

BEFORE THE INDUSTRIAL COMMISSION

OF THE STATE OF NORTH DAKOTA

IN THE MATTER OF A HEARING CALLED ON A MOTION OF THE COMMISSION TO CONSIDER THE APPLICATION OF CONTINENTAL OIL COMPANY FOR AN ORDER TO PERMIT THE INJECTION OF WATER INTO THE HEATH FORMATION THROUGH THE WOLFE-PAVLICEK "A" #1 WELL LOCATED IN THE SE SW OF SECTION 11, T140N, R96W, STARK COUNTY, NORTH DAKOTA, FOR THE PURPOSE OF MAINTAINING THE RESERVOIR PRESSURE, FOR SECONDARY RECOVERY OPERATIONS, AND FOR THE EFFICIENT AND UNITIZED CONTROL OF THE DICKINSON-HEATH UNIT.

CASE NO. 1515
ORDER NO. 1657

ORDER OF THE COMMISSION

BY THE COMMISSION:

Pursuant to legal notice this cause came on for hearing at 9:30 a.m. on the 13th day of December, 1977, in Bismarck, North Dakota, before the Industrial Commission of North Dakota, hereinafter referred to as the "Commission."

NOW, on this 12th day of January, 1978, the Commission, a quorum being present, having considered the testimony adduced, and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant is the operator of the Dickinson-Heath Unit, and the Wolfe-Pavlicek "A" #1 well which is outside of the boundaries of said unit.
- (3) That the applicant proposes to inject water into the Heath Formation through said well for the purpose of maintaining the reservoir pressure, for secondary recovery operations, and for the efficient and unitized control of the Dickinson-Heath Unit.
- (4) That all operators and owners within one-half mile of the proposed injection well have been advised of this application, and no objections to the application have been received by the Commission.
- (5) That the granting of this application would be in the interest of conservation, and protective of correlative rights.

IT IS THEREFORE ORDERED:

- (1) That Continental Oil Company is hereby permitted to inject water into the Heath Formation through the Wolfe-Pavlicek "A" #1 well located in the SE SW of Section 11, T140N, R96W, Stark County, North Dakota.

(2) That this order shall continue in full force and effect until further order of the Commission.

DONE, in Bismarck, North Dakota, this 12th day of January, 1978.

THE NORTH DAKOTA INDUSTRIAL COMMISSION



Arthur A. Link, Governor



Allen I. Olson, Attorney General

Myron Just, Commissioner of Agriculture

R 97 W

PATRICK PET. ET AL

BLOCO ET AL

CONOCO ETAL

CONOCO ET AL

CARDINAL
Kesting-State

F.L.B. et al

Ficek et al

Conoco et al

Conoco et al

PHILLIPS PET. ET AL

CONOCO ET AL

CONOCO ET AL

PHILLIPS
Dvorek-FLB

CONOCO
Pavlicek-Wolfe
14-11

CARDINAL
Pavlicek-Wolfe
15-11

F.J. Dvorek et al

Conoco et al

Conoco et al

140

DICKINSON UNIT OUTLINE
CONOCO OPER.

CARDINAL
Kadmas et al
5-15

CONOCO
Wolff-FLB
2

15

14

13

CARDINAL
Kralicek-Kadmas
15X

2

46

CONOCO
Wolff-FLB
1

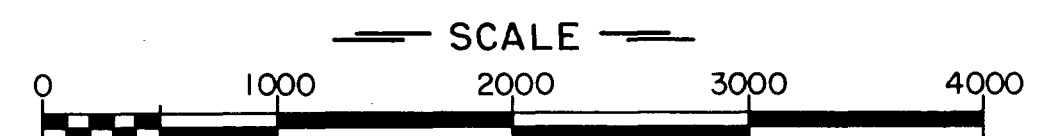
INDUSTRIAL COMMISSION
STATE OF NORTH DAKOTA
Date 12-13-77 Case No. 1515
Introduced by Conoco
Exhibit 1
Identified by C. Tarr

DICKINSON OIL FIELD

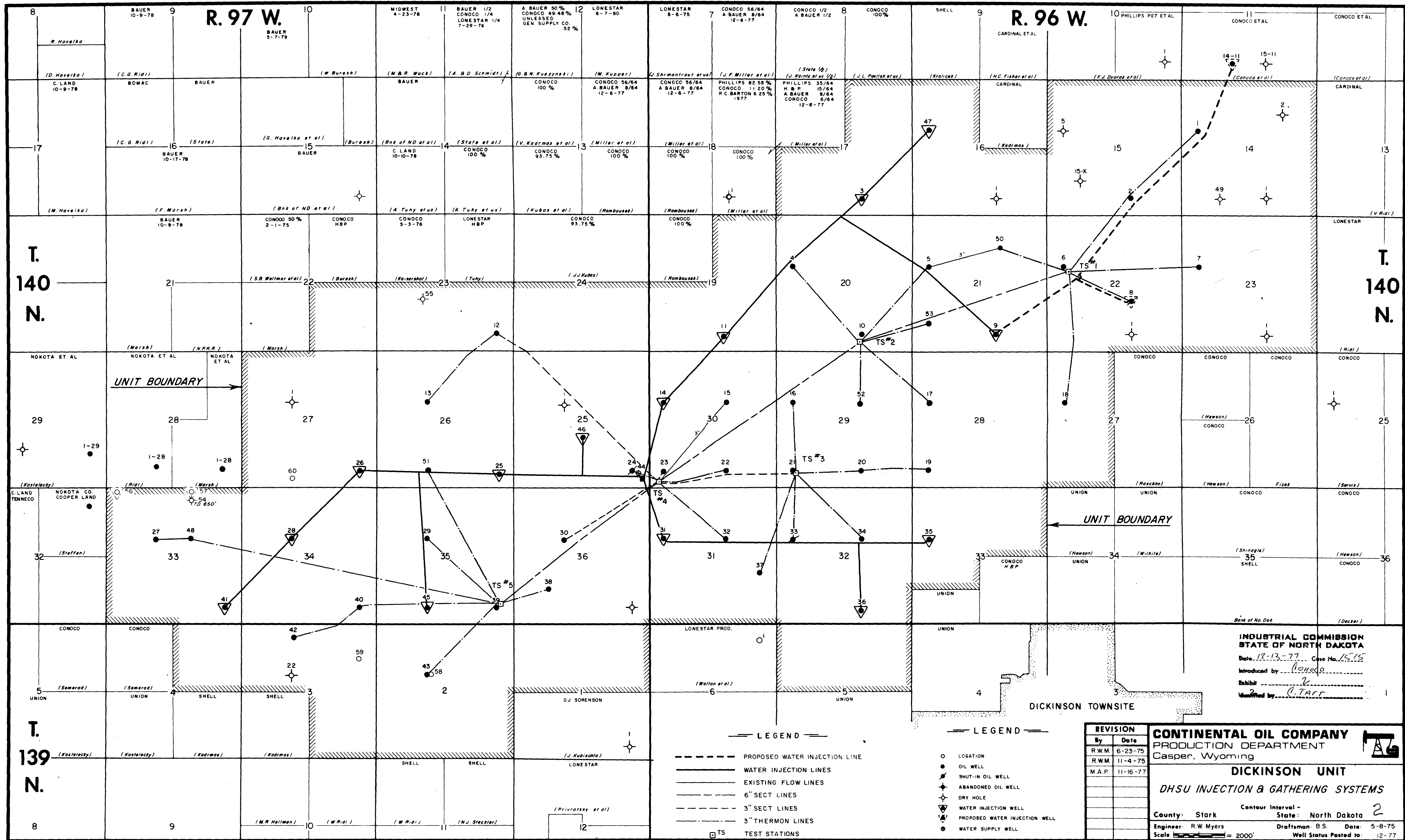
Stark Co.

Wyoming

Application to convert Pavlicek-Wolfe No 14-11
to a water injection well — Heath Sand



1



INDUSTRIAL COMMISSION
STATE OF NORTH DAKOTA

CASE NO. 1515

ON A MOTION OF THE COMMISSION TO CONSIDER THE)
APPLICATION OF CONTINENTAL OIL COMPANY FOR)
AN ORDER TO PERMIT THE INJECTION OF WATER)
INTO THE HEATH FORMATION THROUGH THE)
WOLFE-PAVLICEK "A" #1 WELL LOCATED IN THE SE SW)
OF SECTION 11, TOWNSHIP 140 NORTH RANGE 96 WEST,)
STARK COUNTY, NORTH DAKOTA, FOR THE PURPOSE)
OF MAINTAINING THE RESERVOIR PRESSURE, FOR)
SECONDARY RECOVERY OPERATIONS, AND FOR THE)
EFFICIENT UNITIZED CONTROL OF THE)
DICKINSON-HEATH UNIT.)

TRANSCRIPT

State Capitol Building
Bismarck, North Dakota
December 13, 1977

Met pursuant to notice at 9:30 a.m.

BEFORE THE NORTH DAKOTA STATE INDUSTRIAL COMMISSION

LEE GERHARD, Assistant State Geologist, conducted hearing.

APPEARANCES:

Gerald Vande Walle, Assistant Attorney General and Attorney for
Industrial Commission.
Wes Norton, Field Office Manager, North Dakota Geological Survey,
Jack Wilborn, Assistant Petroleum Engineer, North Dakota Geological
Survey.
Ernest Fleck, Attorney for Applicant, Fleck, Mather, Strutz and
Mayer, Ltd.
Charles Tarr, Senior Staff Engineer, Continental Oil Company.

LEE GERHARD: Case No. 1515. On a motion of the Commission to consider the application of Continental Oil Company for an order to permit the injection of water into the Heath Formation through the Wolfe-Pavlicek "A" #1 well located in the SE SW of Section 11, Township 140 North, Range 96 West, Stark County, North Dakota, for the purpose of maintaining the reservoir pressure, for secondary recovery operations, and for the efficient and

unitized control of the Dickinson-Heath Unit. All those who may wish to present testimony in this case take the oath. Do you swear to tell the truth, the whole truth and nothing but the truth? Proceed.

ERNEST FLECK: Ernest Fleck, P.O. Box 1436, Bismarck, North Dakota, hearing on behalf of Continental. What this is is merely a request by Continental, Continental is as you know the operator of the Dickinson Heath Unit in Stark County, and its their, its a request of Continental to take what we call the Wolfe-Pavlicek well its located in Section 11, Township 140 North, Range 96 West, Stark County and convert it from a producing well to an injection well. Now Continental has acquired the necessary interests in this well to accomplish this from a legal standpoint and we're proceeding here merely under the rules to get permission to convert it to an injection well. An application was filed with the Commission setting forth the details as required by the rules as to the casing program the amount of water to be injected and so on and let me say that notice has been given to all of the owners within one half mile of the proposed injection well as required by the rules. If you want witness who will summarize the proposed program. Charlie will you state your name for the record.

CHARLES TARR: Charles Tarr.

ERNEST FLECK: Where are you employed?

CHARLES TARR: Continental Oil Company.

ERNEST FLECK: What capacity?

CHARLES TARR: Senior Staff Engineer of the Casper Division, Casper, Wyoming.

ERNEST FLECK: Over the years Charlie, you have testified before this Commission and have been actively engaged in all the engineering work relating to the Dickinson Heath Unit. Is that correct?

CHARLES TARR: That is true.

ERNEST FLECK: And you have brought some exhibits with you here today?

CHARLES TARR: Yes.

ERNEST FLECK: We offer the further testimony of Mr. Tarr as that of an expert. Now would you briefly explain to the Commission what's depicted by these exhibits and what Continental, the operator of the Dickinson Heath Unit, wants to do.

CHARLES TARR: Our first exhibit is merely a land exhibit of the area which lies to the northeast of the Dickinson Heath Sand Unit which is shown on your second exhibit. The sketch of the Dickinson Heath Sand Unit formed in March 15, 1972, is a statutory unit. A well was drilled after the unit was formed immediately to the north of the northeast part of the Dickinson Heath Sand Unit boundary. Cardinal Petroleum drilled the Wolfe-Pavlicek-Wolfe 15-11 as a dry hole, and as exception location they drilled the Wolfe-Pavlicek 14-11, but that was a farmout from Cardinal to Patrick, subsequently Patrick sold it to Continental and at statutory payout

Cardinal came back in for 25 percent working interest; Cardinal Petroleum sold out to Phillips so Phillips has the same 25 percent working interest _____ . We tried to expand the unit but under the statutory laws of North Dakota we couldn't make the expansion in any equitable way to meet the requirements of the royalty owners, and the Commission. There wasn't any equitable way to expand the unit because the factors we based the unit upon such as accumulative production and things like that, wouldn't give, if we applied them to the Wolfe-Pavlicek well, wouldn't give an equitable way to expand the unit. So Continental went out and bought the working interests of Patrick and bought the royalty interests of all parties down to the base of, the top of the Otter Formation which is just immediately below the Heath Sand which is the unitized sand. But we own the minerals in the south half of 11 and in buying minerals we had to buy some others around but we're only concerned with the ownership of the south half of 11 which is a pooled tract communitized as to production. The well will be sold to the unit working interest owners so the working interest working owners in the unit will own the same share of mineral ownership in the south half as they own in the unit.

LEE GERHARD: Excuse me Charlie but shouldn't that read Range 96 West?

CHARLES TARR: Oh, ah.

GERALD VANDE WALLE: Up at the top, we're having some trouble correlating the two exhibits.

CHARLES TARR: I'm sorry, we did these rather hurriedly, it should be 96. Anyway the working interest owners in the Dickinson Heath Sand Unit will ultimately own the same share of the minerals that they own the working interest ownership in the unit. So in effect the working interest owners in the unit will own the well so they can do with it what they want legally with the minerals. Continental has agreed to sell its working interests to the unit owners and we have a letter of agreement worked up from Phillips where when we make this transaction, they will get through an investment adjustment exchange their ownership for a mineral ownership. Phillips owns about the same share of the unit in Dickinson Heath Sand Unit working interest ownership as they have a net interest in the well, so this would be a small investment adjustment for them. We intend to expand our water flood system which shows on our second exhibit the dotted line to add injection wells No. 8 inside the unit and the Wolfe-Pavlicsek well. By expanding the unit we'll be able to water flood an area which we cannot now water flood in the Dickinson Heath Sand Unit and recover approximately 200,000 barrels of oil which we would be unable to recover with the present well configuration.

ERNEST FLECK: Now the casing program and the volumes of water proposed to be injected and so on as set forth in the application are accurate without going into detail?

CHARLES TARR: Yes, they are approximately accurate.

ERNEST FLECK: OK. And you feel then that this is in the best interests of the efficient operation of the Dickinson Heath Unit?

CHARLES TARR: Yes, it will recover as I said, approximately 200,000 barrels of additional oil which we wouldn't be able to recover otherwise. At \$11.00 per barrel, it will be economic and by the unit interest owners owning the royalty under the south half of 11 and the correlative rights of all parties will be protected, in fact the royalty owners in the Dickinson Heath Sand Unit will be recovering additional oil - royalty on additional oil they wouldn't receive otherwise.

ERNEST FLECK: Well, it will be unit oil so everybody will participate.

GERALD VANDE WALLE: What did you say about and I think you did and it went over my head Charlie, about understand about the working interest owners, about the mineral owners, the fee owners?

CHARLES TARR: Ah.

GERALD VANDE WALLE: You know in 11.

CHARLES TARR: We bought them out.

GERALD VANDE WALLE: Oh I see I didn't hear it.

ERNEST FLECK: In other words the well is still producing a few barrels of oil so the best thing is to just buy them out.

CHARLES TARR: It was still producing oil. When we convert it the working interest owners in the unit will own the minerals under it. So any oil that's produced will be produced from unitized wells and become unit oil.

ERNEST FLECK: We don't have anything else. We offer into evidence Continental's Exhibits 1 and 2.

LEE GERHARD: Exhibits accepted. Are there any other questions or any other testimony for this case. If not, the Commission will take it under advisement.

STATE OF NORTH DAKOTA)
)
COUNTY OF BURLEIGH)

I CERTIFY that the record of this hearing was made under my direction, and that the foregoing is a true and correct transcript of the original tape recording of said hearing; that no alterations or additions have been made to the record; and that this transcript thereof is true and correct to the best of knowledge and belief.

DONE at Bismarck, North Dakota, this 6th day of May, 1985.

Jack Wilborn
Jack Wilborn
Deputy Enforcement Officer

STATE OF NORTH DAKOTA)
)
COUNTY OF BURLEIGH)

I HEREBY CERTIFY that the foregoing is a true and correct transcript of the original tape recording of said hearing, and a full and complete statement of the testimony and other proceedings which it purports to contain.

DONE at Bismarck, North Dakota, this 6th day of May, 1985.

Tracy Perrus
Tracy Perrus

1515

LAW OFFICES OF
FLECK, MATHER, STRUTZ & MAYER, LTD.
SIXTH FLOOR, DAKOTA NORTHWESTERN BUILDING
P. O. BOX 1436
BISMARCK, NORTH DAKOTA 58501

ERNEST R. FLECK
RUSSELL R. MATHER
WILLIAM A. STRUTZ
THOMAS A. MAYER
WARREN H. ALBRECHT, JR.
GARY R. WOLBERG

TELEPHONE
(701) 223-6685

November 22, 1977

Mr. Gerald VandeWalle
First Assistant Attorney General
Capitol Building
Bismarck, ND 58505

Dear Jerry:

In re Continental Oil Application
Our File No. 12629

Enclosed herewith are original and one manually signed copy of the subject application. Copies have this day been delivered to Mr. Norton at the Bismarck Survey office and mailed to Grand Forks, as well as the parties named in the Application.

Very truly yours,

Ernest R. Fleck
ERNEST R. FLECK *jr*

jn
Enclosures

Xc Mr. Wes Norton w/enclosure
Mr. Jack Wilburn w/enclosure
Continental Oil Company w/enclosure

BEFORE THE INDUSTRIAL COMMISSION
OF THE STATE OF NORTH DAKOTA

IN THE MATTER OF THE APPLICATION)
OF CONTINENTAL OIL COMPANY FOR AN)
ORDER PERMITTING THE INJECTION OF)
WATER INTO THE HEATH FORMATION IN)
THE WOLFE-PAVLICEK WELL LOCATED IN)
THE SE $\frac{1}{4}$ SW $\frac{1}{4}$ OF SECTION 11, TOWNSHIP)
140 NORTH, RANGE 96 WEST, STARK)
COUNTY, NORTH DAKOTA, FOR THE PUR-)
POSE OF MAINTAINING RESERVOIR)
PRESSURE, FOR SECONDARY RECOVERY)
OPERATIONS AND FOR THE EFFICIENT)
UNITIZED MANAGEMENT AND CONTROL OF)
THE DICKINSON-HEATH UNIT.)

A P P L I C A T I O N

CASE # 1515

COMES NOW the Applicant, Continental Oil Company, and respectfully alleges:

I.

That it is the operator of the Dickinson-Heath Unit in Stark County, North Dakota, and of the Wolfe-Pavliceck Well located in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 11, Township 140 North, Range 96 West, Stark County, North Dakota, which is outside of the boundaries of the said unit.

II.

That attached hereto is a plat showing the location of oil and gas wells abandoned and drilling wells and dry holes and the names of the operators and owners within one-half mile of the proposed input well.

III.

The formation from which wells are producing or have produced is the Heath Sand.

IV.

The log of the input well is attached hereto.

V.

A description of the proposed input wells casing or the

1 proposed casing program and proposed methods for testing casing before
2 use of the input well is as follows:

- 3 (a) Surface 8-5/8", 24#, set at 639 feet and cemented with
4 300 sacks of cement. Long string 7900 ft., 5-1/2", 17#,
5 set at 7900 feet and cemented with 510 sacks of cement.
- 6 (b) The casing will not be tested. Water injection will be
7 down the internally plastic coated 2-7/8 E.U.E tubing
8 with a packer set immediately above the perforation.
9 The casing tubing annulus will be filled with inhibited
10 water to prevent corrosion. The casinghead will be
11 provided with a pressure vacuum gauge so if the packer
12 becomes unseated or a tubing leak develops, the change
13 in pressure will be noted on the pressure gauge.

14 VI.

15 Water from the Dakota Formation and produced water from the
16 Heath Sand will be injected at rates between 250 and 750 barrels per
17 day. The water under pressure of 2400 psi will be pumped from the
18 Dickinson Unit water flood plant located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 25,
19 Township 140 North, Range 97 West, Stark County, North Dakota.

20 VII.

21 Continental Oil Company, the applicant, will be the operator
22 of the injection well.

23 VIII.

24 Continental Oil Company is the only operator in the Dickinson
25 Heath Field. The names and addresses of all owners within one-half
26 mile of the injection well, other than Continental Oil Company, are
27 as follows:

28 Bloco, Inc.
29 P. O. Box 1476
30 Bismarck, ND 58501
31 Attention Arthur C. Bauer

32 Phillips Petroleum Company
33 Security Life Bldg.
34 Denver, CO 80202
35 Attention T. C. Doughty

36 Patrick Petroleum Corporation
P. O. Box 747
Jackson, MI 49204
Attention G. D. Simon, Vice president of Production

A copy of this application has this day been mailed to the
above named parties at the addresses indicated.

1 Dated at Bismarck, North Dakota, this 22nd day of November,
2 1977.

3 CONTINENTAL OIL COMPANY

4 FLECK, MATHER, STRUTZ & MAYER, Ltd.
5 Attorneys for the Applicant
6 6th Floor, Dakota Northwestern Bldg.
7 Bismarck, ND 58501

8 By 
9 Ernest R. Fleck

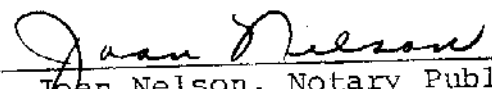
10 STATE OF NORTH DAKOTA)
11 :SS
12 COUNTY OF BURLEIGH)

13 Ernest R. Fleck, being first duly sworn on oath, deposes
14 and says that he is the attorney for the applicant herein named, that
15 he has read the above and foregoing application, knows the contents
16 thereof, and the same is within the knowledge of the affiant, and that
17 the same is true to the best of his knowledge, information and belief.

18 
19 Ernest R. Fleck

20
21 Subscribed and sworn to before me this 22nd day of November, 1977.

22
23
24 ((SEAL))

25 
26 Joan Nelson, Notary Public
27 Burleigh County, North Dakota
28 My Commission Expires: 11-25-81
29
30
31
32
33
34
35
36

R 97 W

PATRICK PET. ET AL

BLOCO ET AL

CONOCO ETAL

CONOCO ET AL

CARDINAL
Kesting-State

Ficek et al

Conoco et al

Conoco et al

F.L.B. et al
PHILLIPS PET. ET AL

CONOCO ET AL

CONOCO ET AL

PHILLIPS
Dvorek-FLB

CONOCO
Pavlicek-Wolfe
14-11

CARDINAL
Pavlicek-Wolfe
15-11

F.J. Dvorek et al

Conoco et al

Conoco et al

140

DICKINSON UNIT OUTLINE
CONOCO OPER.

CARDINAL
Kadmas et al
5-15

CONOCO
Wolff-FLB
2

15

14

13

CARDINAL
Kralicek-Kadmas
15 X

2

46

CONOCO
Wolff-FLB
1

DICKINSON OIL FIELD

Stark Co.

Wyoming

Application to convert Pavlicek-Wolfe N°14-11
to a water injection well — Heath Sand

SCALE



PATRICIA PETROLEUM COMPANY		PATRICIA PETROLEUM COMPANY	
WELL - MOLEE-PAVILICKS NO. 10-11		WELL - MOLEE-PAVILICKS NO. 10-11	
FIELD - DICKINSON		FIELD - DICKINSON	
COUNTY - SIOUX		COUNTY - SIOUX	
STATE - NORTH DAKOTA		STATE - NORTH DAKOTA	
Location SE/SM		Location SE/SM	
Sec. 11 Twp. 140N Rge. 90E		Sec. 11 Twp. 140N Rge. 90E	
Slat 2454		Slat 2454	
KB 11 ft Above Perm. Datum		KB 11 ft Above Perm. Datum	
KB 11		KB 11	
6-30-73		6-30-73	
ONE		ONE	
7920		7920	
7924		7924	
7922		7922	
6400		6400	
8-3/8 639		8-3/8 639	
7-7/8		7-7/8	
SALT GEL		SALT GEL	
10.4 120		10.4 120	
7.00		7.00	
FLOWLINE		FLOWLINE	
11 85 F		11 85 F	
107 85 F		107 85 F	
13 85 F		13 85 F	
2 110/85		2 110/85	
5641 WLSIN		5641 WLSIN	
ELIAS		ELIAS	

The well name, location and borehole reference data were furnished by the customer.

CHANGES IN MUD TYPE OR ADDITIONAL SAMPLES		SCALE CHANGES	
Date	Sample No.	Type Log	Depth
Depth - Driller			
Type Fluid in Hole			
Dens.	Visc.		
Fluid Loss			
Source of Sample			
At 10 Meas. Temp.	(0)	F	
Ref. 10 Meas. Temp.	(0)	F	
Ref. 10 Meas. Temp.	(0)	F	
Source, Ref. 10 Meas.			
Ref. 10 BHT	(0)	F	
Ref. 10 BHT	(0)	F	
Ref. 10 BHT	(0)	F	

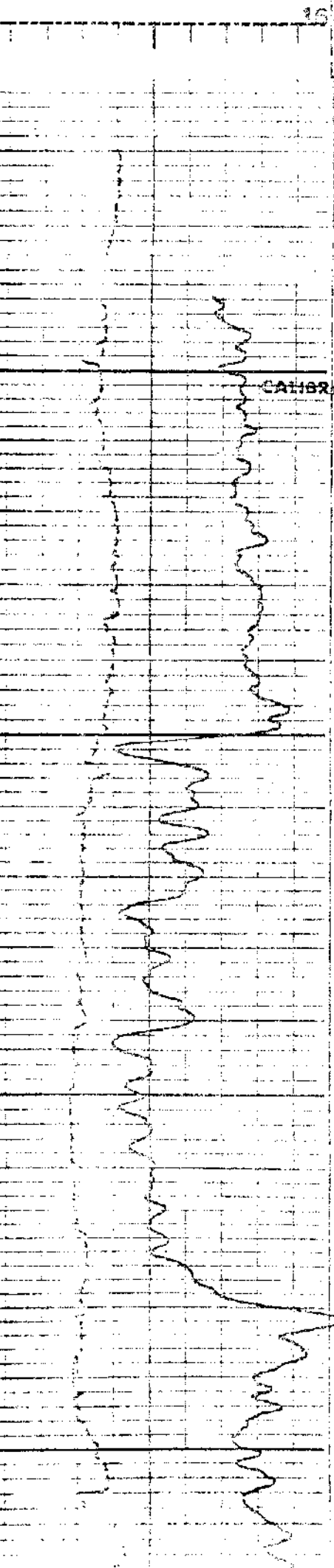
EQUIPMENT DATA		REMARKS	
Job No.	ONE	Service Order No.	25477
Job Panel No.	SLP-10-517	API Sealoff No.	
Sonic Cart No.	SLC-DA-801		
Sonic Sonde No.	SLS-4-585		
Mam. Panel No.	MMP-3-277		
S.R. Cart No.	CRG-483-57		
S.R. Panel No.	RGF-EE-422		
Caliper No.	VCO-0-1118		
Tool No.			
Cent. Device	SPRING & VCO		
Stand off - inches			
Time Const. - Sec.			
Speed - FPM	60		

CALIBRATION DATA		SOURCE		DIVISION		STATUS	
CALIBRATION	BACKEND	100	100	100	100	100	100
GAMMA RAY	40	450	100	100	100	100	100

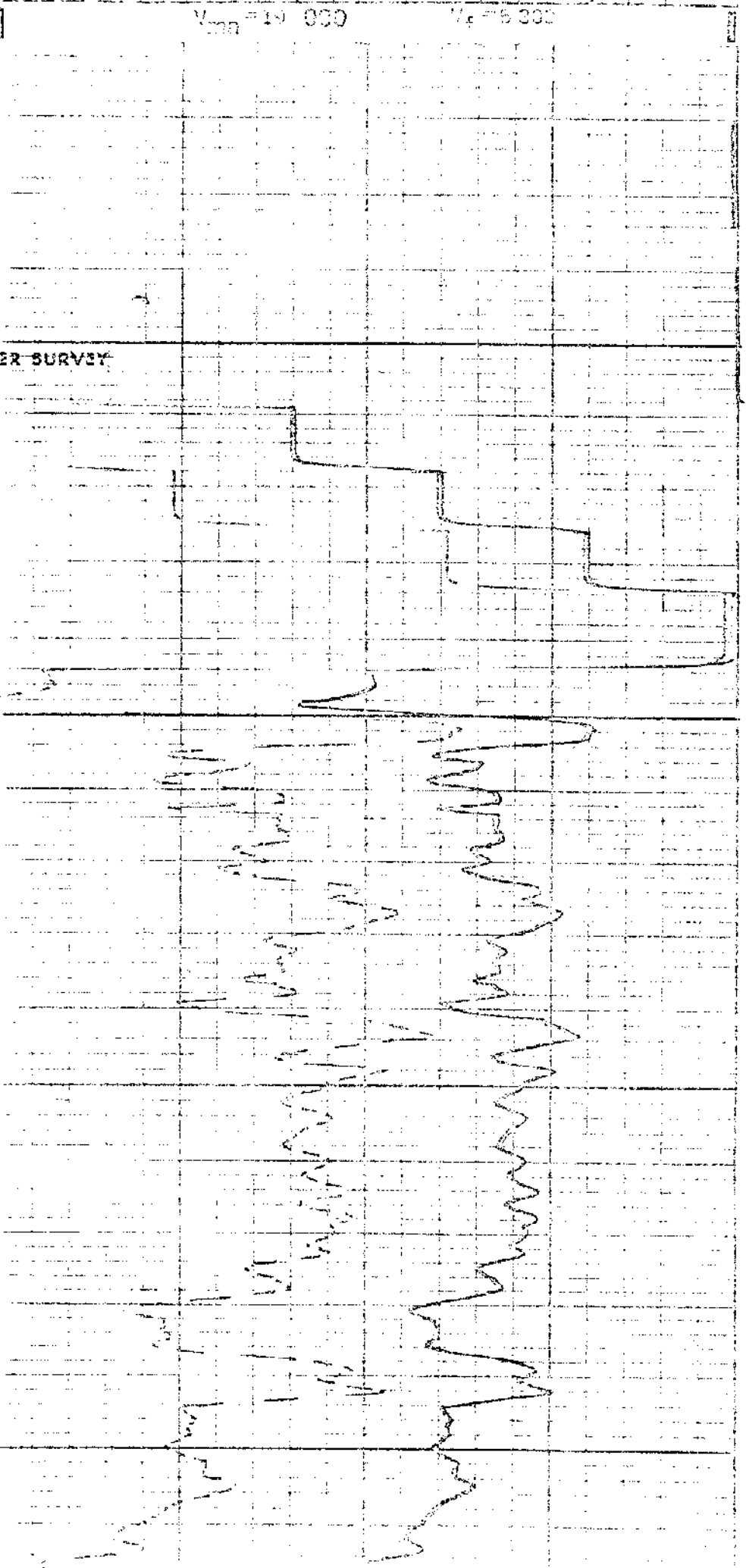
All interpretations and opinions based on information from the customer and are not guaranteed. The customer is responsible for the accuracy of the information provided. The company is not responsible for the accuracy of the information provided.

100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900
2000
2100
2200
2300
2400
2500
2600
2700
2800
2900
3000
3100
3200
3300
3400
3500
3600
3700
3800
3900
4000
4100
4200
4300
4400
4500
4600
4700
4800
4900
5000
5100
5200
5300
5400
5500
5600
5700
5800
5900
6000
6100
6200
6300
6400
6500
6600
6700
6800
6900
7000
7100
7200
7300
7400
7500
7600
7700
7800
7900
8000
8100
8200
8300
8400
8500
8600
8700
8800
8900
9000
9100
9200
9300
9400
9500
9600
9700
9800
9900
10000

CALIPER
HOLE DIAM. IN INCHES



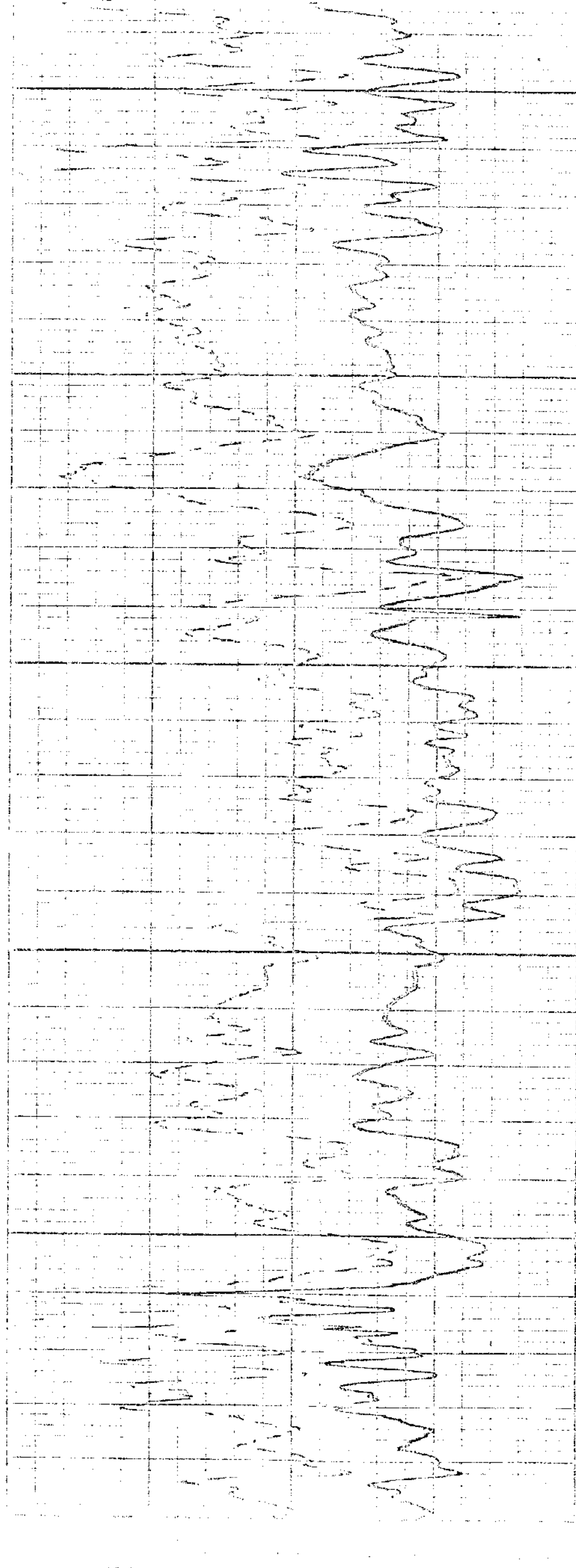
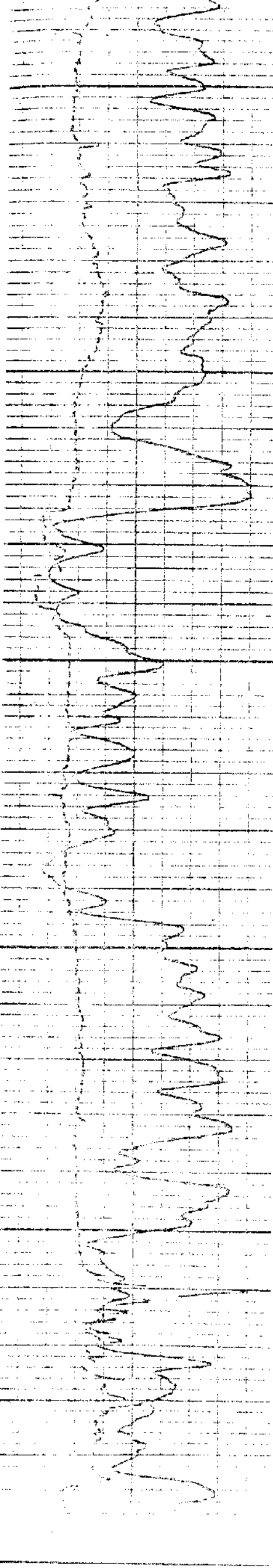
140 80 40
240 100 140
30 20 10 0 -10
SANDSTONE POROSITY—%

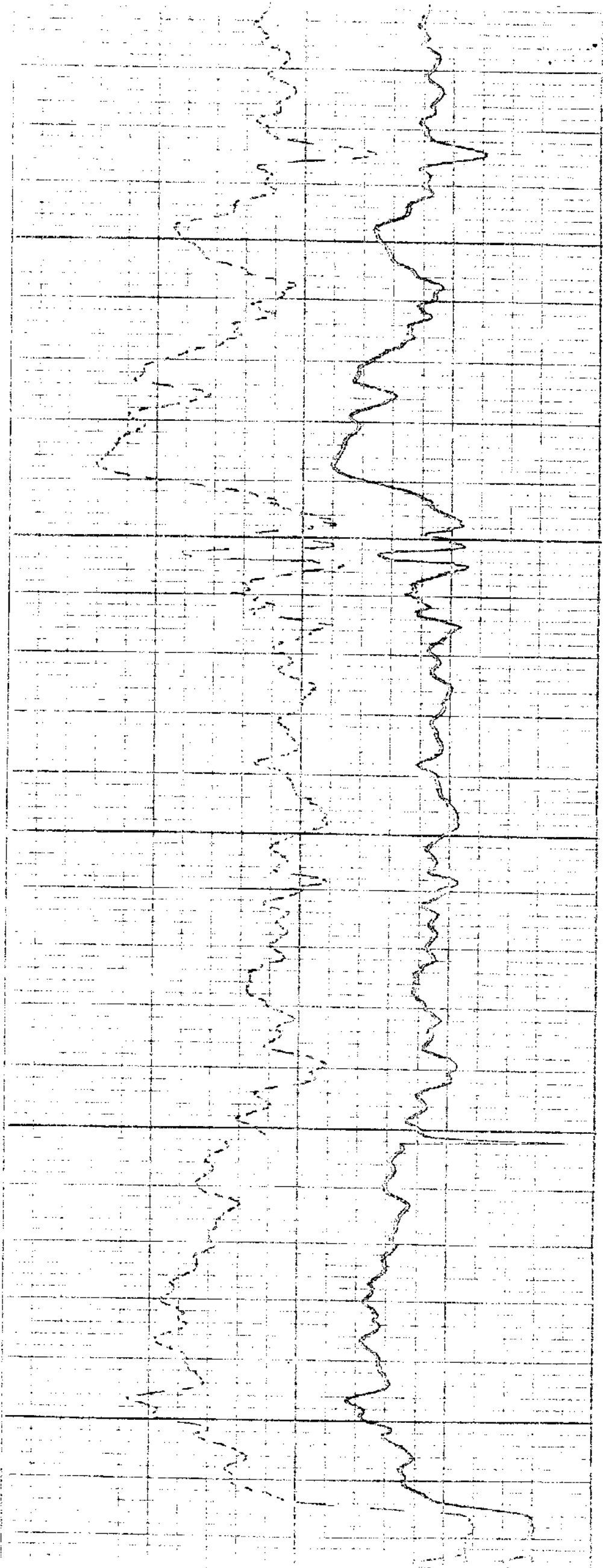


CALIBRATION AFTER SURVEY

6400

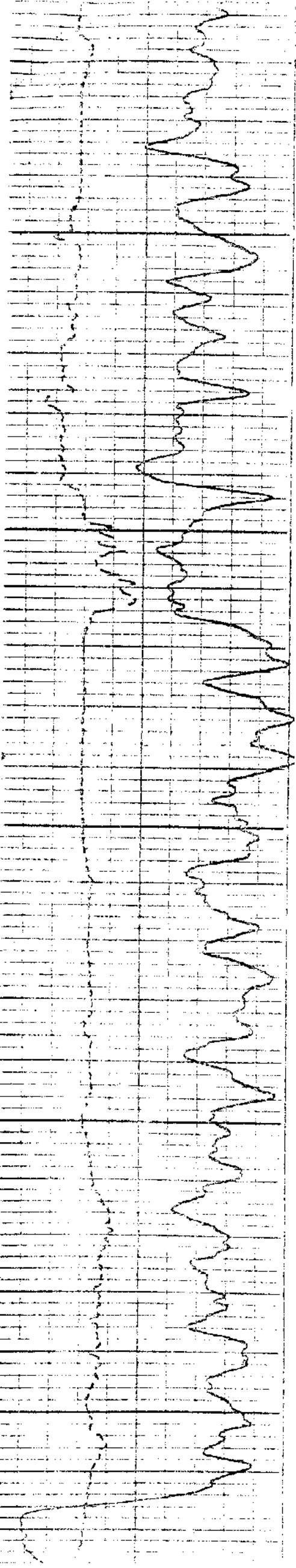
6500

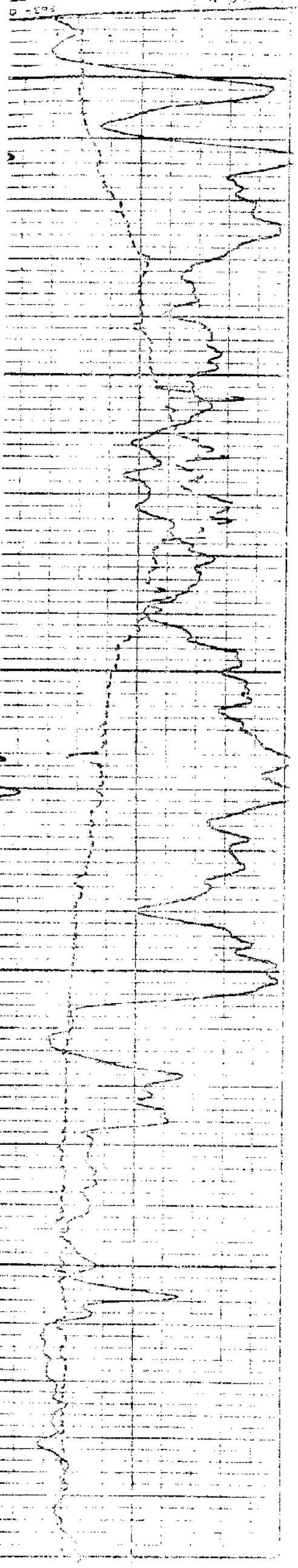
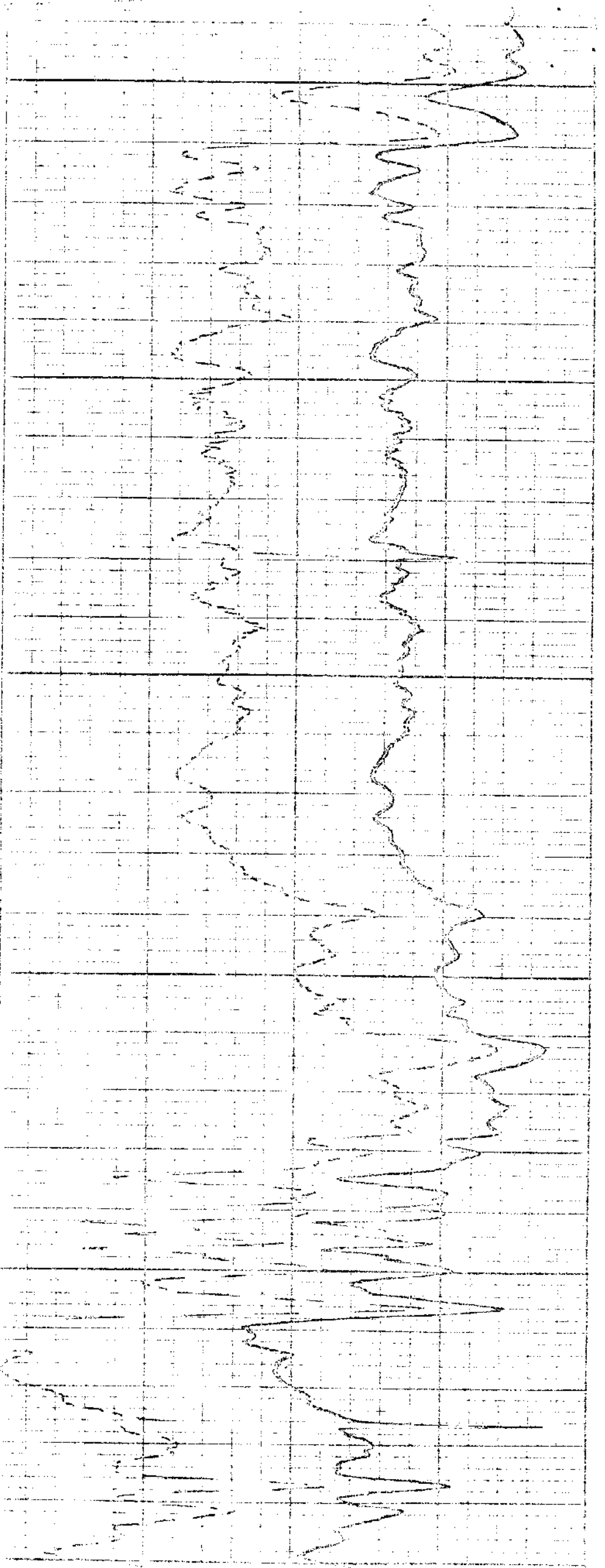


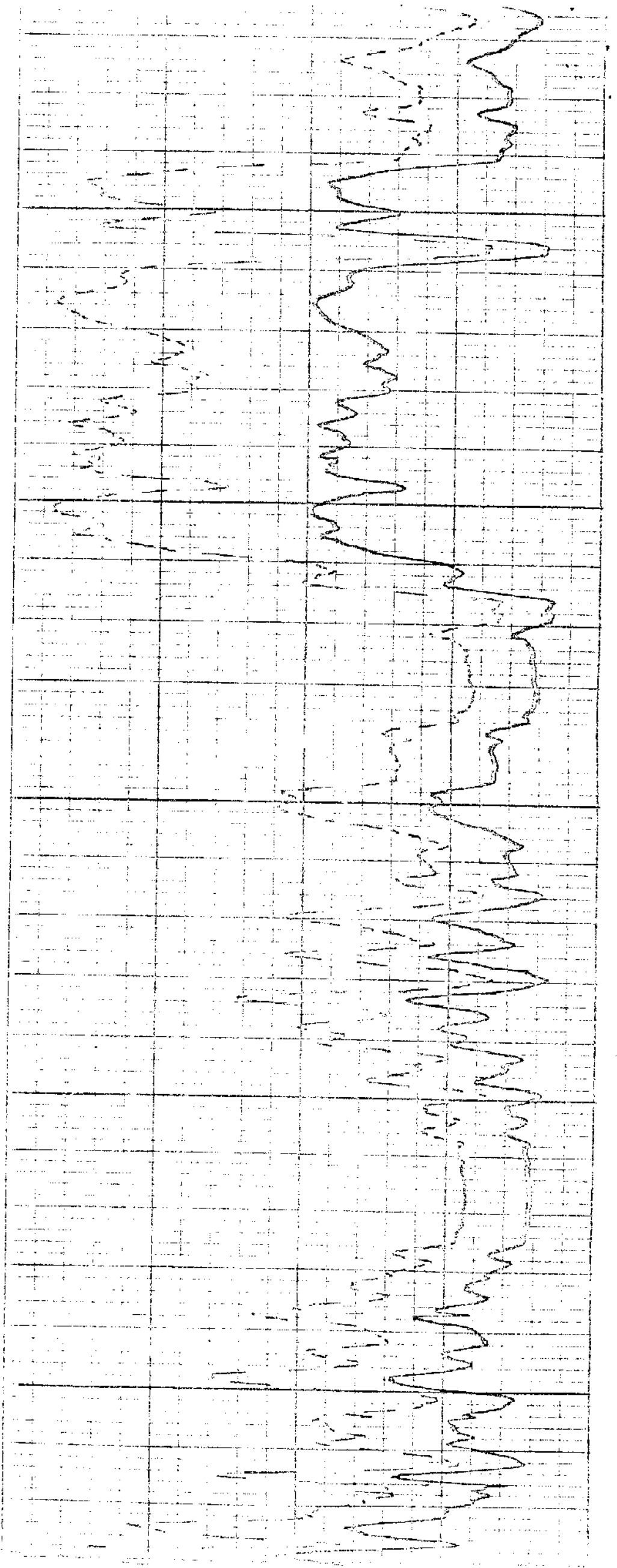


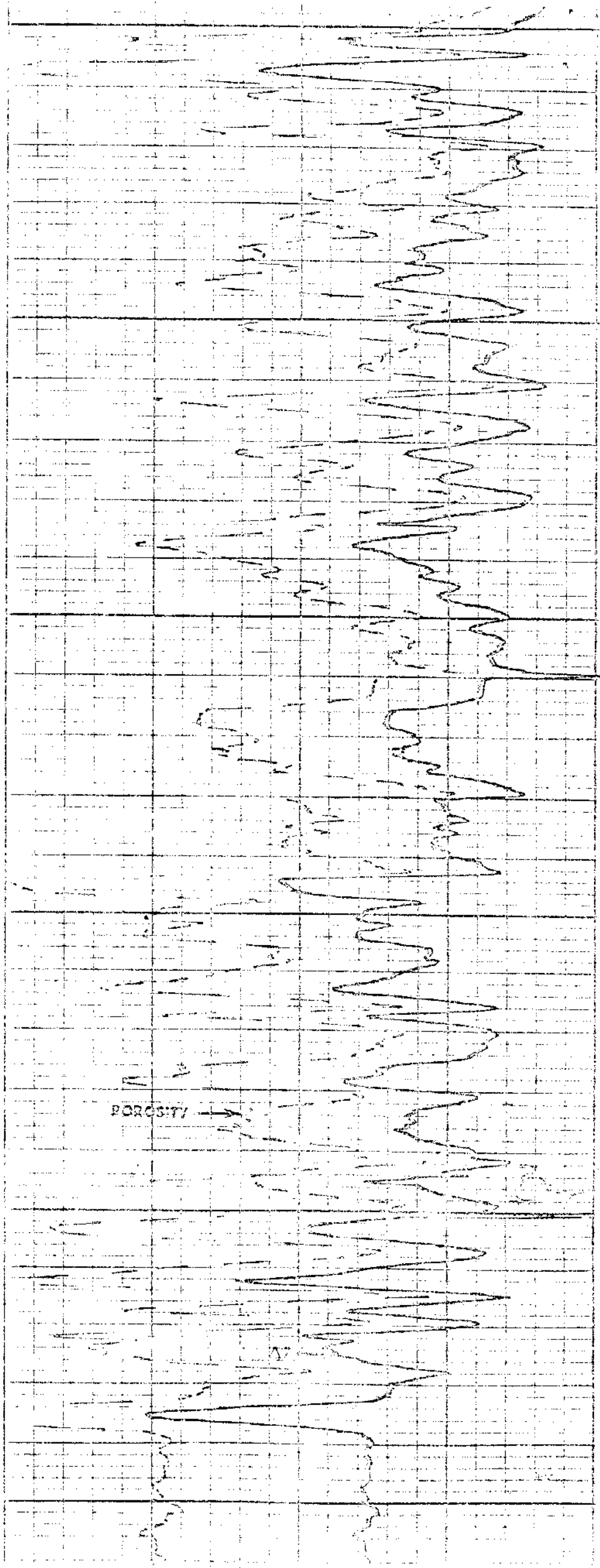
6300

7000





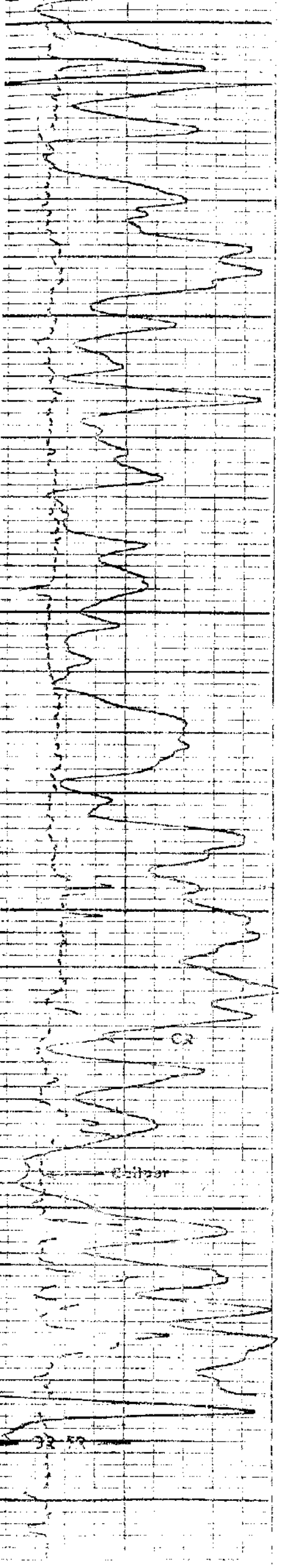




7700

7800

7900



668
Date 12-5-77

2
HAROLD NELSON
State Printer

CERTIFICATE OF PUBLICATION #1515
THE DICKINSON PRESS
Dickinson, North Dakota

STATE OF NORTH DAKOTA, }
County of Stark. }

Gloria Foster, of said state and county, being first duly sworn, on oath says: That she is the Bookkeeper of the Dickinson Press, Inc., publisher of THE DICKINSON PRESS, a daily newspaper of general circulation, printed and published at Dickinson, in said county and state, and has been such during the time hereinafter mentioned; and that advertisement headed Notice Of Publication

NOTICE OF PUBLICATION
N. D. INDUSTRIAL COMMISSION
BISMARCK, NORTH DAKOTA
The State of North Dakota by its Industrial Commission hereby gives notice pursuant to law and the rules and regulations of said Commission promulgated thereunder of the following public hearing to be held at 9:30 a.m. on December 13, 1977, in the Large Hearing Room, Capitol Building, Bismarck, North Dakota, before the Industrial Commission or any member thereof as an Examiner.
STATE OF NORTH DAKOTA TO:
All named parties and persons having any right, title, interest or claim in the following case and notice to the public.
CASE NO. 1515: On a motion of the Commission to consider the application of Continental Oil Company for an order to permit the injection of water into the Heath Formation through the Wolfe-Pavlicek "A" No. 1 well located in the SE SW of Section 11, T. 140 N., R. 96 W., Stark County, North Dakota, for the purpose of maintaining the reservoir pressure, for secondary recovery operations, and for the efficient and unitized control of the Dickinson-Heath Unit.
(Published November 29, 1977)

a printed copy of which is hereunto annexed, was printed and published in THE DICKINSON PRESS, and in the regular and entire issue of each and every number 1 consecutive weeks, commencing on the 29 day of November A. D. 19 77, and ending on the 29 day of November A. D., 1977, both inclusive.

Gloria Foster
Sworn to and subscribed to before me this 29 day of Nov A. D. 1977

ED J. HAUCK
Notary Public, STARK COUNTY, N. DAK.
My Commission Expires JUNE 7, 1979