMIT APPLICATION FOR CLASS-V INJECTION WELL:**

A. Operating a Class-V well without a permit is a violation of Statewide Order No. 29-N-1 (LAC 43:XVII, Subpart 1) and may subject the well owner to enforcement action including fines as provided by La. R.S. 30. No fines will be imposed on the owner of an existing unpermitted injection well provided the owner submits an application for a permit. However, repairing, stimulating, plugging or performing other work on a Class-V well without a work permit (Form UIC-17) may subject the well owner to a fine.

B. After completing the Class-V well, a permanent, weather-proof sign not less than 1 foot by 2-foot in size must be erected within ten feet of the well, which, at a minimum shows the Well Name and Office of Conservation issued Well Serial Number. If the Class-V well is enclosed within a well house, the sign may be inside the well house, if it is prominently visible upon entering.
After completing the Class-V well, complete and submit the Form UIC-42 STRAT TEST.

C. When abandoning, the well must be plugged in accordance with Office of Conservation guidelines in effect at the time of abandonment.

The Injection & Mining Division can be reached by telephone at 225-342-5515 or email Injection-Mining@la.gov.

Please submit the completed application form with all required attachments to:

Mailing Address

Office of Conservation Injection & Mining Division
617 North Third Street
Baton Rouge, LA 70802-5428

Street Delivery Address

Office of Conservation
Injection & Mining Division
LaSalle Building
617 North Third Street, Suite 817
Baton Rouge, LA 70802-5428

044668

Louisiana Department of Natural Resources
Class V – Stratigraphic Test Well Permit Application
Flowering Peach 1

Aethon Energy Operating, LLC
Vernon Parish, Louisiana

B.2 TWO ORIGINAL FORM MD-10-R-A FOR EACH EXISTING WELL TO BE CONVERTED (IF CONVERSION IS PROPOSED)

Not applicable as this is a permit application for a new well.

B.3 ONE ORIGINAL CERTIFIED LOCATION PLAT SHOWING THE LOCATION OF EACH CLASS-V WELL LOCATION

A Certified location plat showing the location of the proposed Class V Well location will be provided in compliance with the IMD-GS-10 Policy.

044668

- BEARINGS, DISTANCES AND COORDINATES SHOWN HEREON ARE AT THE MINIMUM COLLECTED WITH SUBMETER ACCURACY BASED ON THE LOUISIANA STATE PLANE COORDINATE SYSTEM, N.A.D. 83 DATUM (NORTH ZONE) – NAVD–88
- OWNERSHIP INFORMATION PROVIDED BY OTHERS.
- LEASE LINES SHOWN ARE DRAWN FROM RECORD INFORMATION PROVIDED BY OTHERS.
- THIS PLAT IS NOT A PROPERTY BOUNDARY SURVEY AND AS SUCH DOES NOT COMPLY WITH THE "MINIMUM STANDARDS FOR PROPERTY BOUNDARY SURVEYS" AS ADOPTED BY THE LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD.
- DATA WAS COLLECTED USING GNSS/RTK WITH CORS CORRECTIONS
- THIS WELL IS NOT SUBJECT TO THE PROVISIONS OF ORDER U–HS.

OFFICE OF CONSERVATION

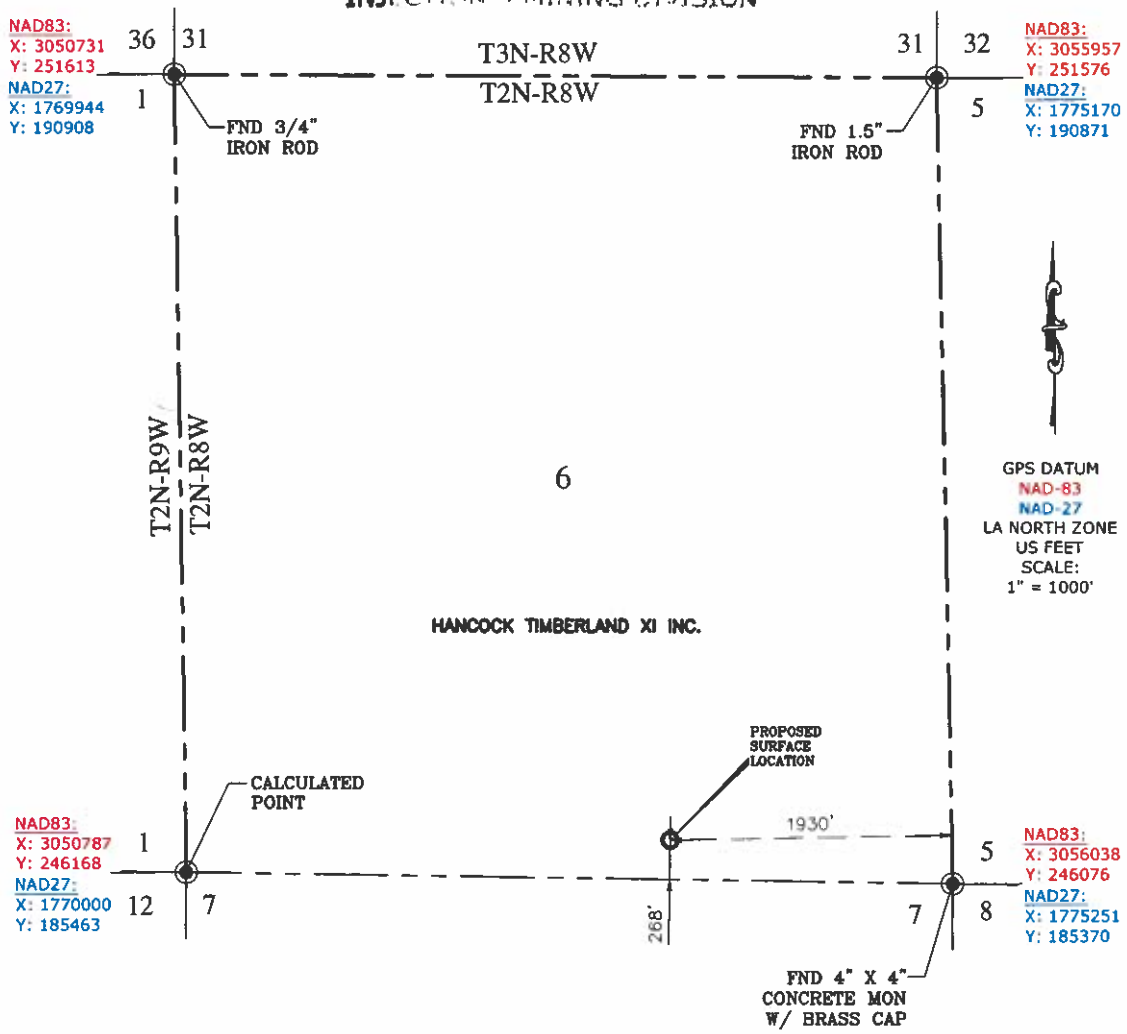
PSLS

Prepared By:
Petro Land Services South
210 Kansas City Ave.
Shreveport, LA 71107

JAN 22 2024

500' 0 250' 500' 1,000'
1 inch = 1,000 ft.

INSPECTION & MINING DIVISION



WELL LOCATION PLAT

AETHON ENERGY OPERATING LLC

FLOWERING PEACH NO. 1
VERNON PARISH, LOUISIANA
SCALE: 1" = 1,000'

LEGAL DESCRIPTION:
A WELL IN THE SOUTHWEST QUARTER (SW/4) OF THE SOUTHEAST QUARTER (SE/4) OF SECTION 6 TOWNSHIP 2 NORTH RANGE 8 WEST LOUISIANA MERIDIAN WITH A BASELINE OF 31° NORTH LATITUDE. THIS DESCRIPTION IS BASED ON THE SURVEY AND PLAT MADE BY ADAM MAYWHORT, PROFESSIONAL LAND SURVEYOR, DATED 12/19/23.

I, ADAM MAYWHORT, PROFESSIONAL LAND SURVEYOR, CERTIFY THAT THE WELL LOCATION DEPICTED AND DESCRIBED IN THIS PLAT WAS LOCATED AND SURVEYED IN THE FIELD BY ME OR UNDER MY DIRECTION WITH ACCURACY AND PRECISION TO THE NEAREST FOOT. I HAVE PROPERLY EXAMINED THIS PLAT AND HAVE DETERMINED THAT IT COMPLIES WITH EXISTING LOCAL LOUISIANA CODES AND HAS BEEN PROPERLY SITE ADAPTED TO USE IN THIS AREA. THE SURVEY AND PLAT HAVE BEEN DETERMINED THAT IT MEETS THE MINIMUM STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF LOUISIANA.

STATE OF LOUISIANA
ADAM MAYWHORT
LIC. No. 5193
LICENSED PROFESSIONAL
LAND SURVEYOR

12-19-2023

PROFESSIONAL LAND SURVEYOR
NO. 5193 – STATE OF LOUISIANA

PROPOSED SURFACE LOCATION
STATE PLANE COORDINATE – NORTH ZONE:
NAD–83 X: 3054103.50 Y: 246378.03
NAD–27 X: 1773316.29 Y: 185672.80
GEOGRAPHIC NAD–83: LAT: N31°10'30.74" LON: W93°13'29.79"
GEOGRAPHIC NAD–27: LAT: N31°10'30.07" LON: W93°13'29.20"
NAT. GROUND ELEV. 303'
CALLS: 268' FSL, 1930' FEL OF 6–2N–8W

FIELD SURVEY: 11/28/23 | FLOWERING PEACH NO. 1 | REV–0 12/19/23

B.4 INJECTION TEST FLUID ANALYSIS (IF INJECTION IS PROPOSED)

Not applicable as this permit application does not propose injection into the well.

B.5 AN ANNOTATED COPY OF AN ELECTRIC WELL LOG OF THE NEAREST OFFSET WELL THAT SHOWS THE UNDERGROUND SOURCE OF DRINKING WATER (USDW)

044668

OFFICE OF CONSERVATION

JAN 02 2024

INJECTION & MINING DIVISION

SCHLUMBERGER INDUCTION - ELECTRICAL

COUNTY VERNON
FIELD or LOCATION WILDCAT-LEESVILLE
WELL MARTIN DEV. CO NO. 1
COMPANY J. F. LENT ET-AL

COMPANY J. F. LENT ET AL
Serial #130785 Ser. # 130795
WELL MARTIN DEVELOPMENT COMPANY NO.
FIELD WILDCAT - LEESVILLE
COUNTY VERNON STATE LOUISIA

LOCATION 660'N, 660'E of SW Cor.
Sec. 13 Twp. 2N Rge. 8W

Other Servi
ST

Permanent Datum: BHF, Elev.
Log Measured From KB 11.7 Ft. Above Perm. Datum
Drilling Measured From SAME

Elev.: K.B.
D.F.
G.L.

Date	11-26-69	11-28-69	
Run No.	ONE	TWO	
Depth—Driller	6061	7000	
Depth—Logger	6065	7012	
Btm. Log Interval	6064	7011	
Top Log Interval	759	6064	
Casing—Driller	758	758	
Casing—Logger	759	759	
Bit Size	9 7/8"@7 7/8") 7 7/8"		
Type Fluid in Hole	GEL CAUSTIC	GEL CAUSTIC	
Dens. / Visc.	9.7 / 38	9.7 / 41	
pH / Fluid Loss	9.0 / 10.4ml	9.0 / 12.8ml	ml
Source of Sample	PIT	PIT	
R_m @ Meas. Temp.	3.10 @ 87°F	3.50 @ 73°F	@ °F
R_{mf} @ Meas. Temp.	3.00 @ 87°F	2.50 @ 73°F	@ °F
R_{mc} @ Meas. Temp.	2.50 @ 87°F	3.50 @ 73°F	@ °F
Source: R_{mf} R_{mc}	C / C	M / C	
R_m @ BHT	1.88 @ 140°F	1.70 @ 145°F	@ °F
Time Since Circ.	6 HRS.	6 HRS.	
Max. Rec. Temp.	140 °F	145 °F	°F
Equip. / Location	4533 / LCT	5636 / LCT	
Recorded By	DUNBAR-LONERGAN	ALCOCK-HUNTER	
Witnessed By	MR. SCOGIN	MR. SCOGIN	

SURVEY 6961 to 30 RECEIVED @

FOLD HERE AD/PH The well name, location and borehole reference data were furnished by the customer.

REMARKS S O 25963

Changes in Mud Type or Additional Samples				
Date / Sample No.				
Depth—Driller				
Type Fluid in Hole				
Dens. / Visc.				
ph / Fluid Loss		ml		
Source of Sample				
R_m @ Meas. Temp.	@ °F		@ °F	
R_{mf} @ Meas. Temp.	@ °F		@ °F	
R_{mc} @ Meas. Temp.	@ °F		@ °F	
Source: R_{mf} / R_{mc}				
R_m @ BHT	@ °F		@ °F	
R_{mf} @ BHT	@ °F		@ °F	
R_{mc} @ BHT	@ °F		@ °F	

Scale Changes			
Type Log	Depth	Scale Up Hole	Scale Down Hole

LSN529418000000130795

Equipment Data			
Run No.	Tool Type	Tool Position	Other

Run No.:	ONE	TWO
C.D.:	NOT USED	NO
S.O.:	0	0
Equip. PANEL No.:	M-494	524
Used: CART. No.:	F-426	226
SONDE No.:	M-527	13
IAP No.:	B-187	444
S.B.R.:	0.5	0.5

Marked log - USDW at 2,430 ft
25,645 ft away from proposed Class V well
SN 130795

Check one, filling in blanks where applicable:
- [X] Surface determined sonde errors used for 6FF40.
- [ ] 6FF40 sonde error corrected for ____ inch borehole signal at Rm =
- [ ] 6FF40 zero set in hole at depth of ____ feet.

SPONTANEOUS POTENTIAL millivolts	DEPTHS	RESISTIVITY ohms-m^2/m	CONDUCTIVITY millimhos/m = $\frac{1000}{\text{ohms-}m^2/m}$
– 20 +		A-16"-M SHORT NORMAL 0 10 / 0 100	6FF40 INDUCTION 4000 0 / 8000 1000
		INDUCTION 0 10	

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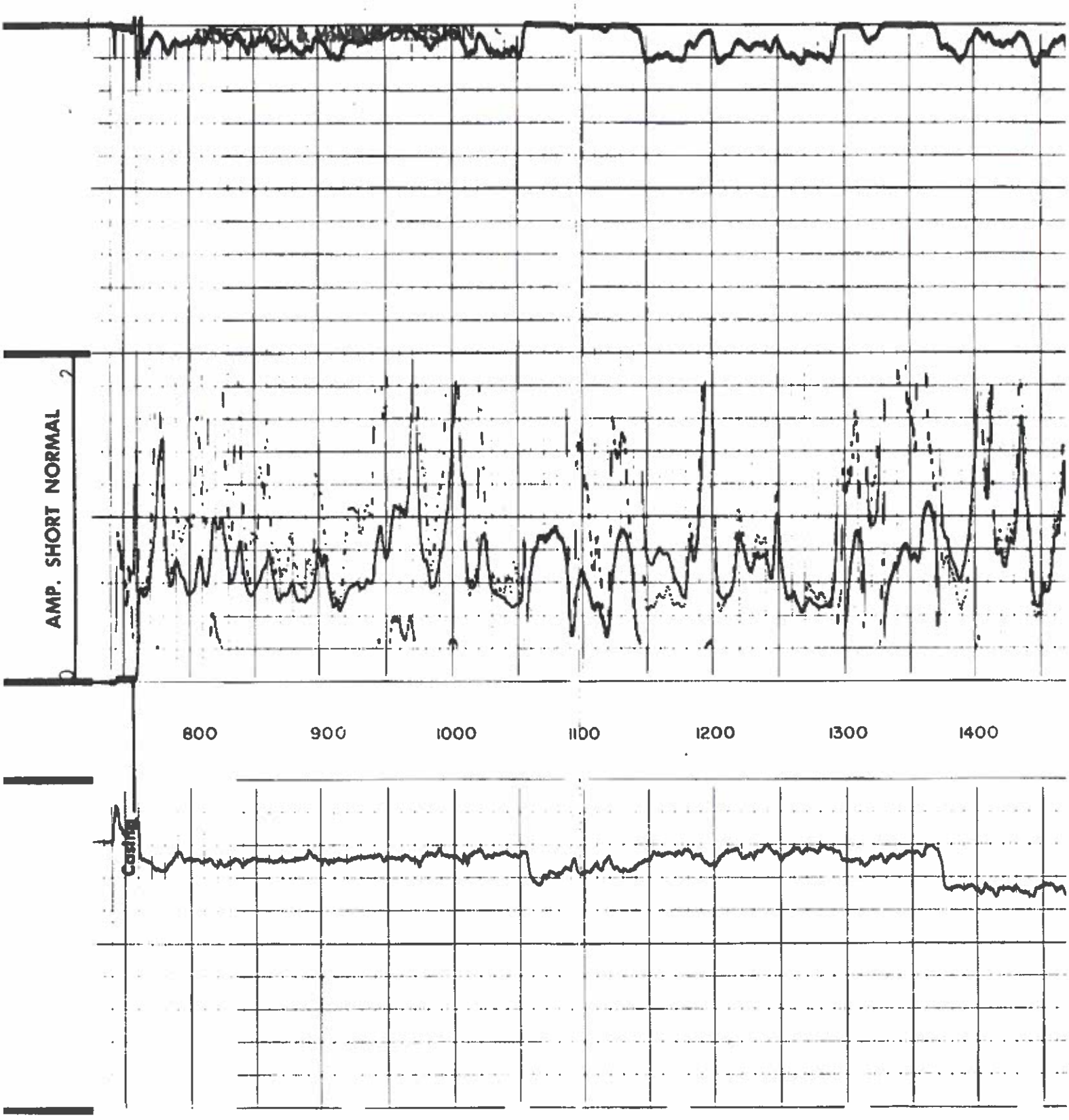
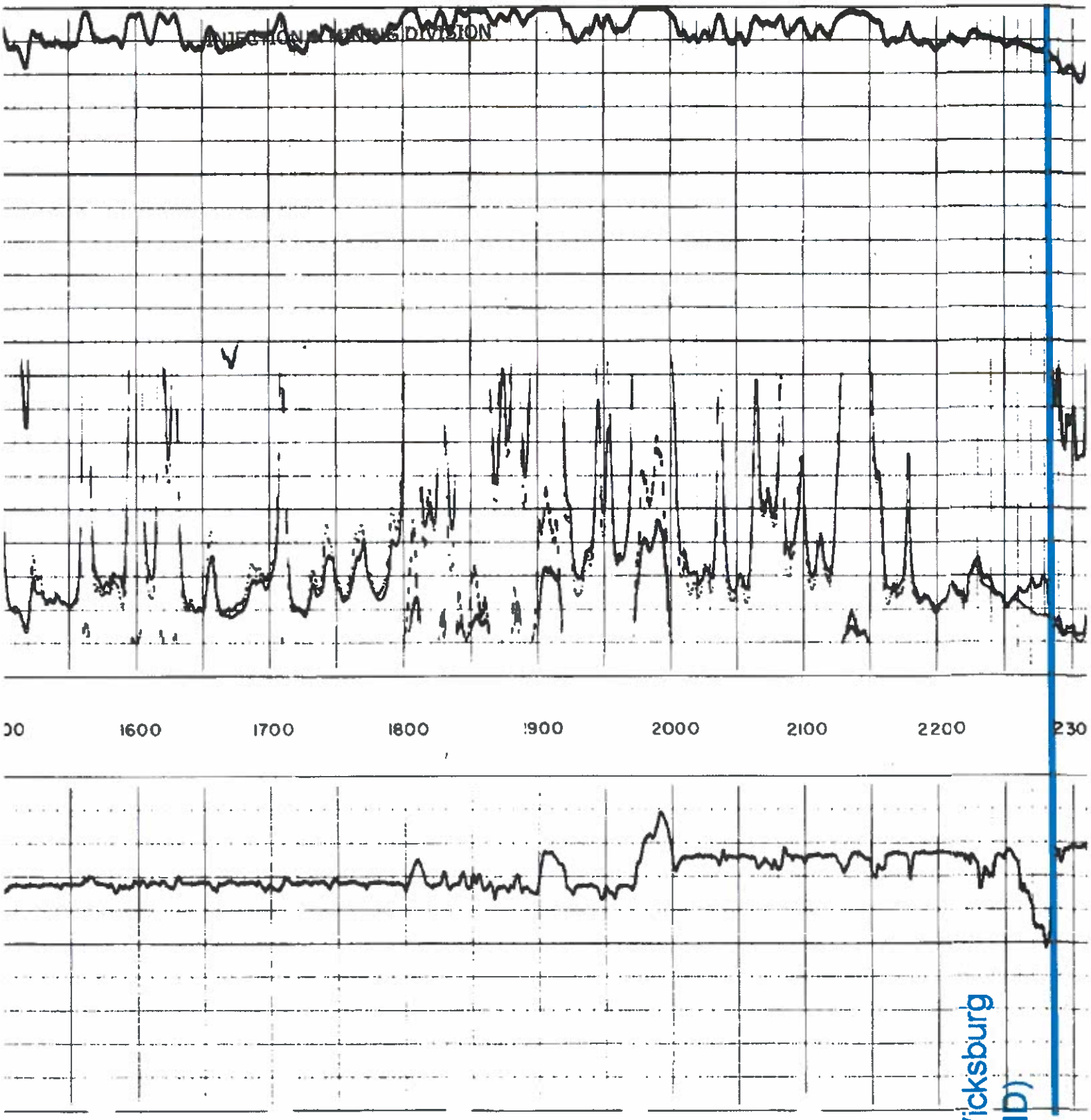
JAN 02 2004
OFFICE OF CONSERVATION
INJECTION & MINING DIVISION

04 46 68

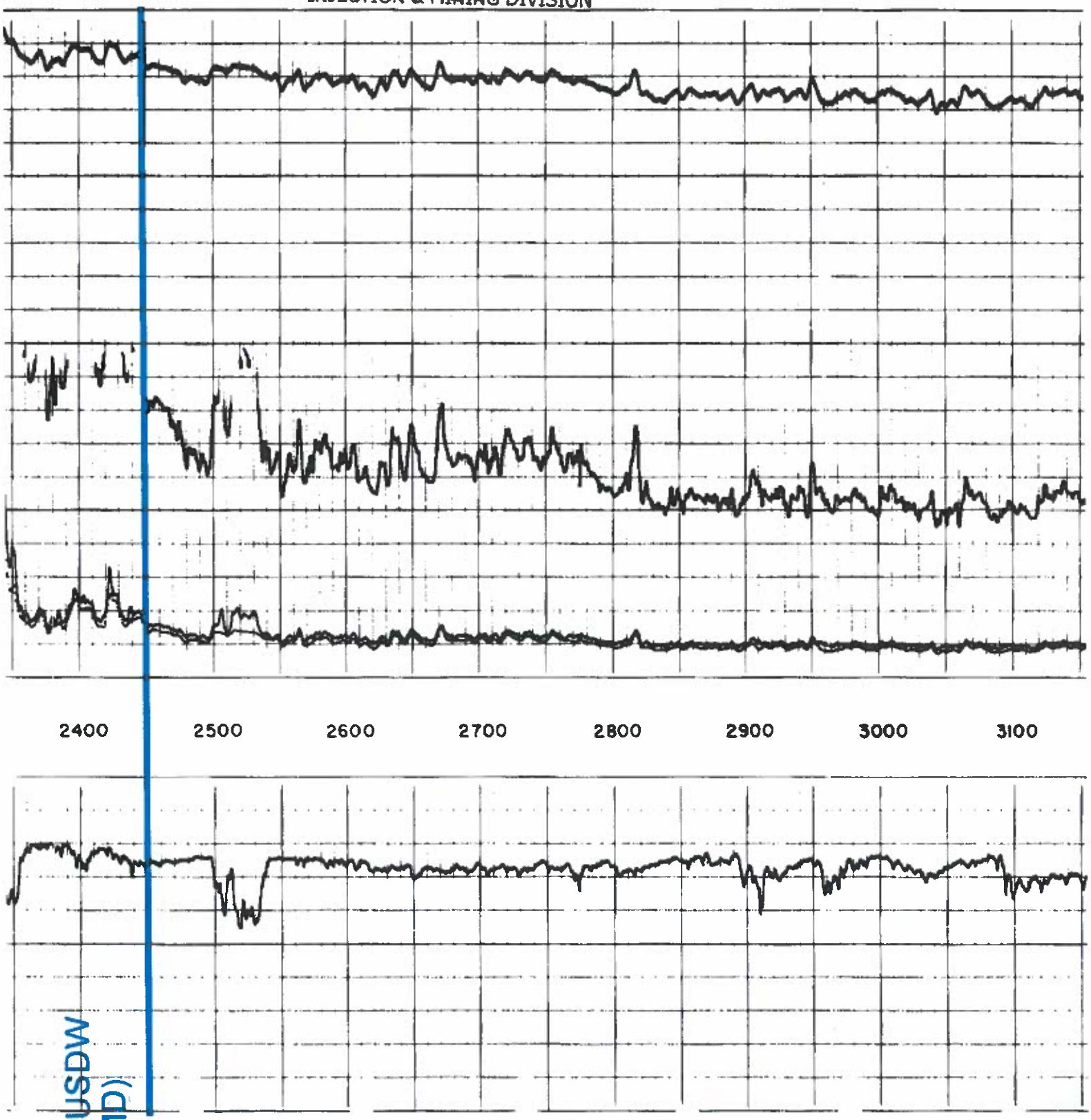


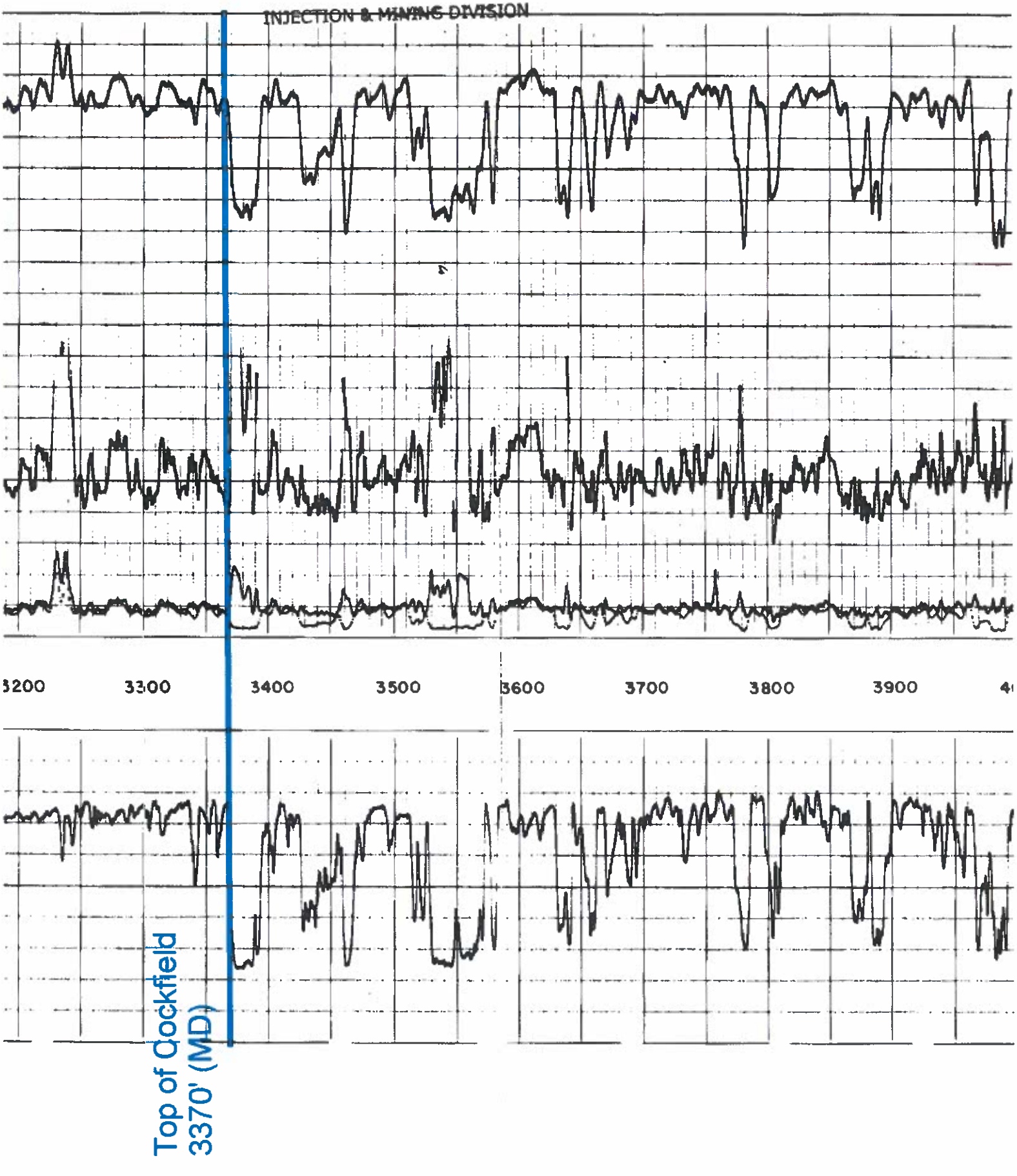


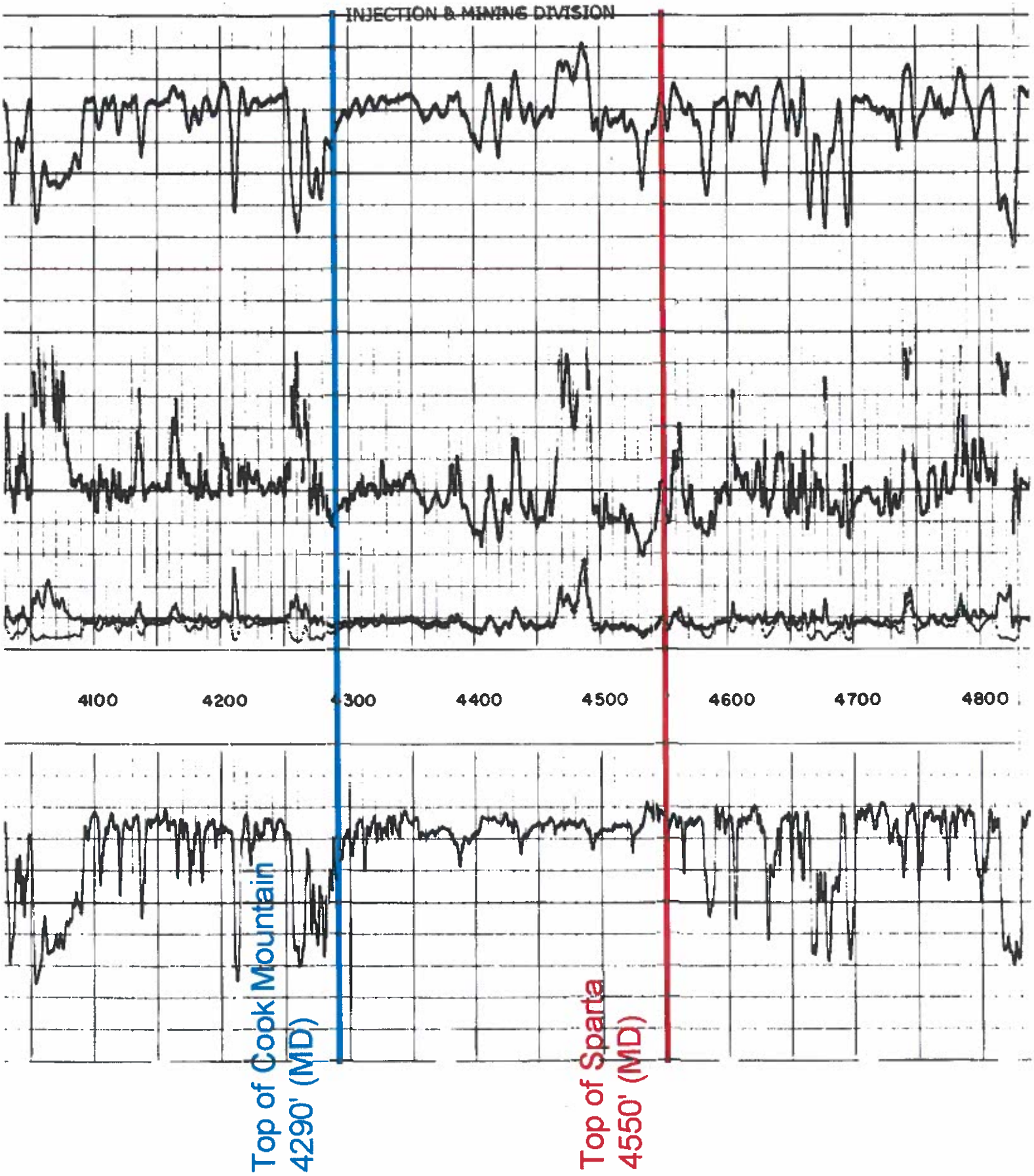
JAN 02 2024

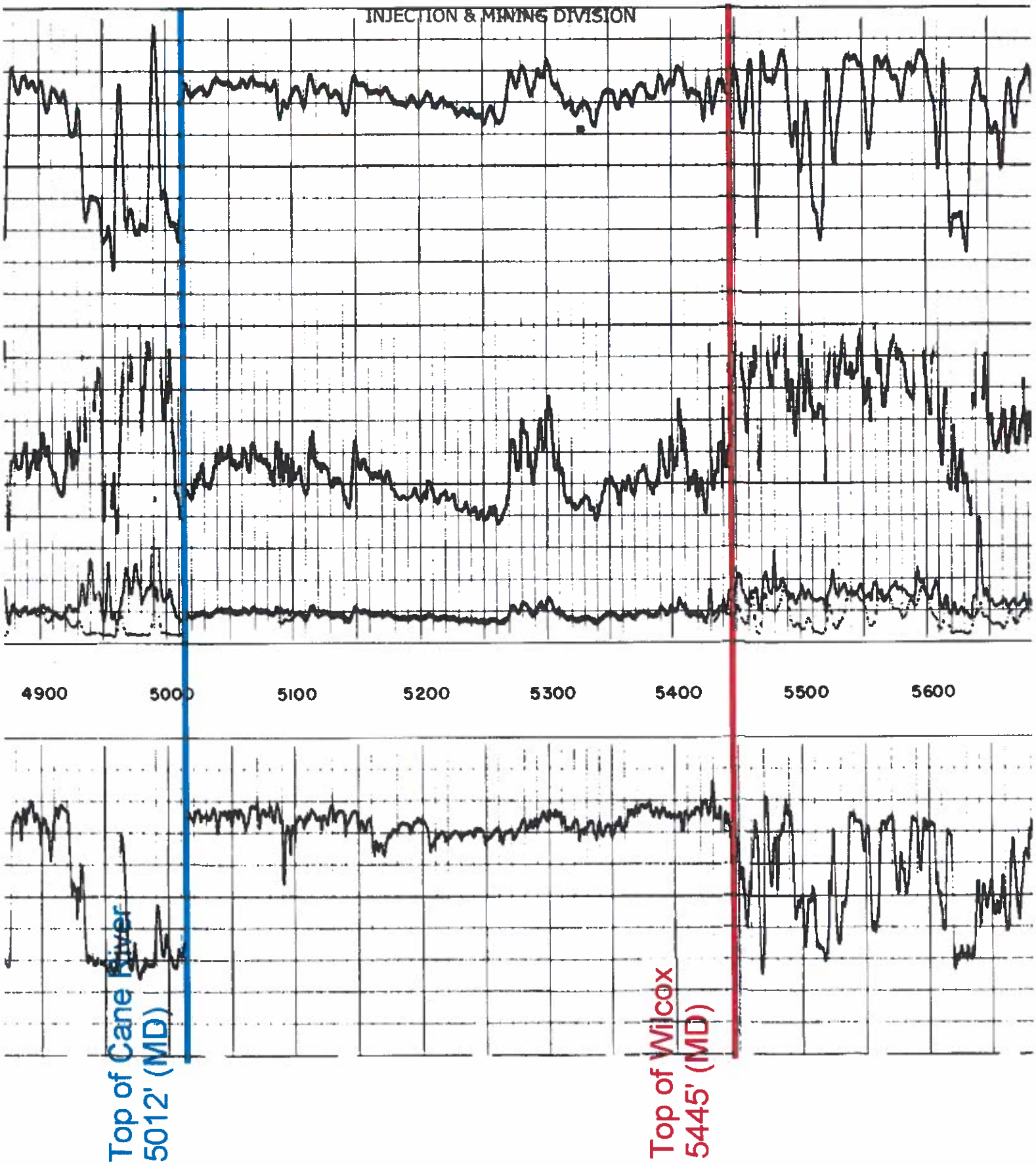
044668

INJECTION & MINING DIVISION

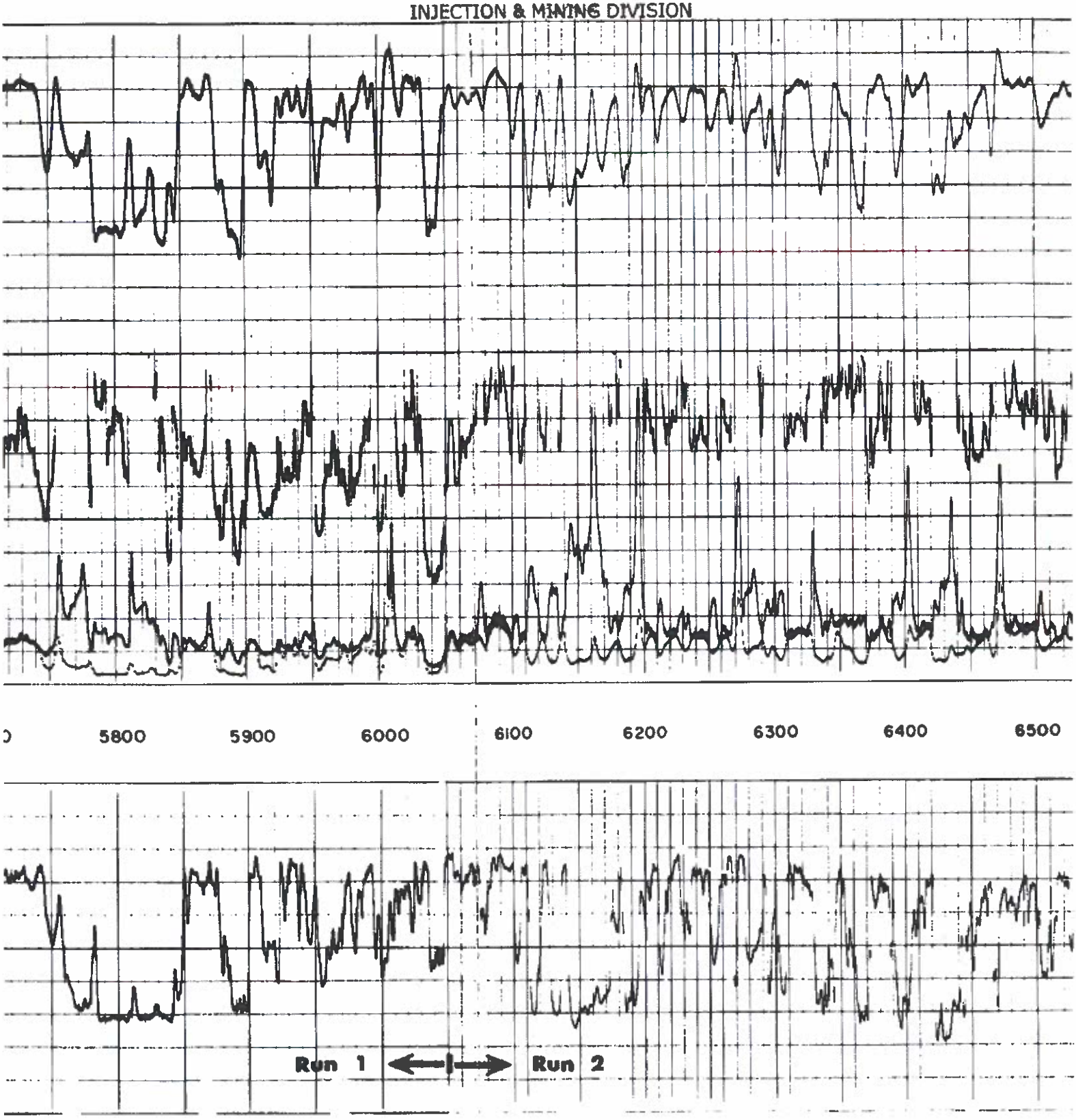


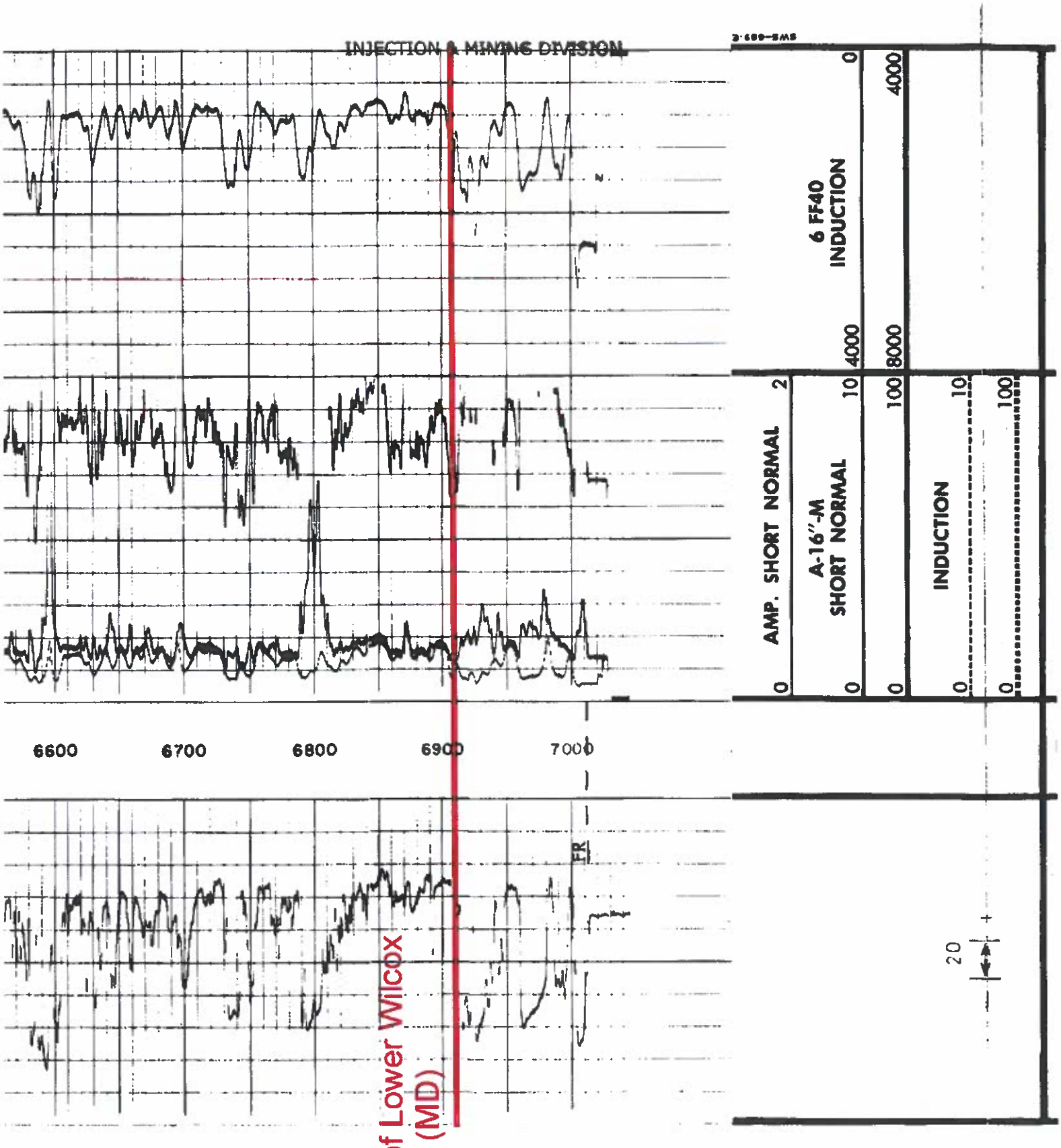






INJECTION & MINING DIVISION





millivolts		ohms - m²/m	millimhos/m = $\frac{1000}{\text{ohms - m}^2\text{/m}}$

COMPANY C. F. LENT ET AL

WELL MARTIN DEVELOPMENT COMPANY NO. 1

FIELD WILDCAT - LEESVILLE

COUNTY VERNON STATE LOUISIANA

SCHL. FR 7011
SCHL. TD 7012
DRLR TD 7000
Elev:
KB
DF
GL

DETAIL LOG

5" = 100'

SPONTANEOUS-POTENTIAL millivolts	DEPTHS	RESISTIVITY ohms - m²/m	CONDUCTIVITY millimhos/m = $\frac{1000}{\text{ohms - m}^2\text{/m}}$
— 20 +		A-16"-M SHORT NORMAL 0 — 10 0 — 100	6 FF40 INDUCTION 4000 — 0 8000 — 4000
		INDUCTION 0 — 10 0 — 100	

B.6 AN ANNOTATED COPY OF AN ELECTRIC WELL LOG OF THE NEAREST OFFSET WELL THAT SHOWS THE PROPOSED INJECTION ZONE (IF INJECTION ZONE IS PROPOSED)

044668

OFFICE OF CONSERVATION

JAN 02 2024

INJECTION & MINING DIVISION

SCHLUMBERGER INDUCTION-ELECTRICAL

COUNTY VERNON, LA.
FIELD or LOCATION WILDCAT SEC.23-3N-8W
WELL PICKERING LBR. COMPANY #2
COMPANY RAMROD PROD. CO., INC.

COMPANY RAMROD PROD. CO., INC.
WELL PICKERING LBR. CO. #2
FIELD WILDCAT
LOCATION SEC.23-3N-8W
COUNTY VERNON
STATE LOUISIANA

Other Surv
CST

Location of
C SE NW, SE
3N-8W

Serial # 9131
Permit # 759

Elevation: K.B.:
D.F.:
G.L.:

FILING No.

RUN No.	ONE			
Date	9-13-62			
First Reading	7988			
Last Reading	1020			
Feet Measured	6968			
Csg. Schlum.	1020			
Csg. Driller	1016			
Depth Reached	7989			
Bottom Driller	7995			
Depth Datum	KB OR 13.5' ABOVE BHF.			
Mud Nat.	GEL			
Dens. | Visc.	9.5 | 35			
Mud Resist.	2.7@ 91 °F	@ °F	@ °F	@ °F
" Res. BHT	1.3@ 181°F	@ °F	@ °F	@ °F
Rmf C	1.0@ 181°F	@ °F	@ °F	@ °F
Rmc C	1.1@ 181°F	@ °F	@ °F	@ °F
" pH	- @ °F	@ °F	@ °F	@ °F
" Wtr. Loss	- CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.
Bit Size	7 7/8"			
Spcgs.—AM	16"			
MN	34'6"			
IND.	6FF40			
Opr. Rig Time	3½ HRS.			
Truck No.	1567-SVPT			
Recorded By	BOULTINGHOUSE			
Witness	MERRIMAN-TATUM-HARRELL			

BEST COPY AVAILABLE

RECEIVED
SEP 26 1962
LOUISIANA GEOLOGICAL SURVEY

RECEIVED
SEP 24 1962
DEPARTMENT OF MINERALS
LAKE CHARLES

CC30 min. @ °F @ °F @ °F @ °F @ °F

334
324

Well C.23-

veys

LOG

FOLD HERE

REMARKS C.D. USED ; S.O. = 1.5" MUD PIT SAMPLE

LSN53320400000091311

Cartridge No. D-X8
Panel No. F-285
Sonde No. K-77
IAP NO. D-196
SBR-1

Marked log - injection zones
26,887 ft away from proposed Class V well
SN 91311

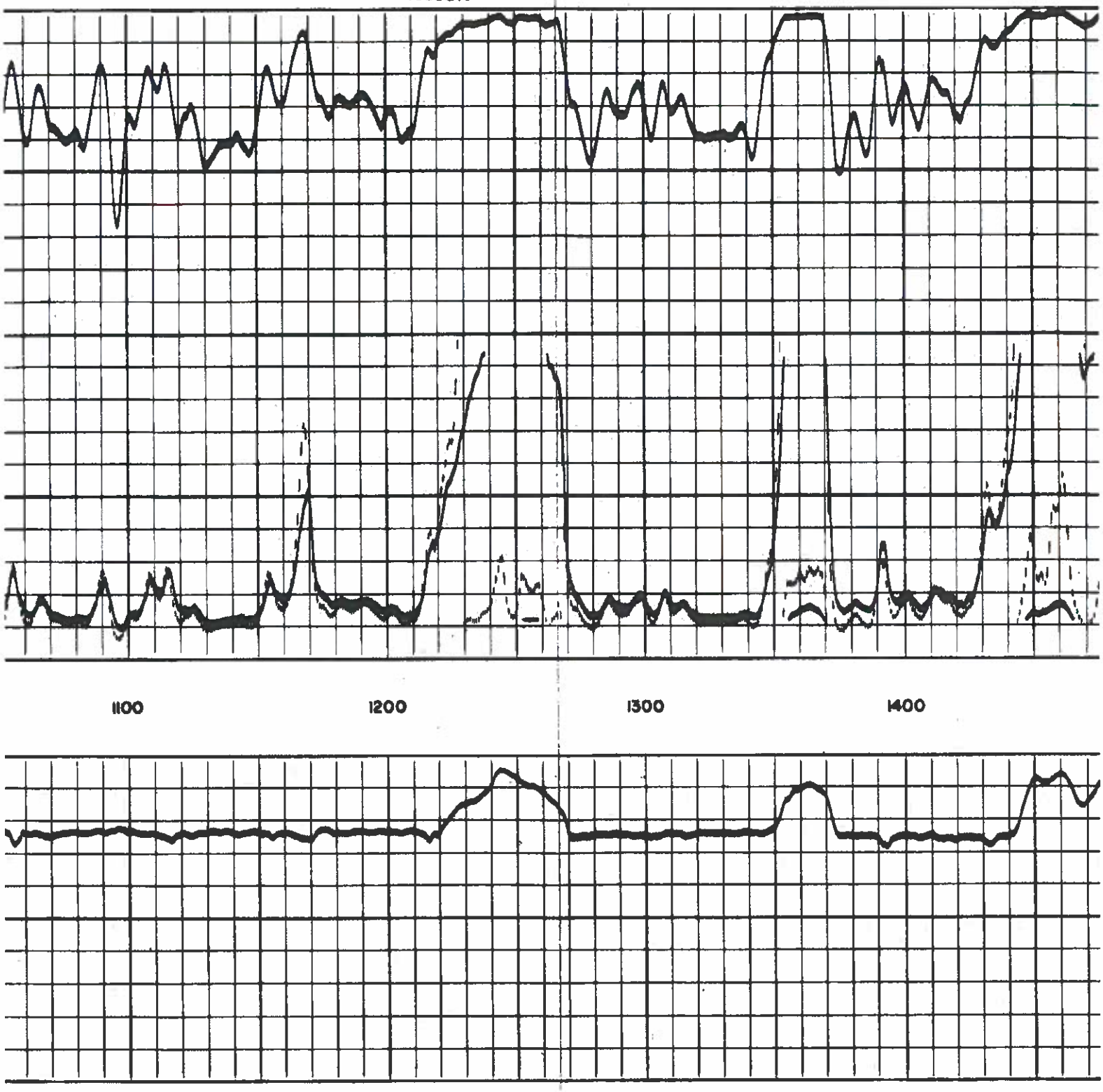
SPONTANEOUS-POTENTIAL millivolts	DEPTHS	CONDUCTIVITY millimhos/m = $\frac{1000}{\text{ohms. m}^2/\text{m}}$
– 15 +		INDUCTION 2000 1000 0 / 3000 2000
		RESISTIVITY –ohms. m²/m 16" NORMAL 0 20 / 0 200 INDUCTION 0 20 / 0 200
	1000	Casing

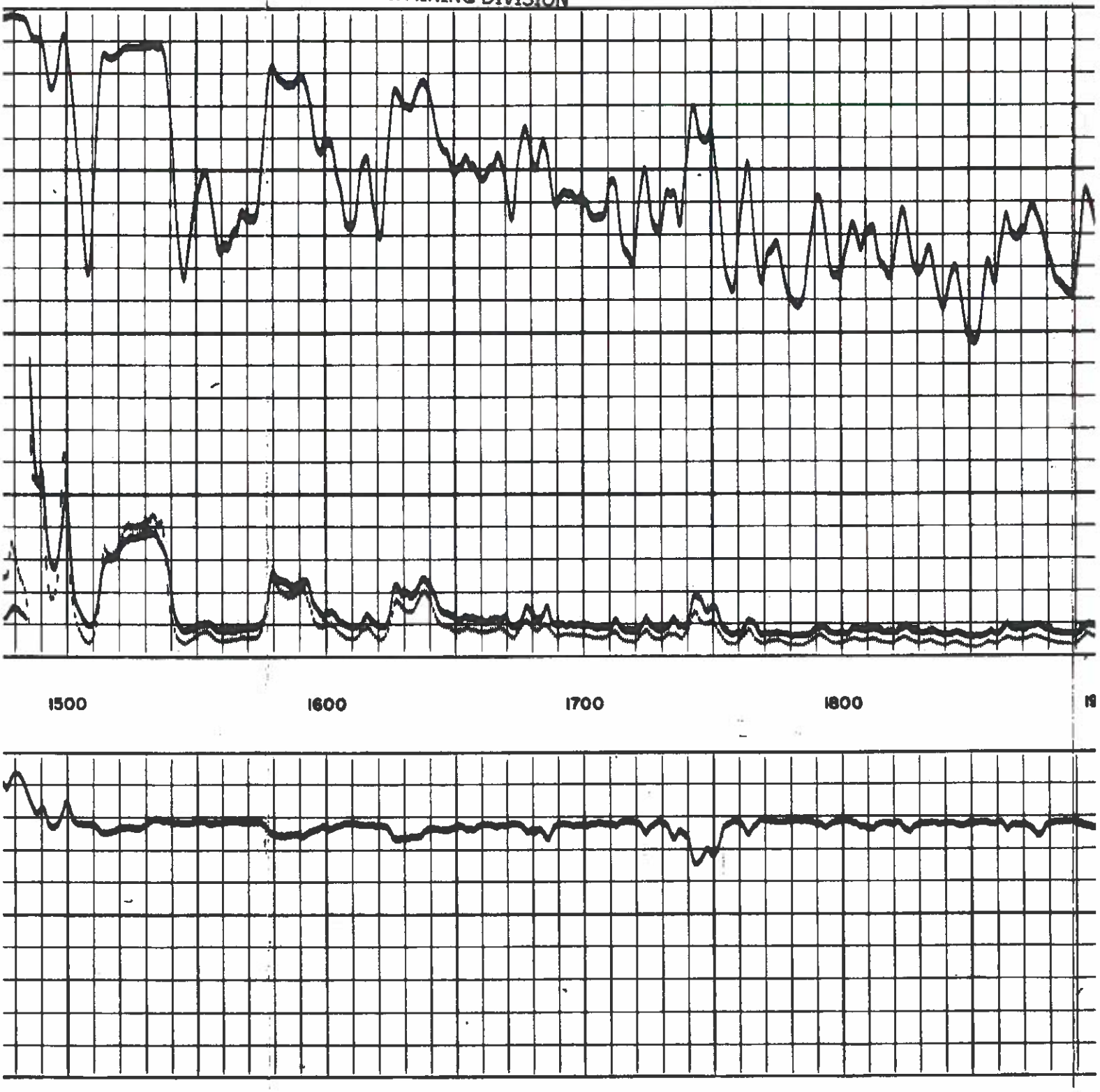
INJECTION & MINING DIVISION

OFFICE OF CONSERVATION

JAN 02 2024

044668





OFFICE OF CONSERVATION

JAN 02 2024

044668

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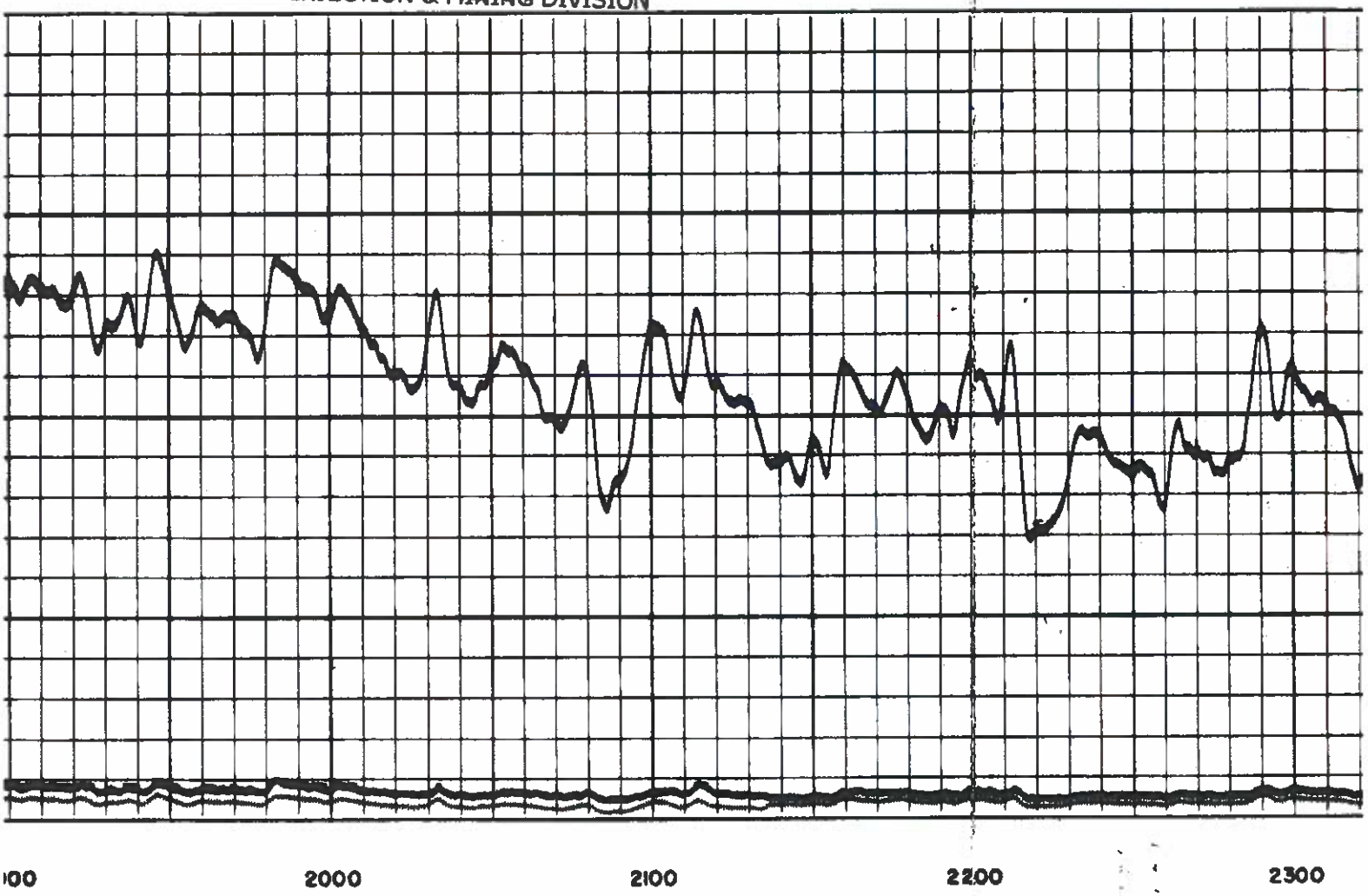

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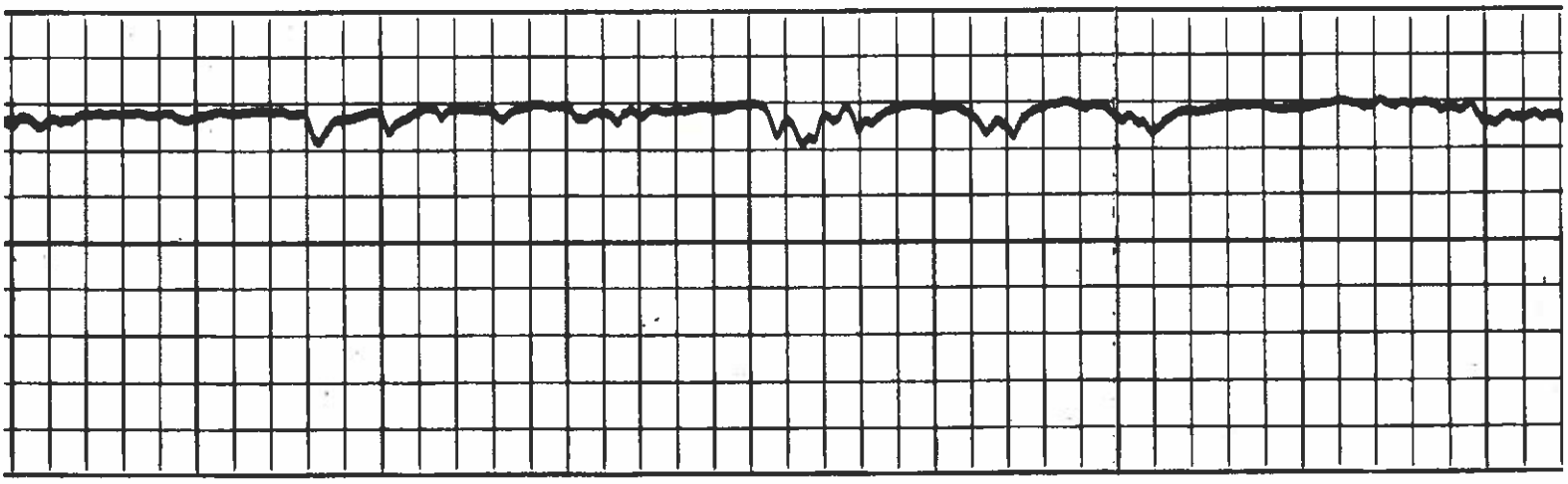
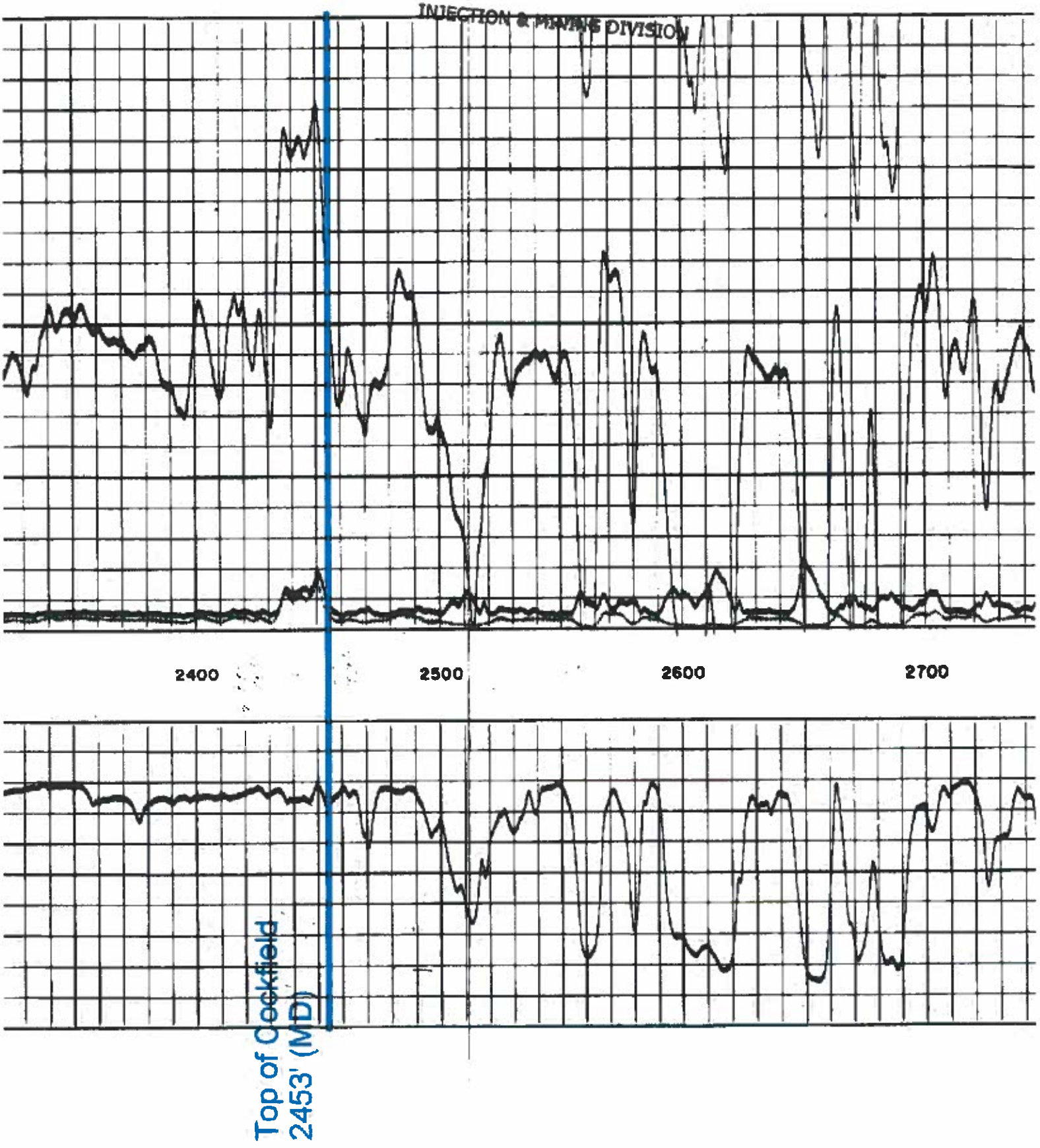
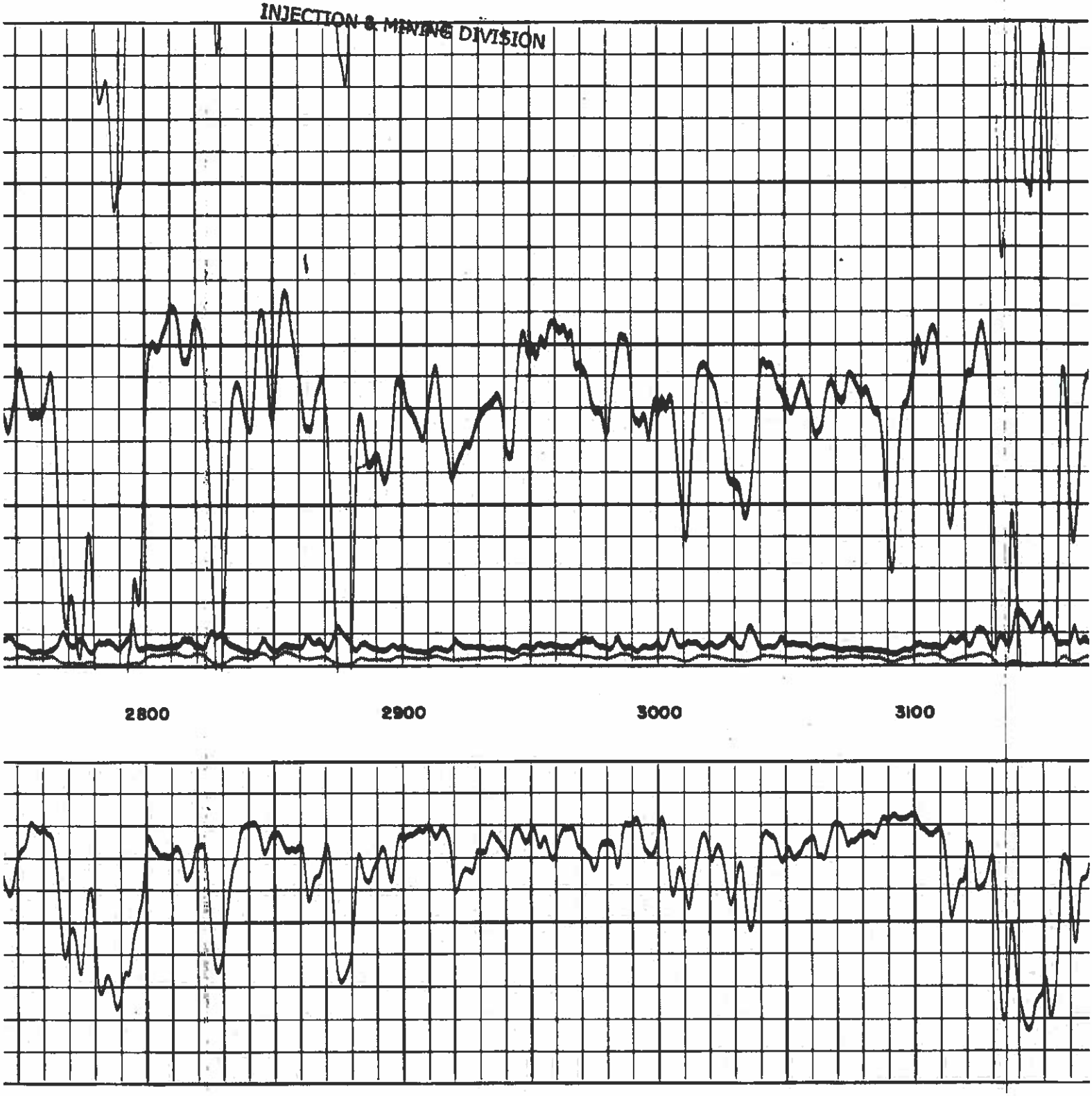
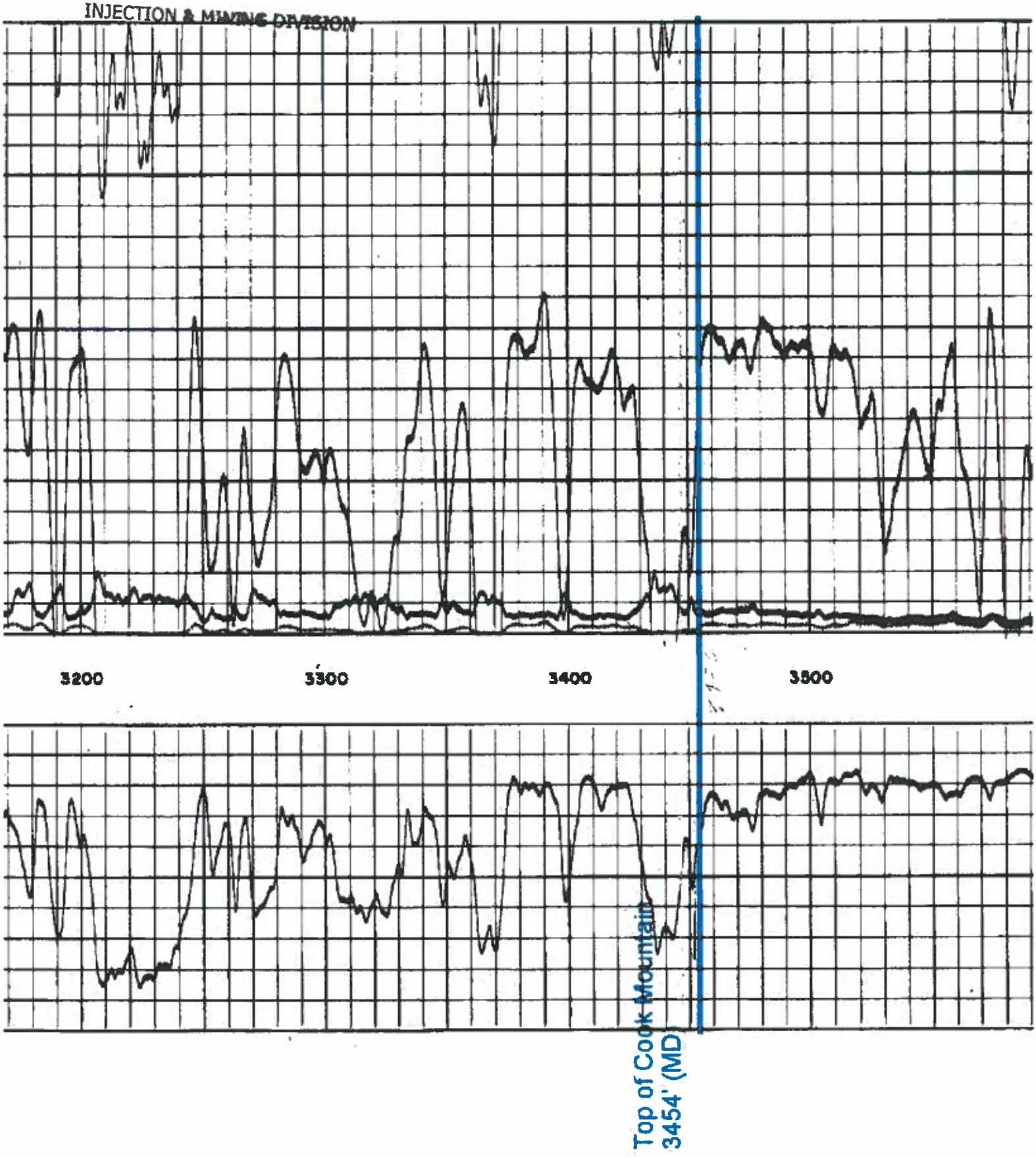
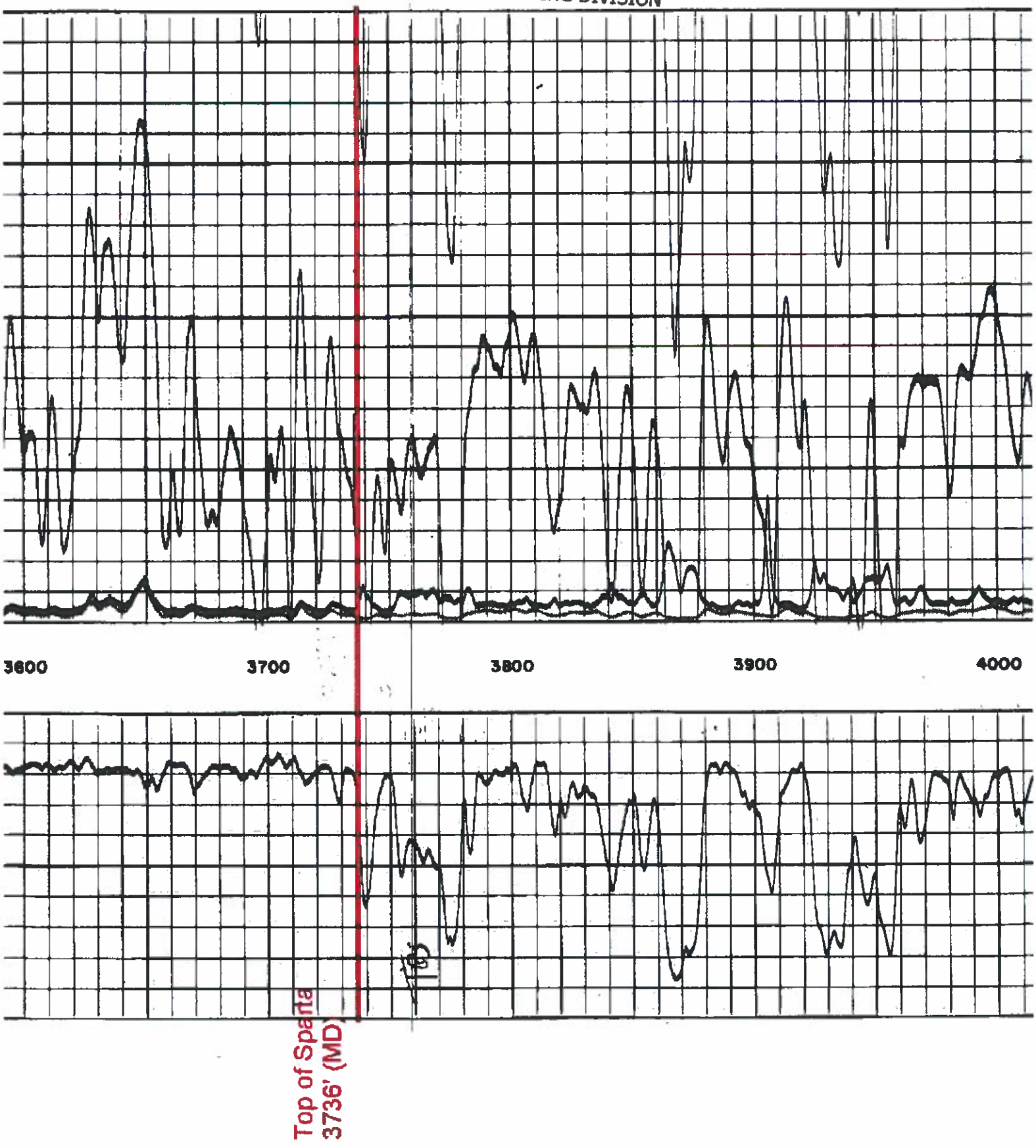
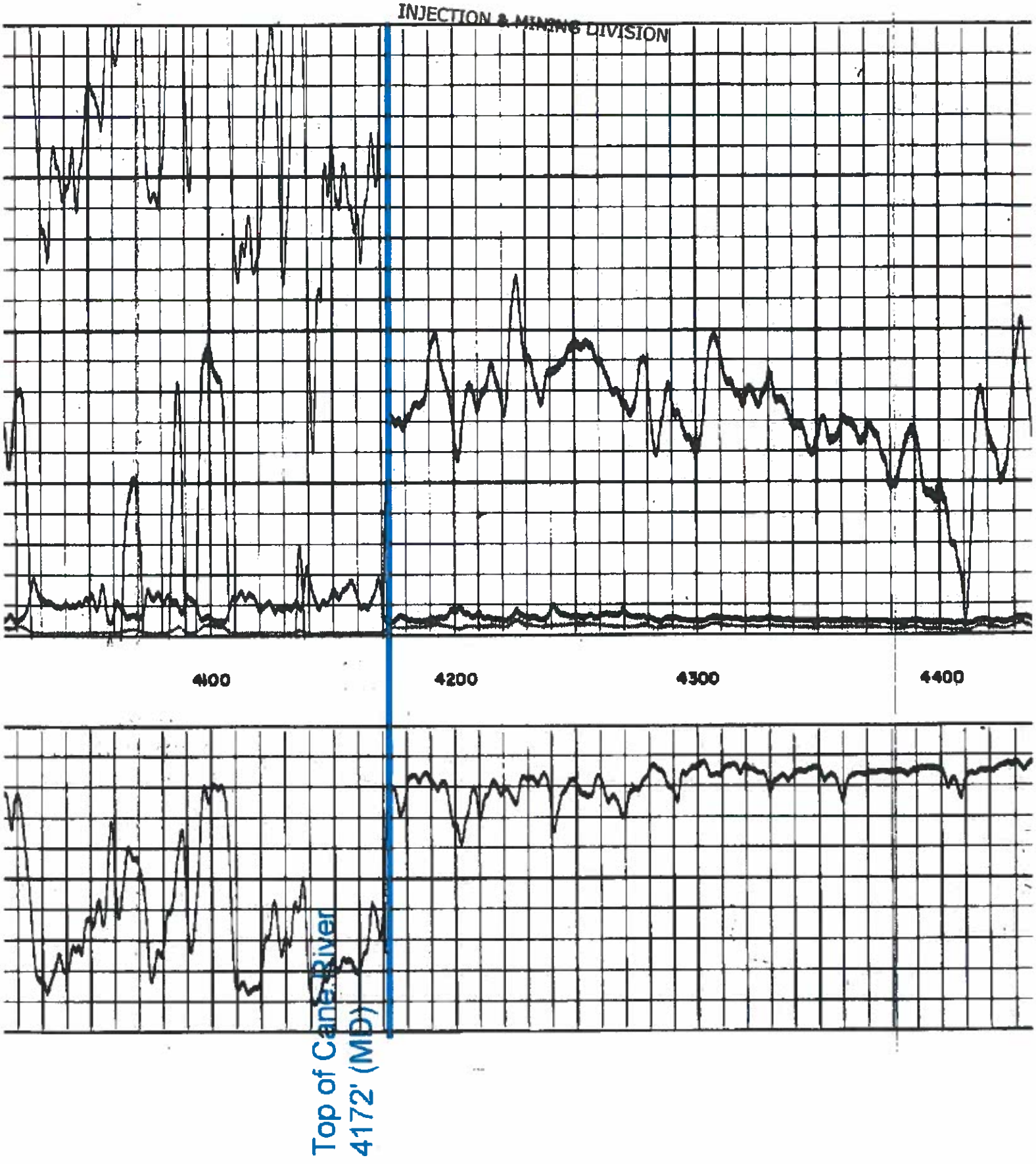


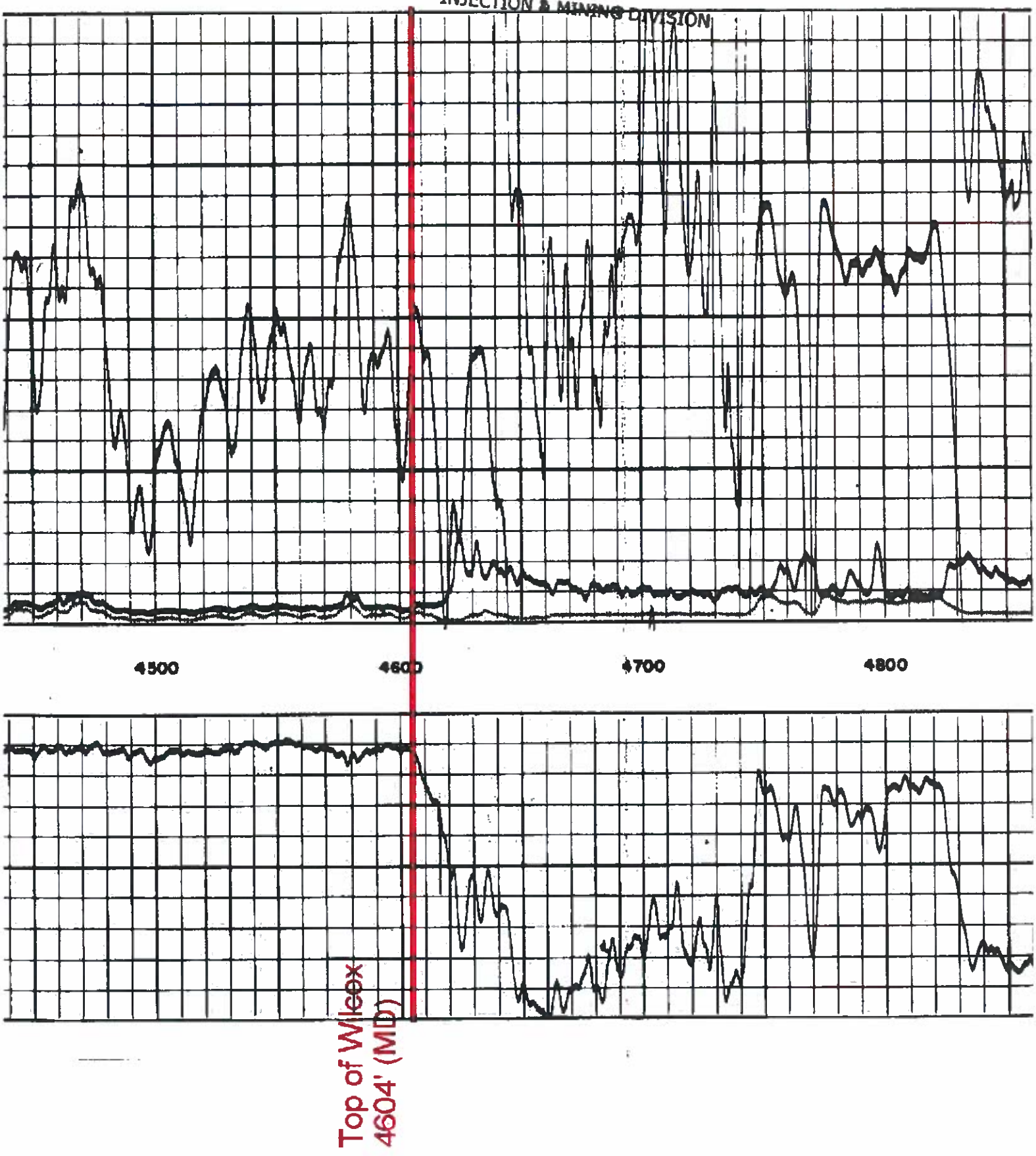




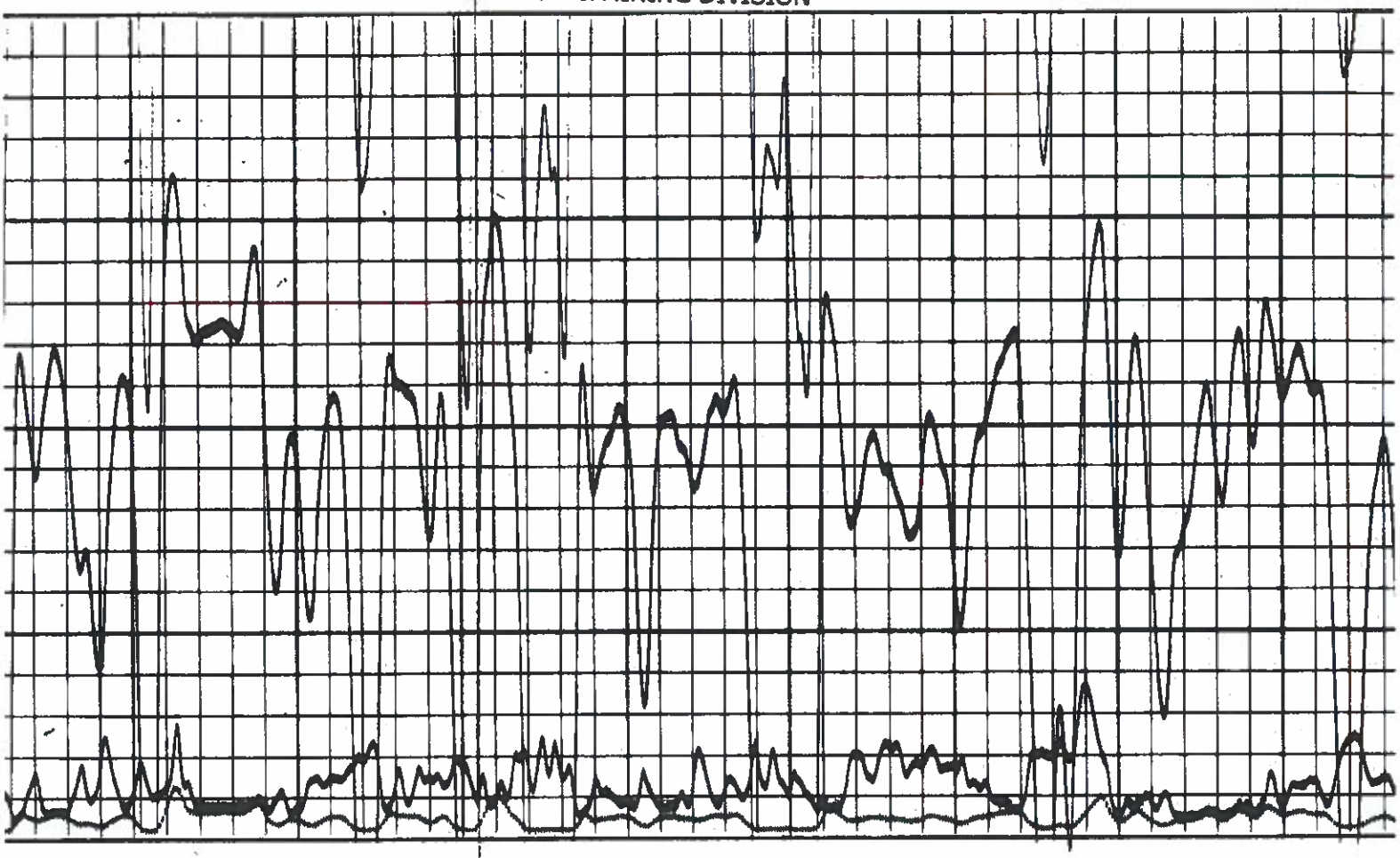




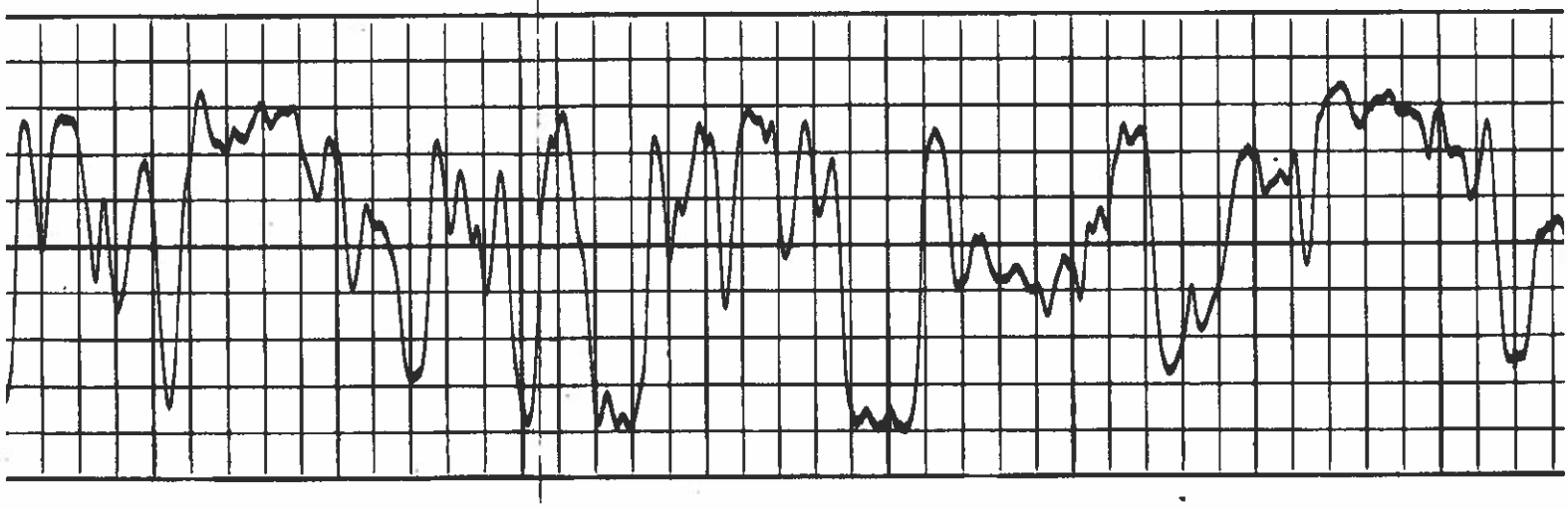


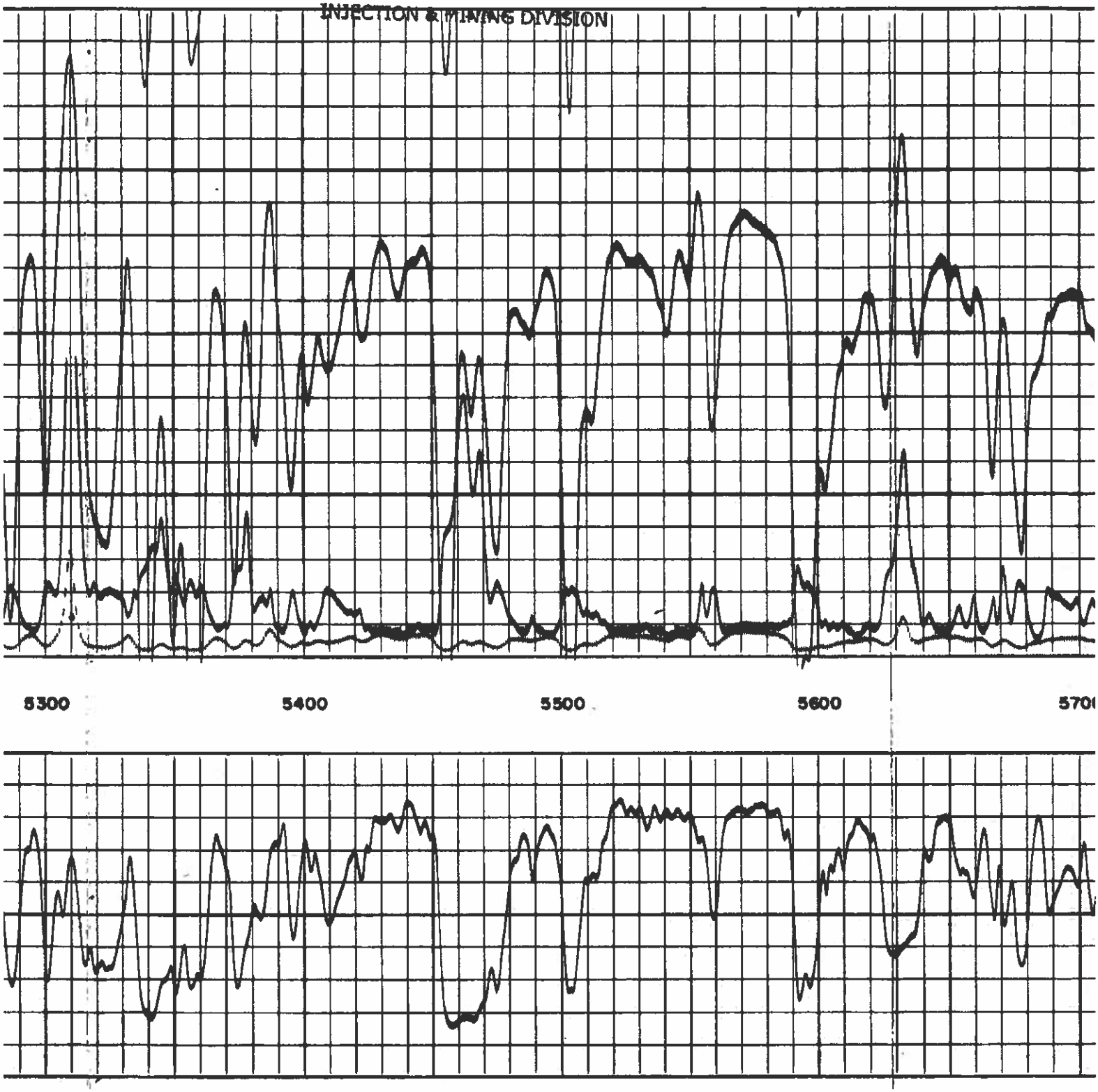


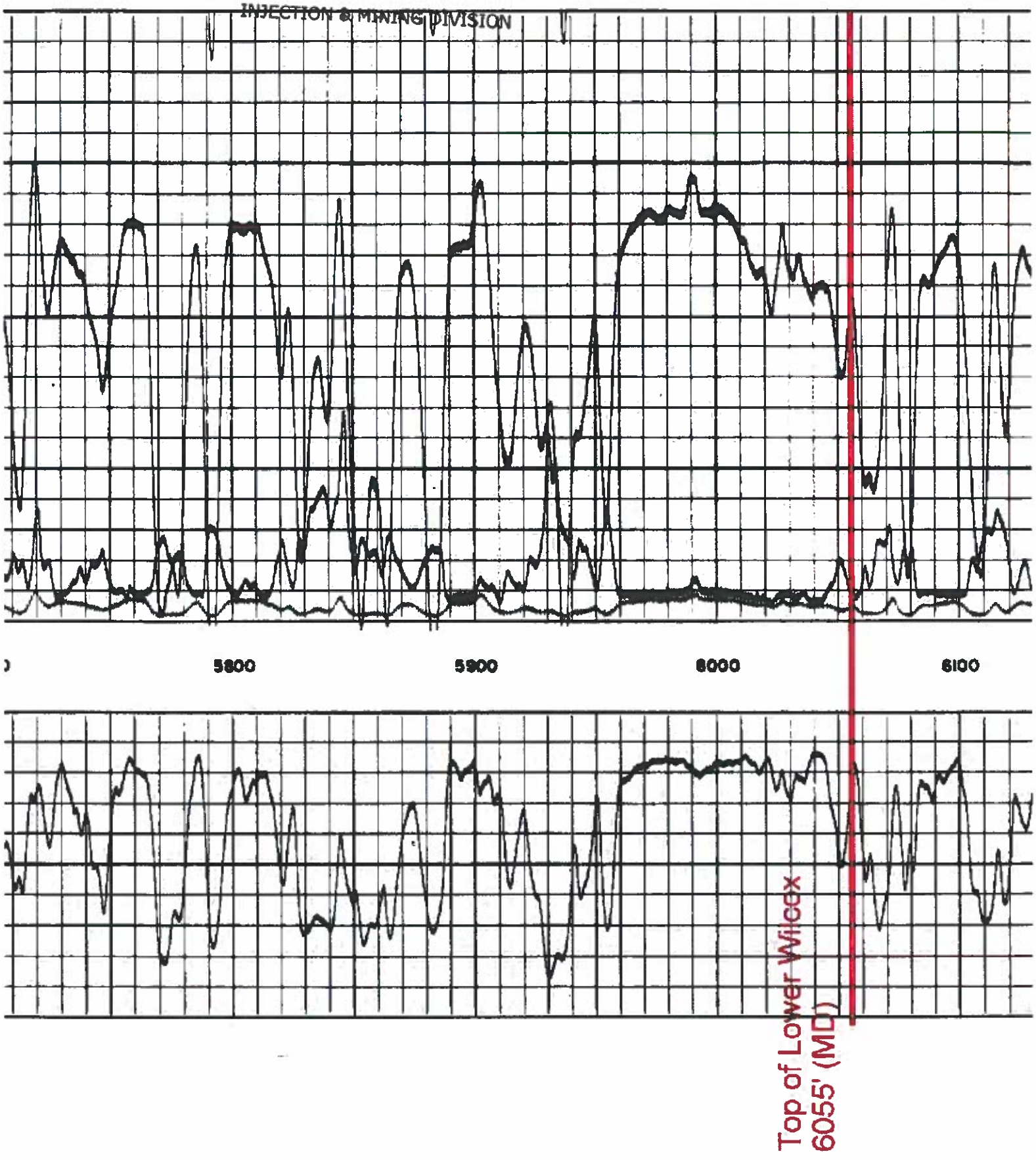
INJECTION & MINING DIVISION

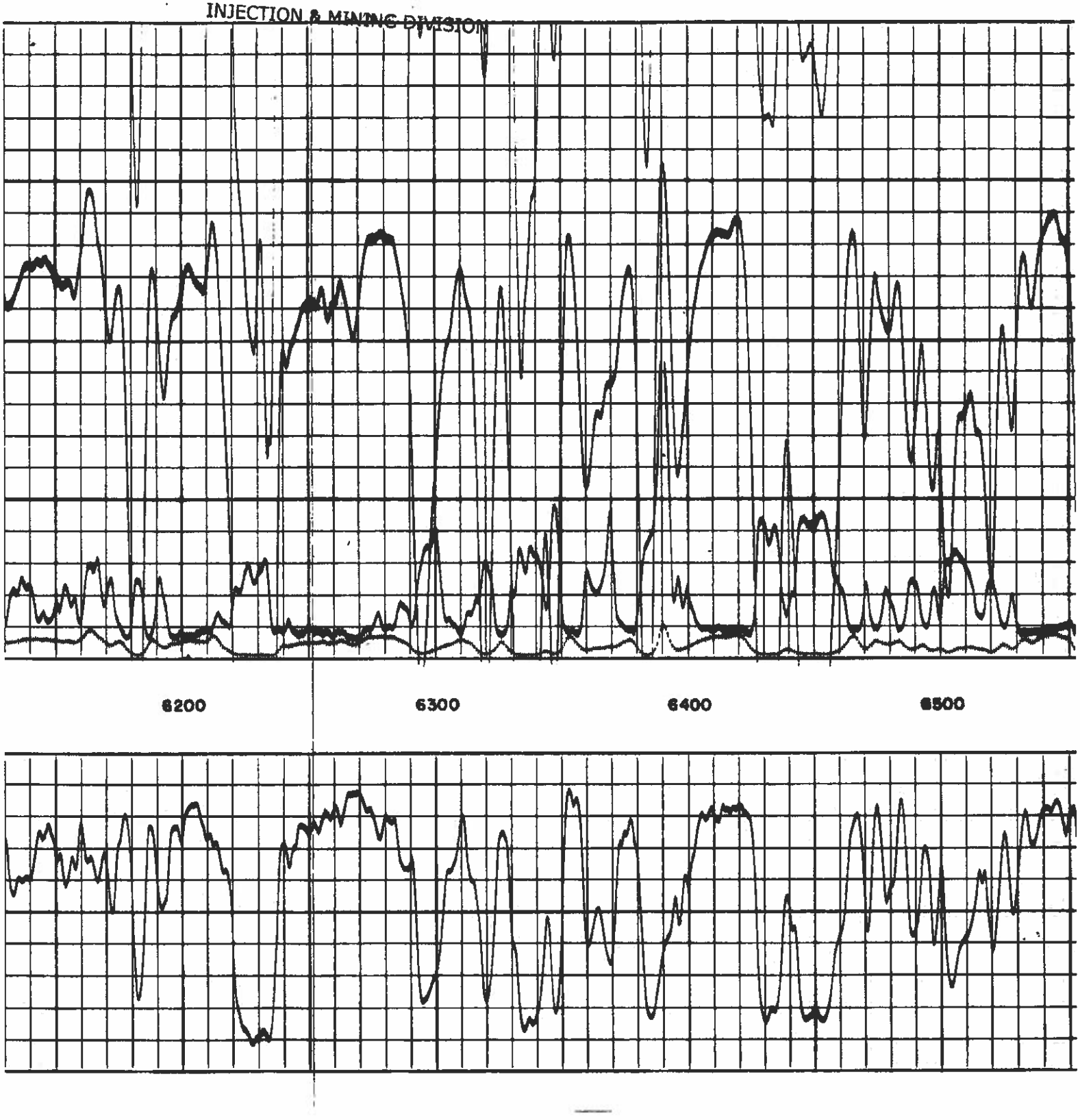


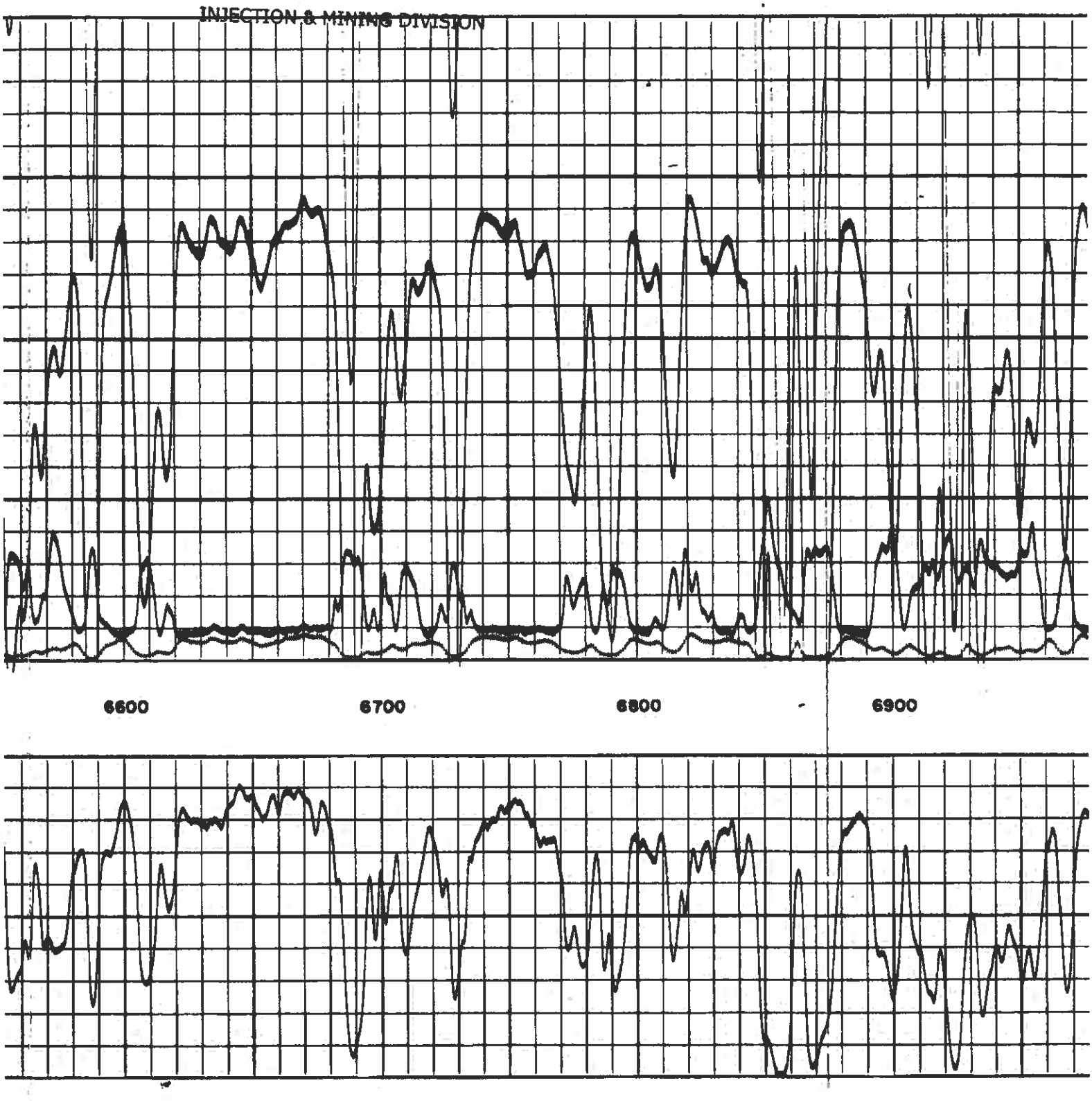
4900 5000 5100 5200

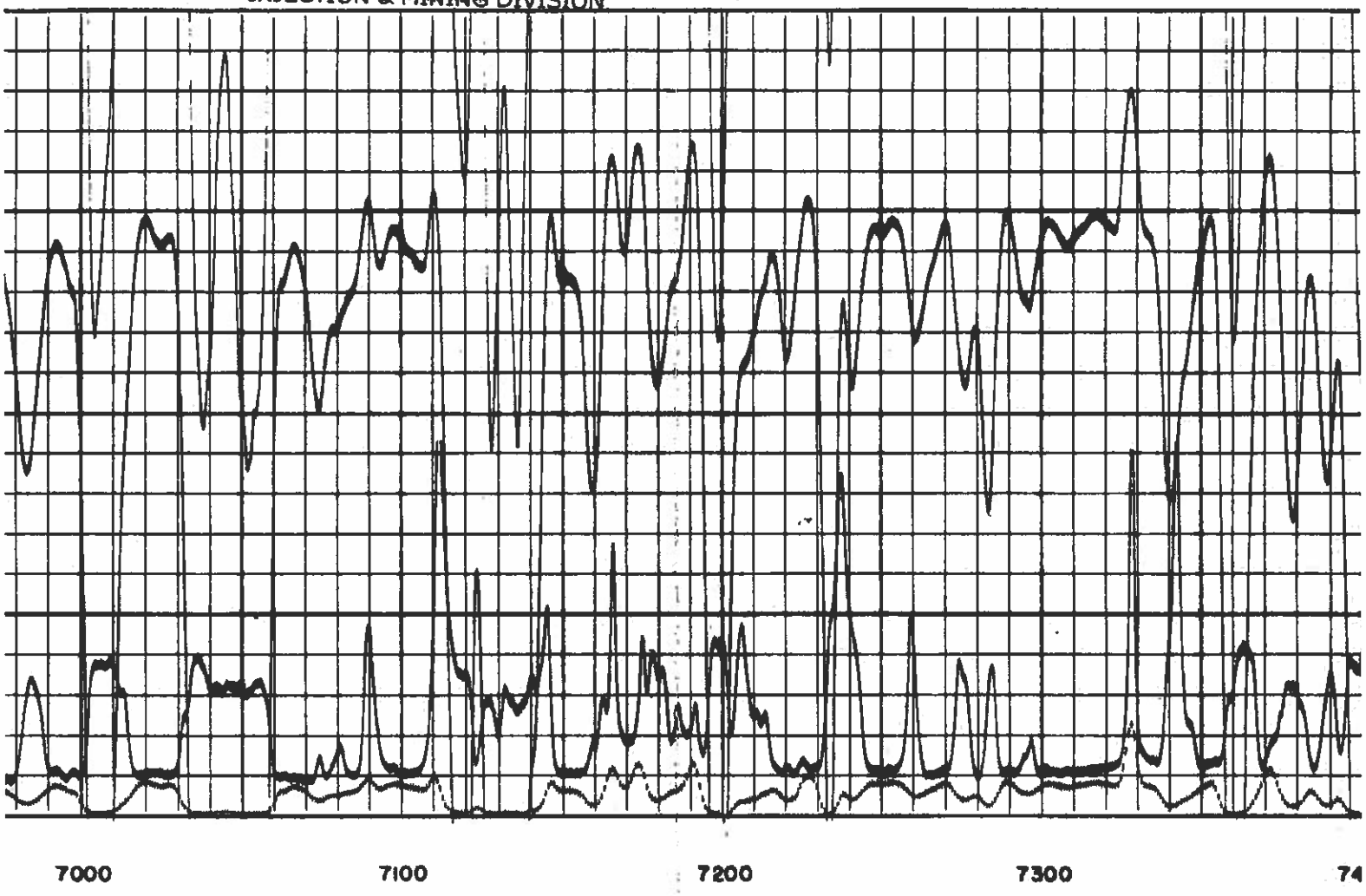


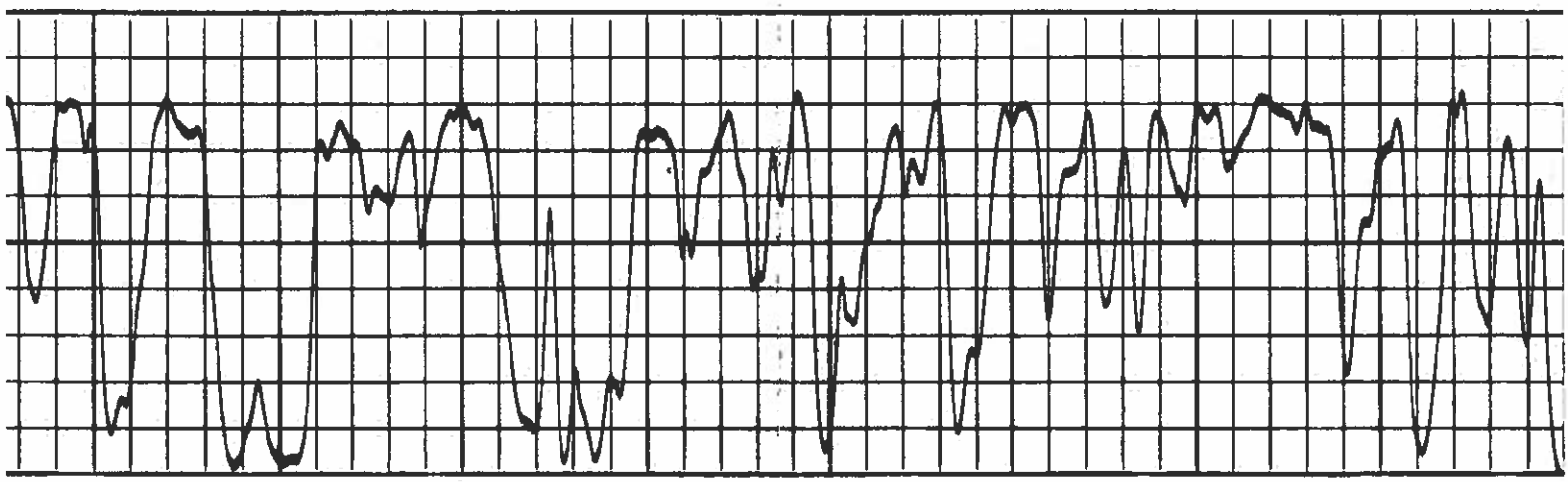












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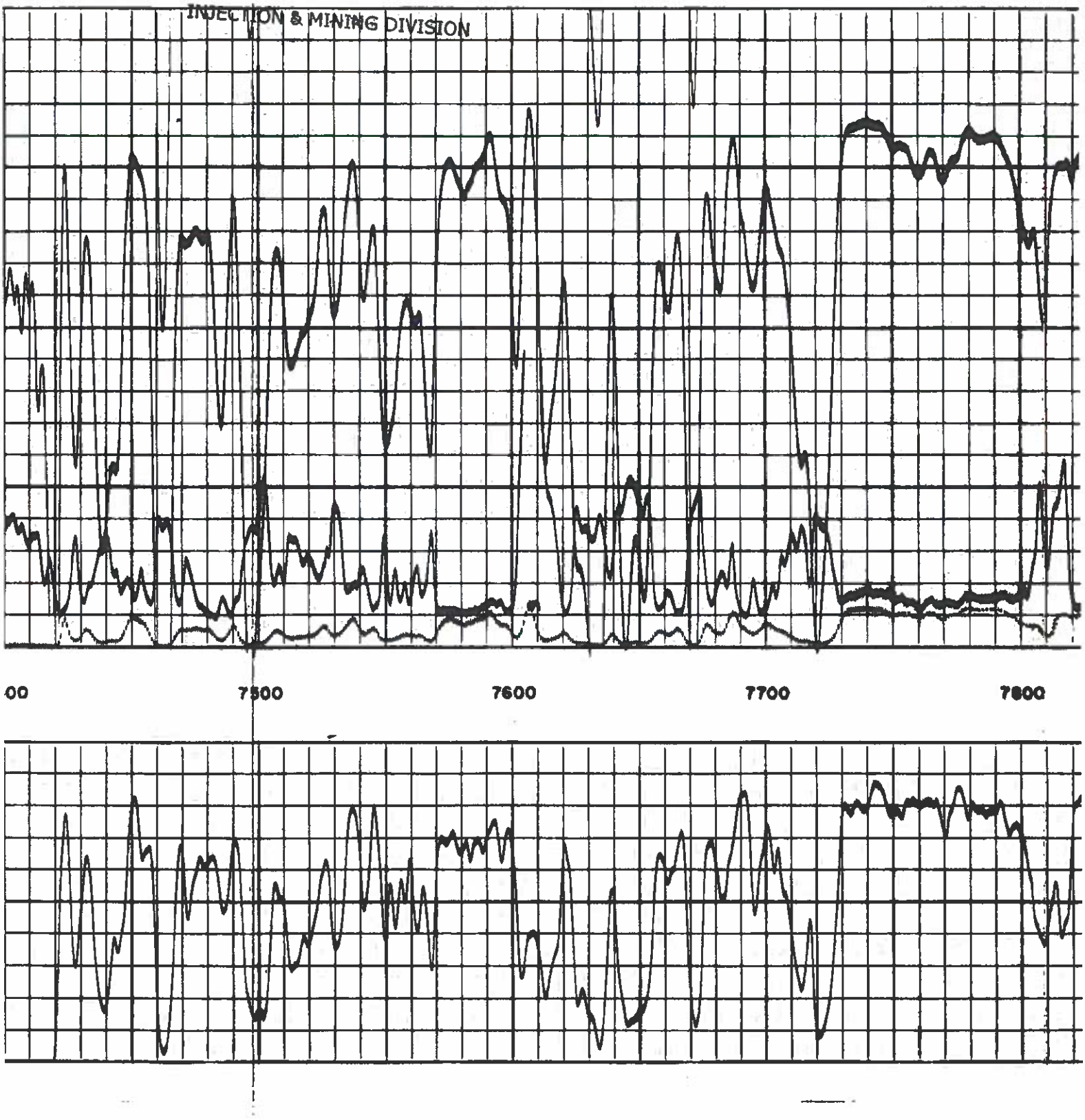

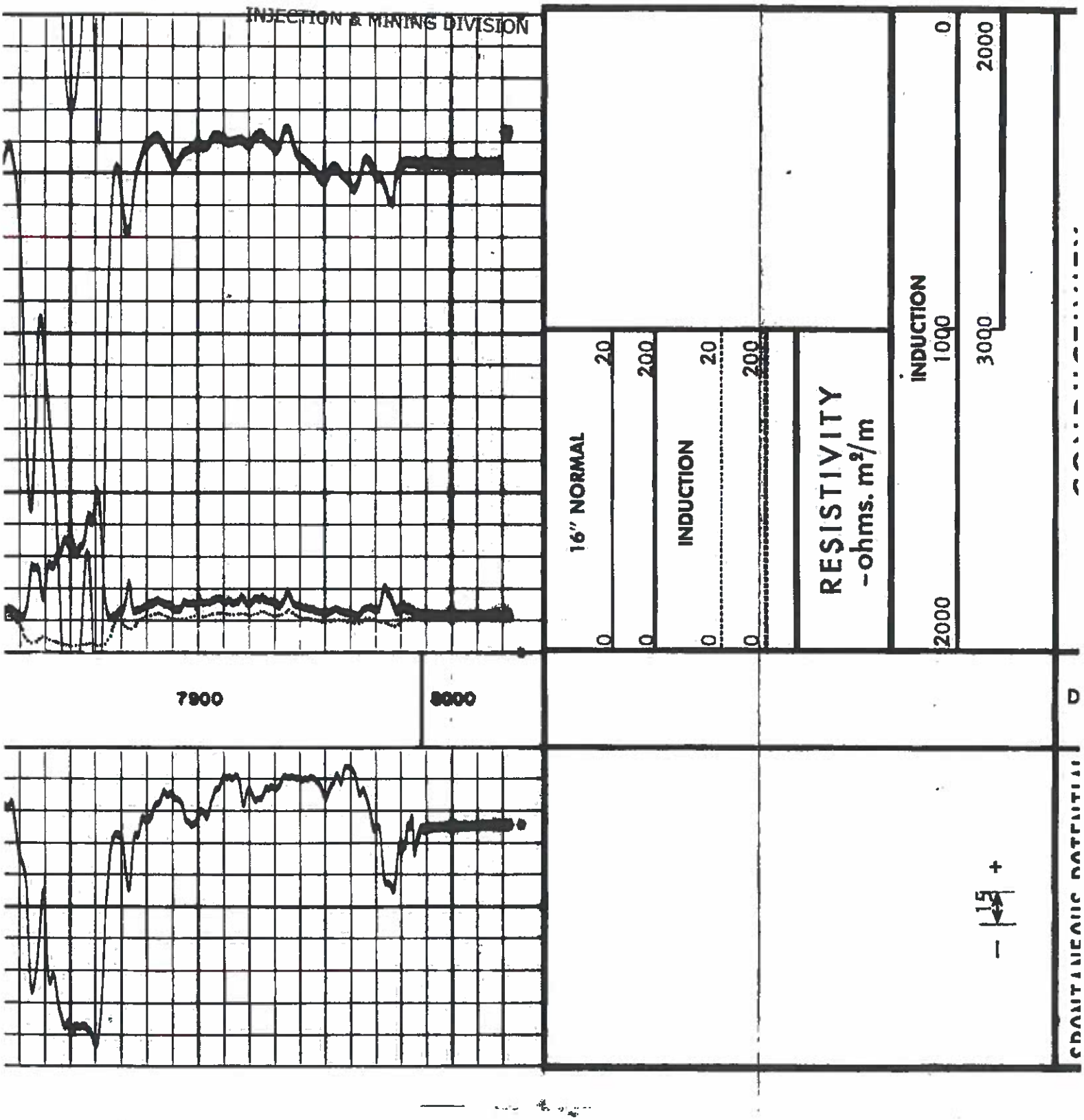

SPONTANEOUS-POTENTIAL millivolts	DEPTHS	CONDUCTIVITY millimhos/m = $\frac{1000}{\text{ohms. m}^2/\text{m}}$

COMPANY RAMROD PROD. CO. INC.

WELL PICKERING LBR. CO. #2

FIELD WILDCAT

COUNTY VERNON STATE LA.

SWSC FR 7988
SWSC TD 7989
DRLR TD 7995
Elev:
KB
DF 334
GL 324

044668

CLASS V – STRATIGRAPHIC TEST WELL DESIGN

OFFICE OF CONSERVATION

FEB 7 2024

INJECTION & MINING DIVISION

Engineering Seal

Signature by Louisiana Professional Engineer

I, Bryan K. Bell, the undersigned state: As an employee of Terra Dynamics Incorporated that I am authorized to prepare this document (***Flowering Peach No. 1 Strat Well Drilling Program***) and that this document (***Flowering Peach No. 1 Strat Well Drilling Program***) was prepared under my supervision and direction. All facts stated herein are true, correct and complete to the best of my knowledge. The specifications and recommendations attested to in this document (***Flowering Peach No. 1 Strat Well Drilling Program***) were prepared in accordance with generally and currently accepted engineering principles and practices. The engineering drawings, specifications, and other related documents referenced herein are subject to revision based on drilling and completion of the Flowering Peach No. 1 injection well.

2/7/2024

Signature Date

Registered Professional Engineer
#41052, State of Louisiana
Terra Dynamics Incorporated
Professional Engineering Firm
EF6140

Document pages 1 to 3 are covered by the seal.

044668

AETHON

Flowering Peach No. 1 Strat Well

Vernon Parish, Louisiana

Version: DRAFT 10/16/2023

Drilling Summary

The Flowering Peach No. 1 is a vertical stratigraphy exploration well. This well is planned to drill into the Willcox to core the confining shale and parts of the formation as well as log the entire well. The well will be drilled to ~9,510, with 8.75"

The surface drilling order for the pad is:

1. 13.5" Surface hole
2. 8.75" Main hole

Communications and Reports

1. LDNR IMD:
    - At least 24 hours before spud
    - At least 8 hours prior to running casing
    - Before testing or retest casing
    - Upon closure of reserve pit
    - When well has reached TD
    - Prior to commencing plugging

Surface Interval

Objective: Drill to surface casing point at ~3,200' MD/TVD. **DO NOT DRILL PAST 3,300' MD.** Run 10.75" casing and cement to surface.

Survey Criteria: Survey every stand – inclination, azimuth, and gamma ray

Mud Logging: None

Wellhead: Cut 10.75" casing to place 5k wellhead flange at ground level.

1. Build location and cellar. Set 20" conductor to required depth (+/- 95ft).
2. Hold pre-spud meeting at TBD location.
3. Move in, rig up drilling rig.
4. Build native mud system. Allow MW to build using drilled solids to no more than 9.5 ppg.
5. Drill 13.5" hole to +/- 3,200' or below USDW.
    - USDW estimated at 2,430'
6. Notify LADNR – IMD 24-hrs prior to anticipated casing test
7. RIH, circulate & condition hole for logging. TOH
8. Run open hole surface logs.
    - Gamma Ray, Spontaneous Potential, Resistivity – USDW Determination
    - Openhole caliper – Cement Volume determination.
9. Submit logs confirming lowermost USDW and at least one non-USDW sand.

10. Rig up casing equipment, RIH and set 10.75" casing at 3200' & mix and pump primary cement job as follows: (Final cement volumes to be determined based on caliper logs)
    - 1,130 sks, 12.8 ppg 35:65 Poz; Class A Lead Slurry Yield: 1.79 ft^3/sk
    - 289 sks, 15.2 ppg Class A Tail Cement Slurry Yield: 1.26 ft^3/sk
    - ~9.5 ppg WBM displacement
11. Circulate cement to surface.
12. Wait on cement.
13. Cut casing and install wellhead flange.
14. If needed, top off cement in surface casing with 1" pipe

Main Hole Interval

Objective: Drill to production casing point ~200' below the Midway Shale top using Oil Based Mud. ~9,510'

Survey Criteria: Survey every stand – inclination, azimuth, and gamma ray

Mud Logging: Entire Interval

Depths: All depths are estimated. Exact depths to be picked on location during the job.

9.875" Production Interval Drilling Procedure

1. NU BOPs on wellhead.
2. Rig up wireline and run cement bond, variable density, and temperature log.
3. Pressure test surface casing to 500 psi. Hold test pressure for 1 hour. If pressure declines more than 5% in 1 hour, inform Drilling Engineer, and discuss remediation plans. A form CSG-T will filled out and submitted to IMD.
4. PU 8.750" drill out BHA RIH to drill out casing float collar, shoe track, and at least 10' of new formation with WBM.
5. Spot 25 bbl LCM pill on bottom prior to FIT attempt. Assuming 9.5 ppg WBM in the hole at time of FIT, pressure up on casing to test the casing shoe and formation to 12.5 ppg EMW FIT. Hold FIT pressure on formation and casing shoe for 15 minutes. Maximum mud weight expected at TD is 10.7 ppg.
6. Displace WBM with 9.5 ppg OBM.
7. Rig up mud logging equipment, sample every 30'
8. Drill 8.75" hole to first coring point (~3,950').
9. TOH. Pick up core barrel & core bit. TIH and core 3,950'-4,100'
    - Target Cook Mount Shale to top of Sparta Sand
10. POH & lay down core.
11. Condition hole if any hole problems encountered during coring operation.
12. TIH and drill to 4,550'
13. TOH. Pick up core barrel & core bit. TIH and core 4,450'-4,800'
    - Target Cane River Shale through top of Wilcox Sand
14. POH & lay down core.

44668

15. Condition hole if any hole problems encountered during coring operation.
16. TIH and drill to 6,200'
17. TOH. Pick up core barrel & core bit. TIH and core 6,200'-6400'
    - Target Lower Wilcox
18. POH & lay down core.
19. Condition hole if any hole problems encountered during coring operation.
20. TIH and drill to 9,150'
21. TOH. Pick up core barrel & core bit. TIH and core 9,150'-9,300'
    - Target Base of Wilcox Sand to the top of the Midway Shale.
22. POH & lay down core.
23. Condition hole if any hole problems encountered during coring operation.
24. TIH and drill to TD +/- 9,510' ~300' below the top of the Midway Shale.
25. Circulate & condition hole for logging. TOH
26. Log well with recommended logging suite.
27. Run Pressure and Formation sampling tools to desired depths. Perform sampling. (Depths TBD)
28. TIH to TD and circulate and condition hole displacing OBM for WBM 9- 10.0 ppg with loss circulation for setting cement plugs.
29. Nipple up cementing equipment.
30. Place cement plug #1 CO_2 Resistant blend (6,025'-6,325')
    - 16.4 ppg; 1.07 cuft/sack; 145 sacks;
31. TOH Circulate. WOC
32. TIH and tag cement plug #1, PUH.
33. Place cement plug #2 CO_2 Resistant blend (4,410'-4,710')
    - 16.4 ppg; 1.07 cuft/sack; 145 sacks;
34. TOH Circulate. WOC
35. TIH and tag cement plug #2, PUH.
36. Place cement plug #3 CO_2 Resistant blend (3,621-4,025')
    - 16.4 ppg; 1.07 cuft/sack; 191 sacks;
37. TOH Circulate. WOC
38. TIH and tag cement plug #3, PUH.
39. Place cement plug #4 Class A blend (3,350'-3,050')
    - 15.6 ppg; 1.18 cuft/sack; 135 sacks;
40. TOH Circulate. WOC
41. TIH and tag cement plug #4, PUH.
42. Place cement plug #5 Class A blend (2,480'-2,380')
    - 15.6 ppg; 1.18 cuft/sack; 47 sacks;
43. TOH circulate. WOC
44. TIH and tag cement plug #5. Pressure test to 300 psi for 30 minutes.
45. Circulate hole clean with inhibited fresh water
46. POH laying down drill pipe & collars.
47. Remove BOP
48. Install Wellhead.
49. Rig down and move out.

B.7 PROGNOSIS FOR TESTING THE WELL

Table 1

Hole Section	Item	Data Acquisition	Specific description (in addition to work product definitions elsewhere)
Surface hole	Drilling	Survey	
	OH Logging Run – WL	SP, GR, Res, Cali	
	CH Logging Run - WL	Radial CBL, VDL, Temp	
Open Hole	**Core Run** **UCZ 1 & IZ 1** Run 1 – 3,950' to 4,100' **LCZ 1 & IZ 2** Run 2 – 4,450' – 4,800' **IZ 2** Run 3 – 6,200' – 6,400' **IZ 2 & LCZ 2** Run 4 – 9,150' – 9,300'	Whole Core each 7" core (150-350 ft each)	Wellsite Handling
	Drilling	Mud Logs, Survey	
	OH Logging Run/s - WL	Spectral GR, SP, RHOB, Neu, Induction, FMI, NMR, Sonic, Elemental Spectroscopy, RFT, Lithology tool (GEM)	
		RSWC Acquisition * 1 (plug number TBD at wellsite)	Wellsite Handling

B.8 WORK PROGNOSIS FOR DRILL, AND COMPLETING THE WELL SCHEMATIC(S) OF THE CLASS-V WELL SHOWING:

a. Casing diameter, specifications, material (PVC, steel, etc.) and depth,
b. Screen type, length, material, slot or opening size.
c. Injection tubing size inside casing (if any),
d. Hole diameter (bit size),
e. Amount and type of cement used and depths to top and bottom of cement,
f. Wellhead showing all fittings,
g. Discharge line diameter and connection to wellhead,
h. Well house (if any).

Schematic should be stamped and signed by a Louisiana-registered Professional Engineer (PE) as appropriate

B.9. TEMPORARY ABANDONMENT PROCEDURE, AND SCHEMATIC

Aethon Energy Operating, LLC (Aethon) will conduct temporary abandonment of the Flowering Peach 1 Class V well according to the procedures below. Prior to temporary abandonment, a bottomhole reservoir pressure will be determined via wireline gauges. All work will be done in accordance with temporary abandonment rules set by the State of Louisiana and will be submitted to the Louisiana Department of Natural Resources (LDNR).

The temporary abandonment procedures, along with the selected materials, have been designed to prevent the movement of formation fluid out of the tested zone or into USDWs. A proposed well plugging schematic is contained in Figure 1 and is based on the proposed drilling and completion schematic. Final plan adjustment will be made for "as built" well conditions and perforated and tested intervals.

Aethon will use the materials and methods noted in Table 2 to temporarily plug the well. The volume and depth of the temporary plugs will depend on the final geology and downhole conditions of the well as assessed during construction. The cement(s) formulated for temporary plugging will be compatible with the formation and formation fluids. The cement formulation and required certification documents will be submitted to the agency with the temporary abandonment plan.

Industry practice has shown that 100 to 200 feet above the hole of good cement is sufficient for permanent isolation. Excess volume will be pumped to cater for contamination and uncertainty in placement such as in high-angle wells or high expectations of slurry contamination. Cement placement software will determine the exact volume. It is planned to plug the Flowering Peach Class V well using four plugs with details in Table 2.

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Table 2: Proposed Temporary Plugging Details – Flowering Peach 1 Class V Well

Plug Information	Plug #1	Plug #2	Plug #3	Plug #4	Plug #5	Surface Plug
Diameter of boring in which plug will be placed (inches)	8.75	8.75	8.75	8.75	10.05	10.05
Sacks of cement to be used (each plug)	95	95	191	86	47	47
Slurry volume to be pumped (ft^3)	101.65	101.65	204.37	101.48	55.7	55.7
Slurry weight (lb./gal)	16.4	16.4	16.4	15.6	15.6	15.6
Calculated top of plug (ft)	6,025	4,410	3,621	3,050	2,380	0
Bottom of the plug (ft)	6,325	4,710	4,025	3,350	2,480	100
Type of cement or other material	CO_2 Resistant Cement	CO_2 Resistant Cement	CO_2 Resistant Cement	Normal Class A Neat poz	Normal Class A Neat poz	Normal Class A Neat poz
Method of emplacement (e.g., balance method, retainer method, or two-plug method)	Balance method	Balance method	Balance method	Balance method	Balance method	
Purpose	Isolate L Wilcox Sands	Isolate Wilcox Sands	Isolate Top Confining Interval and Sparta Sands	Protect USDW – Surface Casing Shoe	Protect USDW – Lowermost	Surface

Volume calculations will be based on the final dimensions of the long string/production casing. Temporary plugs will be tagged at the cement plug top to verify location and integrity. The well will be temporarily plugged with fluid/mud of at least 9.0 ppg.

Cement volumes will be calculated and verified using industry-accepted equations for cement volumes, using open hole diameter, casing size, annular areas, and total length of temporary cement plugs. The top of each temporary plug will be verified by load testing. Any modifications to the cement formulation and required certification documents will be submitted to the LDNR with the proposed well plugging plan before field operations.

044668

Aethon Energy

Well Name:	Flowering Peach No. 1
Formation:	Sparta/Wilcox
County, State:	Vernon, LA
Field:	
API:	Permit:
SHL:	TBD' FSL, TBD' FWL of 06-02N-8W
Latitude:	Longitude:
BHL:	TBD' FSL, TBD' FWL of 06-02N-8W
Latitude:	Longitude:
Rig: TBD	RKB: 25.0' GL: 210.0' KB: 235.0'

Directions

Hole Size	Fit	
13.500"	Native MW: 9.2-9.5 ppg FV: 30-40 sec/qt PV: 13-26 cp YP: 2-10 lbf/100 ft^2 API: 60-80 mL LGS: 8-20% pH: 8.0-9.0	12.5 ppge
8.750"	OBM MW: 9.5-10.7 ppg	

20" 106.5# X-42 conductor @ 95'

USDW Depth: 2,430'

Intermediate TOC @ 0' MD

10.75" Surface Casing @ 3,200' MD/3,200' TVD

1,130 socks 12.8 ppg 35:65 Poz:A lead @ 1.79 cfs

289 socks 15.2 ppg Class A tail @ 1.26 cfs

100% open hole excess

One 13.5"x10.75" bowspring centralizer above float collar between stop rings. One 13.5"x10.75" bowspring centralizer every third joint to surface

Wellhead Equipment

Tubing Spool	N/A
Casing	N/A

Casing Program

Section	MD	TVD	Size	Weight	Grade	Connection	ID	Drift	Burst	Collapse	Tension
Conductor	95'	95'	20.000"	106.50#	X-42	Welded	19.000"	18.812"	-	-	-
Surface	3,200'	3,200'	10.750"	40.50#	J-55	BTC	10.050"	9.894"	3,130 psi	1,580 psi	629 k

Geology

Formation Top	MD	TVD	Description
Frio	35'	35'	Sands and Swelling Shale
Jackson	1,865'	1,865'	Swelling Shale
Cockfield	2,453'	2,453'	Sands and Swelling Shale
Cook Mountain	3,454'	3,454'	Swelling shale
Sparta	3,736'	3,736'	Unconsolidated Sand
Cane River	4,172'	4,172'	Swelling shale
Wilcox	4,604'	4,604'	Unconsolidated Sand
Lower Wilcox	6,055'	6,055'	Unconsolidated Sand
Midway	9,210'	9,210'	Swelling shale

TD criteria: 200' below Midway top

Directional

Section	MD	TVD	Inclination	Azimuth	DLS
Vertical Hold	0'	0'	0.00°	0.00°	-
	9,410'	9,410'	0.00°	0.00°	-

Coring

Top	Bottom	Notes
3,950'	4,100'	7.00"x150' core barrel
4,450'	4,800'	7.00"x360' core barrel
6,200'	5,400'	7.00"x210' core barrel
9,150'	9,300'	7.00"x150' core barrel

Total Depth: 9,510' MD

OFFICE OF CONSERVATION

FEB 7 2024

INJECTION & MINING DIVISION

STATE OF LOUISIANA
BRYAN K. BELL
License No. 41052
PROFESSIONAL ENGINEER

2/7/2024

Terra Dynamics Incorporated

Professional Engineering Firm

EF 6140

Contact List			
Drilling Engineer:	Brad Huggard	469-865-0296	bhuggard@aethonenergy.com
Drilling Supervisors			
Geologist:	Josh Talbert	214-750-3827	jtalbert@aethonenergy.com

BWH 06/15/2023

44668

Aethon Energy

Well Name:	Flowering Peach No. 1					Directions	
Formation:	Sparta/Wilcox						
County, State:	Vernon, LA						
Field:							
API:		Permit:					
SHL:	TBD' FSL, TBD' FWL of 06-02N-8W						
Latitude:		Longitude:					
BHL:	TBD' FSL, TBD' FWL of 06-02N-8W						
Latitude:		Longitude:					
Rig: TBD	RKB: 25.0'	GL: 210.0'	KB: 235.0'				

Hole Size		FIT
13.500"	Native MW: 9.2-9.5 ppg FV: 30-40 sec/qt PV: 13-26 cp YP: 2-10 lb/100 ft² API: 60-80 mL LGS: 8-20% pH: 8.0-9.0	12.5 ppge
8.750"	OBM MW: 9.5-10.7 ppg	

100' Surface Plug

Plug #5 2380-2480'

Plug #4 3050-3350'

Plug #3 3621-4025'

Plug #2 4410-4710'

Plug #1 6025-6325'

20" 106.5# X-42 conductor @ 95'

Wellhead Equipment

Tubing Spool	N/A
Casing Head	N/A

GAU Depth: 2,300'

10.75" Surface Casing @ 3,200' MD/3,200' TVD

1,130 sacks 12.8 ppg 35:65 Poz:A lead @ 1.79 cfs

289 sacks 15.2 ppg Class A tail @ 1.26 cfs

100% open hole excess

One 13.5"x10.75" bowspring centralizer above float collar between stop rings. One 13.5"x10.75" bowspring centralizer every third joint to surface

Casing Program

Section	MD	TVD	Size	Weight	Grade	Connection	ID	Drift	Burst	Collapse	Tension
Conductor	95'	95'	20.000"	106.50#	X-42	Welded	19.000"	18.812"	-	-	-
Surface	3,200'	3,200'	10.750"	40.50#	J-55	BTC	10.050"	9.894"	3,130 psi	1,580 psi	629 k

Geology

Formation Top	MD	TVD	Description
Frio	35'	35'	Sands and Sanding Shale
Jackson	1,865'	1,865'	Swelling Shale
Cockfield	2,635'	2,635'	Sands and Sanding Shale
Cook Mountain	3,721'	3,721'	Swelling shale
Sparta	4,025'	4,025'	Unconsolidated Sand
Cane River	4,269'	4,269'	Swelling shale
Wilcox	4,660'	4,660'	Unconsolidated Sand
Lower Wilcox	6,275'	6,275'	Unconsolidated Sand
Midway	9,210'	9,210'	Swelling shale

TD criteria: 200' below Midway top

Directional

Section	MD	TVD	Inclination	Azimuth	DLS
Vertical Hold	0'	0'	0.00°	0.00°	-
	9,410'	9,410'	0.00°	0.00°	-

Abandonment Plugs

Surface	0'	100'	Normal Class A Neat psi
#5	2,380'	2,480'	Normal Class A Neat psi
#4	3,050'	3,350'	Normal Class A Neat psi
#3	3,621'	4,025'	CO2 Resistant Cement
#2	4,410'	4,710'	CO2 Resistant Cement
#1	6,025'	6,325'	CO2 Resistant Cement

Void between plugs filled with fresh water 9.0 ppg mud equivalent

STATE OF LOUISIANA
BRYAN K. BELL
License No. 41062
PROFESSIONAL ENGINEER

6/19/2024

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Interval	Hole	Make	Model	Motor	MWD	Stabilization
Surface						
Drillout						

Plugging Notes

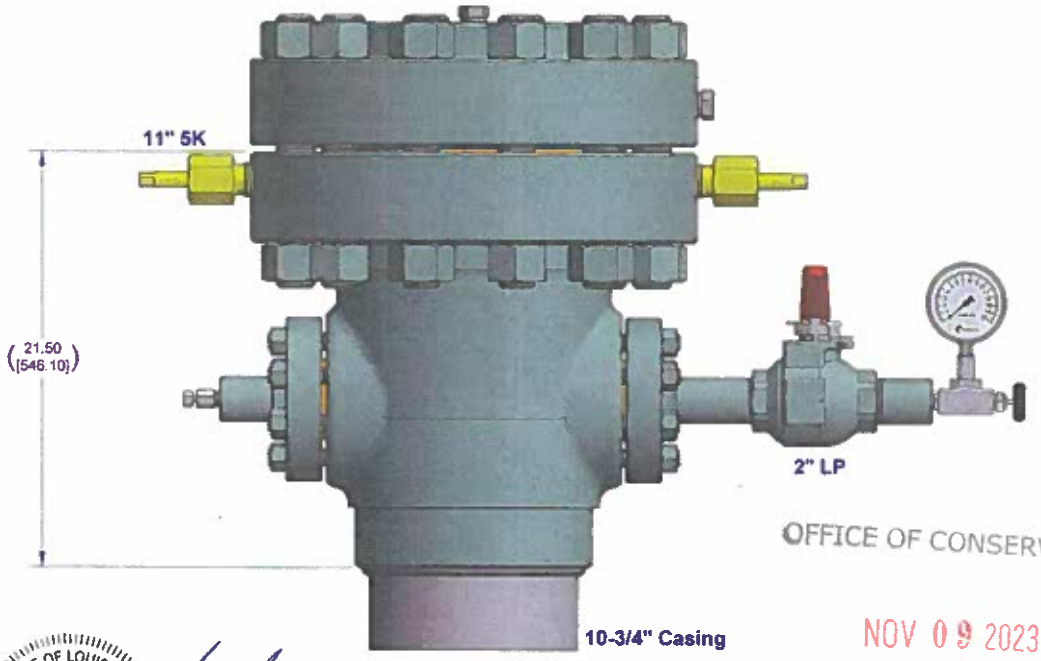
- cut off wellhead
- drop 1" circulation pipe to 100' circulate in 100' plug, pull pipe
- Cap well with Well Identification.

Total Depth: 9,510' MD

Contact List

BWW 06/15/2023

044668



OFFICE OF CONSERVATION

NOV 09 2023

INJECTION & MINING DIVISION

STATE OF LOUISIANA
BRYAN K. BELL
License No. 41052
PROFESSIONAL ENGINEER

11/3/2023
Terra Dynamics Incorporated
Professional Engineering Firm
EF6140

NOTE: This is a proposal drawing and dimensions shown are subject to change during the final design process.

CAMERON CONFIDENTIAL INFORMATION			
DO NOT SCALE		slb	SURFACE SYSTEMS
DRAWN BY: C. LOPEZ	DATE: 10/26/2023		
CHECKED BY: C. OATES	DATE: 10/26/2023	11" 5K IC-2-BP Conventional	
DRAWING NO.: QD-01-00482	REV: 01		

PLUGGING AND ABANDONMENT PLAN

A closure plan has been prepared for Aethon Energy Flowering Peach No. 1 that will be implemented following temporary abandonment if the well has reached the end of its useful life. Aethon Energy Flowering Peach No. 1 will be plugged and abandoned in accordance with Louisiana Statewide Order No. 29-N-1. Flowering Peach No. 1 to be in a state of temporary abandonment following drilling activities by placing cement plugs at 2,380 to 2,480 feet (across USDW), 3,100 to 3,300 feet (across surface casing shoe), 3,621 to 4,025 feet, 4,460 to 4,660 feet and 6,075 to 6,275 feet.

The proposed plugging and abandonment procedure is presented below:

1. Aethon Energy to submit to the commissioner a plan of plugging and abandonment which will include location, depth of plugs, type of cement and the general procedure for plugging. Await approval before commencing plugging and abandonment operations.
2. Aethon Energy to notify the commissioner by telephone at (225) 342-5540 and obtain work permit before commencing plugging and abandonment activities.
3. Prepare location for closure operations.
4. Install a digital pressure recorder on the casing. Pressure test the 10 ¾-inch casing from cement plug at 2,380 feet to surface to 300 psi for 30 minutes. Record test results.
5. Run 1-inch circulation pipe to 100 feet.
6. Rig up and pump approximately 47 sacks of Class A cement (1.18 ft^3/sk) through 1-inch circulation pipe. Pull pipe from well and wait on cement to cure for 12 hours. Top off with additional Class A cement as required to assure cement to surface.
7. Rig down and move out cementing equipment.
8. Cut off casing head and 20-inch and 10 ¾-inch casings below grade.
9. Weld a plate over the top of the 20-inch conductor casing.
10. Install a permanent marker on the surface above the well inscribed with the following information: operator's name, well class, well name and number, serial number, section, township, range, parish and date plugged and abandoned.
11. Submit a report of the closure to the LDNR.

STATE OF LOUISIANA
BRYAN K. BELL
License No. 41052
PROFESSIONAL ENGINEER

3/19/2024
Terra Dynamics Incorporated
Professional Engineering Firm
EF 6140

OFFICE OF CONSERVATION

MAR 19 2024

INJECTION & MINING DIVISION

TERRA DYNAMICS INC

The estimated costs for the Plugging and Abandonment Plan are presented below:

Flowering Peach No. 1 – Estimated Plugging and Abandonment Cost	
Casing pressure test	$500
Cementing services	$15,000
Excavation	$750
Welder	$1,000
Engineering/supervision charges	$7,500
Subtotal	**$24,750**
Contingency (5%)	$1,238
TOTAL	**$25,988**

3/19/2024
Terra Dynamics Incorporated
Professional Engineering Firm
EF 6140

AETHON

Via E-mail (info@la.gov)

Mr. Patrick Ragan
Injection and Mining Division
Louisiana Office of Conservation
617 North Third Street
Baton Rouge, Louisiana 70802

February 21, 2024

Re: Aethon Energy Operating LLC Application No. 446668 (Flowering Peach No. 001, Class V Stratigraphic Test Well) Responses to IT Analysis Questions

Dear Mr. Ragan,

On November 8th, 2023, Aethon Energy Operating LLC ("Aethon") applied to drill and complete a Class V stratigraphic test well, the Flowering Peach No. 001 (Application No. 44668), in Vernon Parish. The proposed well is intended to collect additional subsurface information that will aid in evaluating the appropriateness of the geographic area for subsurface carbon dioxide sequestration. Thereafter, on February 15th, 2024, Aethon was noticed on a call with your staff that a request to provide responses to the five questions that comprise a full IT analysis would be forth coming. Accordingly, Aethon provides the following answers.

1. **Have the potential and real adverse environmental effects of the proposed project been avoided to the maximum extent possible?**

The potential and real adverse environmental effects of Aethon's proposed Class V stratigraphic test well have been minimized or avoided to the maximum extent possible. After evaluation, Aethon has determined that there are no "real adverse environmental effects" from the proposed project. Nevertheless, Aethon evaluated the potential adverse environmental effects of the proposed project throughout the proposed project's development. (These are discussed further in response to IT Question No. 2.) Aethon implemented mitigation measures to minimize or avoid, to the maximum extent possible, these potential adverse environmental effects, as evidenced by Aethon's commitment to the following activities:

1. Refraining from conducting injectivity testing or otherwise injecting fluid into the proposed Class V stratigraphic test well.
    a. Aethon solely intends to use the well to collect cores and logging via wireline instruments, without injectivity testing.
        i. In line with this, the well will be open-hole completed at this stage, as reflected in the application.
    b. After drilling, the proposed well will be temporarily abandoned with cement plugs back to the surface casing.
2. Protecting the underground sources of drinking water (USDW) by setting surface casing in a shale at least 700' below the lowermost USDW formation and cementing the casing to surface in accordance with all applicable policies and regulations.
    a. The appropriate open-hole logs will be run and submitted to Louisiana Department of Energy and Natural Resources (LDENR)–Injection & Mining Division (IMD) for USDW determination prior to setting surface casing.

3. Setting the surface casing depth and size in such a manner to meet all, potential future options for the well, including if Aethon seeks to convert the stratigraphic test well into either a monitoring well or into an in-plume Class VI injection well.

    a. After drilling the well, Aethon will plug the well back to the surface casing using acid-resistant cement plugs. The acid-resistant cement plugs eliminate the risk of compromising the integrity of the plugs from any future, sequestered carbon dioxide.

    b. Aethon will then determine the viability of converting the stratigraphic test well into either a monitoring well or an in-plume Class VI injection well after evaluating the coring and logging results.

        i. Ultimately, if the proposed stratigraphic test well will not be converted, Aethon will plug the remaining portion of the proposed stratigraphic test well through use of a surface plug to cap the surface casing.

4. Mitigating any environmental pollution from stormwater runoff by filing a Notice of Intent for coverage under the Storm Water General Permit for Large Construction Activities with the Louisiana Department of Environmental Quality, which also requires the submission of a Stormwater Pollution Prevention Plan.

5. Implementing a closed-loop drilling system with waste disposal occurring at an appropriate disposal facility. A closed-loop drilling system will retain all drilling fluids, drilling mud, and drill cuttings, which will be collected for offsite disposal by a licensed and permitted third-party waste collection service. Aethon will also apply for any required Louisiana Department of Environmental Quality (LDEQ) approvals if it will be deemed a generator or transporter of such waste.

6. Utilizing the U.S. Fish & Wildlife Service's Information Planning and Consultation tool to detect any species listed or proposed for listing under the Endangered Species Act. Aethon will provide recommendations to avoid or mitigate impacts associated with any identified threatened or endangered species.

2. Does a cost benefit analyses of the environmental impact costs versus the social and economic benefits of the proposed project demonstrate that the latter outweighs the former?

Yes. A cost benefit analysis demonstrates that the social and economic benefits outweigh the environmental impact costs. Identifying potential locations for geologic sequestration of carbon dioxide will benefit society by enabling carbon capture and sequestration projects to reduce the emission of greenhouse gases into the atmosphere, as well as allowing for the continued development of low-carbon industrial and energy sites. Encouraging the development of such sites will provide economic benefits to Louisiana in the form of continued job and tax growth, as well as sustaining existing infrastructure in the energy sector. Identifying and studying potential locations for such sequestration is a necessary first step in the development of this critical tool against global warming.

The primary, potential environmental impact costs associated with the Class V well include (1) potential USDW endangerment and (2) potential pollution from drilling activities. Both potential impact costs have been minimized or avoided to the maximum extent possible by the fact that no injectivity testing will be done in connection with the proposed Class V well, by drilling the proposed Class V well below the lowermost USDW, and by implementing a closed-loop drilling system with waste disposal occurring at an appropriate disposal facility, among other things.

The fundamental purpose and benefit of the proposed Class V well is to collect geologic data required to fully evaluate the feasibility of the geologic sequestration of carbon dioxide in the vicinity of this location. (A Class V permit will not authorize the use of the well for the injection of carbon dioxide, and the permit will not authorize any waste disposal via injections using this well.) Aethon has already completed

preliminary assessments utilizing all publicly available data; however, site-specific data is not currently available. The proposed Class V well will serve the purpose of gathering the required site-specific data by collecting cores and wireline logging, which cannot be acquired via other means. The drilling and subsequent data collection and testing through this proposed Class V well is necessary for an adequate assessment of a potential future carbon dioxide sequestration project, which is a type of project that the Louisiana Legislature has expressly and unambiguously determined to be favored as a matter of Louisiana public policy.[1] Moreover, support for carbon dioxide sequestration is also found in Louisiana's Climate Action Plan, which offers, as recommended action item 5.3, "[s]upport [for] the safe and responsible deployment of carbon capture ... and storage for high-intensity and hard-to-abate emissions."[2]

3. Are there alternative projects which would offer more protection to the environment than the proposed project without unduly curtailing non-environmental benefits?

The proposed project has been carefully planned to evaluate the feasibility of developing a carbon dioxide sequestration project within a particular subsurface geology. There are no alternative projects to constructing a stratigraphic test well that will allow for the testing of subsurface geology to determine suitability for carbon dioxide sequestration.

4. Are there alternative sites which would offer more protection to the environment than the proposed site without unduly curtailing non-environmental benefits?

The site location for the proposed Class V well has been selected to acquire the required site-specific subsurface information needed to perform a proper feasibility assessment for developing a carbon dioxide sequestration project in the immediate vicinity of the proposed Class V well. The site has also been selected to avoid potential impacts to wetlands and coastal zones.

Because the purpose of the proposed stratigraphic test well is to gather subsurface, geologic data in the vicinity of the potential carbon dioxide sequestration site, requiring Aethon to consider alternatives far removed from the potential sequestration site would frustrate the purpose of the project. Neither LDENR nor Aethon is required to consider alternatives that would "unduly curtail[] non-environmental benefits" of the project.[3] The U.S. District Court for the Eastern District of Louisiana recognized that an applicant's "purpose of constructing a test well to obtain data regarding a specific target formation ... would be thwarted if the test well could not be constructed within the area known to contain the target formation.[4] The court went on to explain that "it was within the Corps' discretion to consider alternatives only within the area containing the target formation."[5] Accordingly, LDENR is not required to consider sites that would prevent the collection of subsurface data in the vicinity of the potential carbon dioxide sequestration site.

The location for the proposed stratigraphic test well was chosen over other alternative sites within the area of interest in light of potential environmental impacts and other factors. The chosen location for the proposed test well is ideally located within the reservoir, particularly because aerial surveying is limited for the specific location. Furthermore, Aethon adjusted the location to avoid potential impact to wetlands and coastal zones, in addition to accounting for potential drainage. The location also has limited visibility to adjacent landowner from publicly-accessible roadways. Finally, because the chosen location is located on

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[1] *See* La. R.S. § 30:1102(A) ("It is declared to be in the public interest for a public purpose and the policy of Louisiana that . . . [t]he geologic storage of carbon dioxide will benefit the citizens of the state and the state's environment by reducing greenhouse gas emissions.").

[2] Louisiana Climate Action Plan (February 2022), p. 60, found at Climate_Action_Plan_FINAL_3.pdf (louisiana.gov). The Louisiana Climate Action Plan further states:

> CCUS is anticipated to play a critical role in decarbonizing the global economy by addressing high-intensity and hard-toabate emissions that will be necessary to reach net zero. With expansive geologic storage potential, highly concentrated industrial corridors, and a trained workforce, Louisiana has potential for deployment of this technology and infrastructure. This is particularly true in the industrial sector, where high temperature processes cannot be readily transitioned to electrification or low-carbon alternatives and where process emissions from chemical reactions are unavoidable except with CCUS.

[3] *In re Rubicon*, 95-108, p. 8 (La. App. 3 Cir. 2/14/96); 670 So. 2d 475, 482 (quoting *Blackett v. Louisiana Department of Environmental Quality*, 506 So. 2d 749, 754 (La. App. 1 Cir. 1987) (internal quotation marks omitted).

[4] *Town of Abita Springs v. U.S. Army Corps of Eng'rs*, 153 F. Supp.3d 894, 921 (E.D. La. 2015).

[5] *Id.*

land owned by a timber company, there is existing access to the proposed site along a logging road, which will help limit the construction needed as part of the proposed project.

Aethon's plan for the future utility of the well, as outlined in the application, is to possibly convert the well to a monitoring well or an in-plume Class VI injection well, if the data and test results obtained from the proposed stratigraphic test well demonstrate that the site would be suitable for geologic sequestration of carbon dioxide. Any such conversion would be subject to future regulatory approval(s) of a carbon dioxide sequestration project and Class VI injection well. Therefore, the well location within the area of interest was also selected as an appropriate monitoring well and in-plume Class VI injection well location based upon initial reservoir modeling results. In so doing, Aethon hopes to minimize the number of additional wells that may be needed to support a possible future sequestration project. Ultimately, if the well will not be used as either a monitoring well or in-plume Class VI injection well, the stratigraphic test well will be plugged and abandoned in compliance with all regulatory requirements for same.

Due to the foregoing reasons for the specific site selection, there are no alternative sites which would offer more protection to the environment without unduly curtailing non-environmental benefits and otherwise compromising the purpose of this proposed Class V well.

5. Are there mitigating measures which would offer more protection to the environment that the proposed project without unduly curtailing non-environmental benefits?

As outlined in Question 1 and re-iterated here, the potential adverse environmental effects of Aethon's proposed Class V well have been minimized to the maximum extent possible. Environmental risks were considered throughout the proposed project development and mitigation measures are evident in Aethon's commitment to the following activities:

1. Refraining from conducting injectivity testing or otherwise injecting fluid into the proposed Class V stratigraphic test well.
    a. Aethon solely intends to use the well to collect cores and logging via wireline instruments, without injectivity testing.
        i. In line with this, the well will be open-hole completed at this stage, as reflected in the application.
    b. After drilling, the proposed well will be temporarily abandoned with cement plugs back to the surface casing.
2. Protecting the underground sources of drinking water (USDW) by setting surface casing in a shale at least 700' below the lowermost USDW formation and cementing the casing to surface in accordance with all applicable policies and regulations.
    a. The appropriate open-hole logs will be run and submitted to LDENR–IMD for USDW determination prior to setting surface casing.
3. Setting the surface casing depth and size in such a manner to meet all, potential future options for the well, including if Aethon seeks to convert the stratigraphic test well into either a monitoring well or into an in-plume Class VI injection well.
    a. After drilling the well, Aethon will plug the well back to the surface casing using acid-resistant cement plugs. The acid-resistant cement plugs eliminate the risk of compromising the integrity of the plugs from any future, sequestered carbon dioxide.
    b. Aethon will then determine the viability of converting the stratigraphic test well into either a monitoring well or an in-plume Class VI injection well after evaluating the coring and logging results.

i. Ultimately, if the proposed stratigraphic test well will not be converted, Aethon will plug the remaining portion of the proposed stratigraphic test well through use of a surface plug to cap the surface casing.

4. Mitigating any environmental pollution from stormwater runoff by filing a Notice of Intent for coverage under the Storm Water General Permit for Large Construction Activities with the Louisiana Department of Environmental Quality, which also requires the submission of a Stormwater Pollution Prevention Plan.

5. Implementing a closed-loop drilling system with waste disposal occurring at an appropriate disposal facility. A closed-loop drilling system will retain all drilling fluids, drilling mud, and drill cuttings, which will be collected for offsite disposal by a licensed and permitted third-party waste collection service. Aethon will also apply for any required LDEQ approvals if it will be deemed a generator or transporter of such waste.

6. Utilizing the U.S. Fish & Wildlife Service's Information Planning and Consultation tool to detect any species listed or proposed for listing under the Endangered Species Act. Aethon will provide recommendations to avoid or mitigate impacts associated with any identified threatened or endangered species.

Based upon the aforementioned, there are no mitigating measures which offer more protection to the environment than the Class V well as proposed, without unduly curtailing the non-environmental benefits.

Sincerely,

Aaron Wimberly,
Chief Health, Safety and Environmental Officer