JOHN R. MALOY, Executive Director

South Florida
Water Management District

POST OFFICE BOX "V", WEST PALM BEACH, FLORIDA 33402

TELEPHONE (305) 686-8800

IN REPLY REFER TO:

August 21, 1979

Mr. Charles O. Morgan, P.E.
The Deltona Corp.
P.O. Box 68
Marco Island, FL 33937

Dear Mr. Morgan:

Thank you for sending me copies of CH2M Hill's reports and logs on your well at Caxambas point on Marco Island.

I will try to send you suggested plugging depths and procedures later this week. In the meantime I am enclosing a more complete list of licensed drillers in your area that I am sure would be qualified to execute any plugging operations.

Although it is not necessary, I would like to be present when the well is plugged for my own personal information and would appreciate a day or two notice.

Sincerely,

J. BRUCE MACKELDUFF,
Supervising Hydrogeologist
Groundwater Division
Resource Planning Department

JBM/js
Enclosure

ROBERT L. CLARK, JR.
Chairman - Fort Lauderdale

ROBERT W. PADRICK
Vice Chairman - Fort Pierce

W. J. SCARBOROUGH
Lake Placid

R. HARDY MATHESON
Miami

BEN SHEPARD
Hialeah

STANLEY HOLE
Naples

MAURICE L. PLUMMER
Fort Myers

NATHANIEL REED
Hobe Sound

J. NEIL GALLAGHER
St. Cloud

JOHN L. HUNDLEY
Pahokee

Deltona

P.O. Box 68
Marco Isl.
FL. 33937

August 16, 1979

RECEIVED

AUG 2 0 1979

SOUTH FLORIDA WATER
MANAGEMENT DISTRICT

Mr. Bruce Mackleduff
South Florida Water Management District
P.O. Box V
West Palm Beach, FLorida 33402

Dear Mr. Mackleduff:

I am enclosing 2 copies of the report prepared for us on the well at Caxambas point on Marco Island.

We are very anxious to proceed with the proper capping of this well and certainly appreciate your offer to advise us of the necessary depth and manner of capping.

After recieving your recommendation we will contact Mr. Miller of Ft. Meyers and Mr. Brawley of Naples for a quotation to proceed with this project. We will notify you of the expected starting date and also when the project has been completed.

If you would like to make a personal inspection during the capping process, please advise.

Yours truly

Charles O. Morgan PE
Resident Engineer

COM/la

CC:
D. Scharr
J. Abrams

TERMINATION OF ARTESIAN WELL AT CAXAMBAS POINT

Prepared For

THE DELTONA CORPRATION

Prepared By

CH2M HILL
1063 Fifth Avenue, North
Naples, Florida

18 July 1979

Project No. NA12833.A0

CH2M HILL
engineers
planners
economists
scientists

18 July 1979

NA12833.A0

The Deltona Corporation
P.O. Box 68
Marco Island, Florida 33937

ATTENTION: Mr. John H. Abrams

SUBJECT: Artesian Well at Caxambas Point

Gentlemen:

In accordance with our agreement of 4 June 1979, we are submitting this report as a result of our investigation of the artesian well at Caxambas Point on Marco Island.

The well was drilled in 1959 by Whatley-Miller Brothers of Fort Myers, Florida, for the purpose of obtaining a potable water supply. Since the well no longer serves a useful purpose and it is desired to develop the land at the well site, the well should be terminated by adequately sealing the opening for the entire depth of the well.

On 28 June 1979, personnel from CH2M HILL visited the site to determine the physical conditions of the well, including depth of well and casing, depth and type of water-bearing formation, well yield, and water quality. Geophysical logging was performed to determine well and casing diameter and depth, well yield and fluid conductance and temperature. Copies of these logs are attached. A field determination of chloride concentration was also performed.

The well is made up of an 8-inch diameter cast-iron casing, extending from three (3) feet above to 350 feet below ground levels. The casing is open-bottomed and a 10-inch diameter cavity extends to -402 feet. The formation at this level is limestone, with the water-bearing layer from -380 to -402 feet.

Naples Office
1063 Fifth Avenue, North, P.O. Box 3317, Naples, Florida 33939 813/262-6693

On the surface, the top of the casing is open and discharges freely, except for a temporary wooden plug. This plug was removed for this investigation. The upper 15 feet of the casing has been bent a few degrees from vertical.

The results of our analyses are as follows:

Well (casing) diameter	8 inches
Diameter of cavity (average)	10 inches
Well yield	450 gpm
Fluid temperature	80.8°F
Fluid conductance	7,800 μmho/cm
Chloride	2,000 mg/l

The chloride concentration indicates this to be a mildly brackish water.

Termination of the well could be accomplished by concrete grouting the entire cavity and casing depth up to five (5) feet below ground level. At this level, the casing would be cut off and cap welded. The estimated cost for this work is $3,000. Permits would be required from the South Florida Water Management District and Florida Department of Environmental Regulation.

We would be pleased to provide additional services to the Deltona Corporation on this project. We would provide plans, specifications and contract documents, and assistance in receiving bids for a fee of $2,500, lump sum. For assistance in obtaining construction permits, we would be compensated on a cost-plus basis (salary cost x 2.5, plus direct expenses).

We are pleased to have provided our services to the Deltona Corporation. If you have any questions or would like to discuss utilizing our services further on this project, please give me a call.

Yours very truly,

George H. Hermanson, P.E.

slt

attachments

Sheet 1 of 4

CH2M HILL

GEOPHYSICAL WELL SURVEY

CLIENT The Deltona Corp. Date 6/28/79

Well No. _____ Project No. _____

☐ Electric ■ Caliper
☐ Gamma Ray ☐ Fluid Resistivity
☐ Temperature ■ Fluid Velocity

Location: State Florida County Collier

____ ¼ ____ ¼ ____ ¼ Sec. 19 T. 56 ☐ N ■ S R 26 ■ E ☐ W

Logged by R. Sproul Observer _____

Owner: The Deltona Corp.

Well: Caxambas Point

Driller: Whatley/Miller Bro. Date Drilled: 1959

Surface Elevation: 6 ft. ■ Estimated ☐ Measured Above MSL

T.D. Logged 402' T.D. Driller 404'

Hole Dia. 8" From 350' To 402' Dia. ____ From ____ To ____

Casing I. D. 8" From 0 To 350' Dia. ____ From ____ To ____

Finish: ■ Open hole ☐ Screen ☐ Gravel ☐ Other

Water Level: flow ft. ☐ Above ☐ Below MP ☐ Above ☐ Below Land Surface

Yield: Flow 450 gpm Pump ____ gpm

Drawdown: ____ ft. after ____ hours pumping @ ____ gpm

Use: ☐ Dom. ☐ Stock ☐ PS ☐ Ind ☐ Irr. ☐ Test
☐ Heating or cooling ☐ Drainage ☐ Disposal ☐ Obs.

Water Quality:

Temp. 80.8 °F; Sp. Cond. 7,800; Iron ____ ppm

Cl⁻ ____ ppm; $SO_4^=$ ____ ppm; Total Hardness ____ ppm

Color ____ Odor ____ Taste ____

Log Scales

Electric Log
SP 400 millivolts/inch
Res. 20 ohms/inch

Fluid Resistivity
on log ohm-meters/inch
@80.8 °F

Gamma Ray Log
20 Counts/sec/in.
Time Constant 4 sec.
Logging speed 25↓ FPM

Fluid Velocity
120 Counts/min/inch (stationary)
25↓ FPM (continuous)
Q = 450 gpm

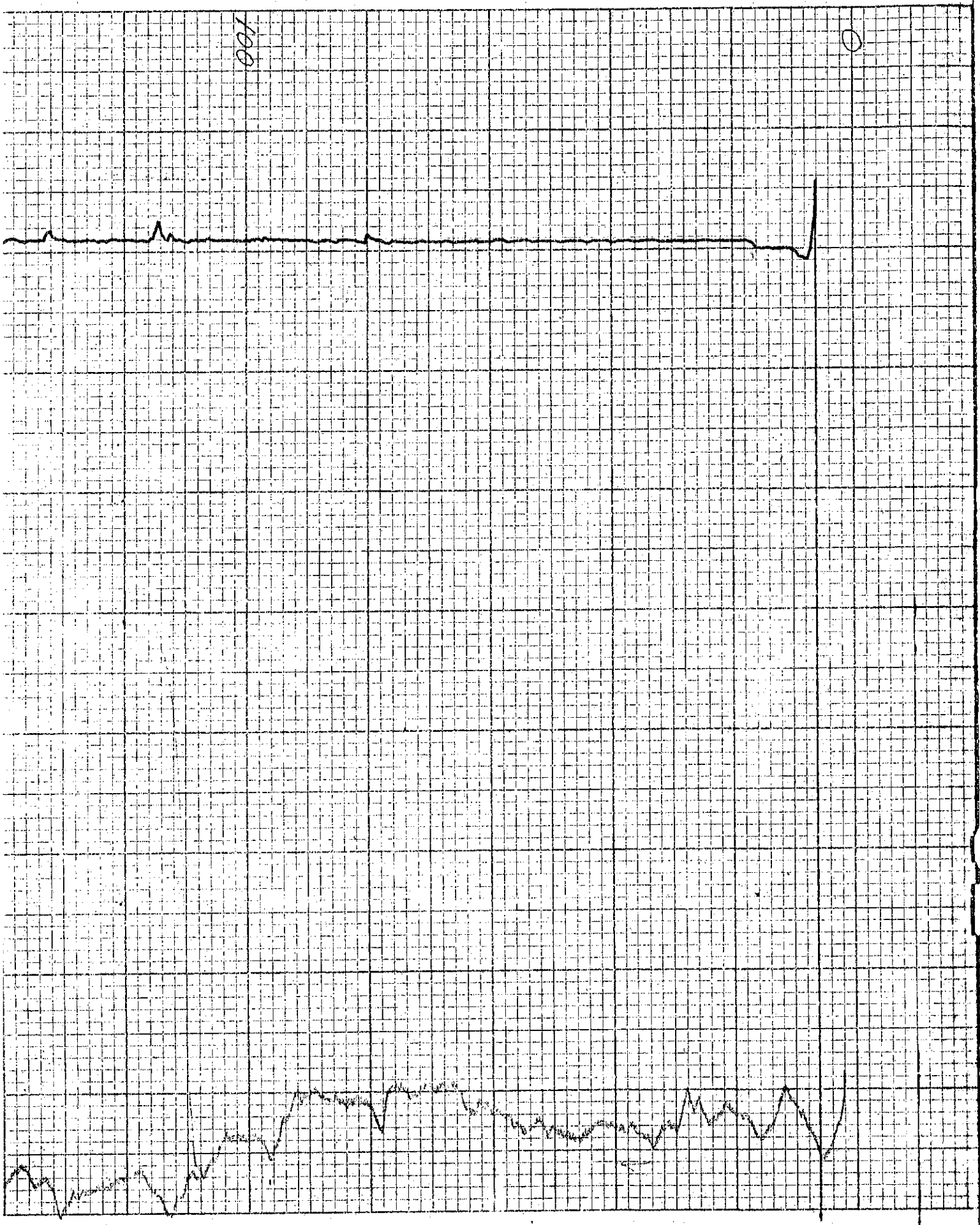
Temperature
2 °F/inch
Logging speed 40↑ FPM

Caliper
6 inches to 16 inches
Logging speed 40 FPM

Water Samples
Depths sampled: ____, ____, ____, ____, ____.

CH2M HILL
Water Resources Division
P.O. Box 1647
Gainesville, Florida 32602
(904) 377-2442

Remarks: Artesian well at tracking station. Water level 18' above surface in 1959.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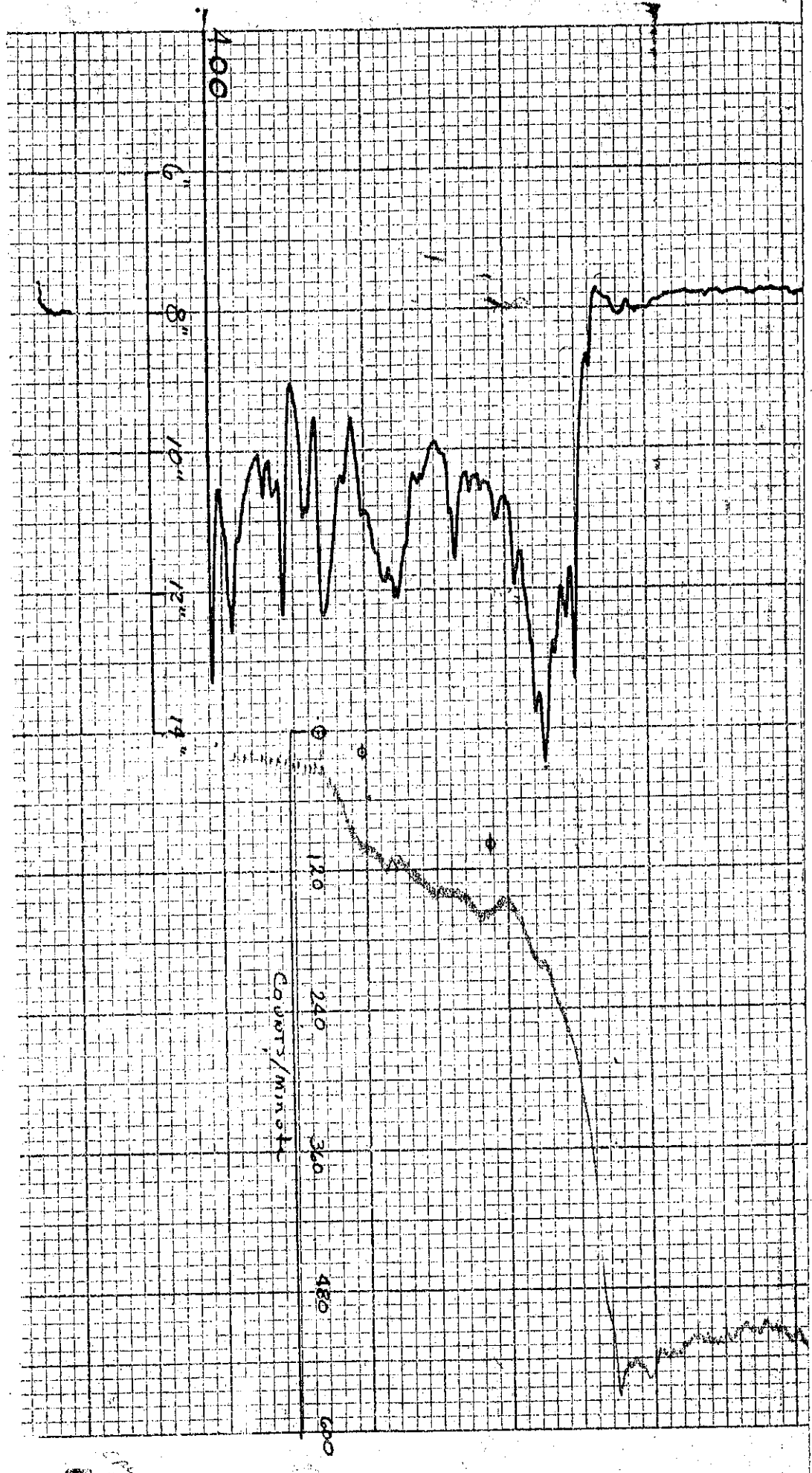
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14"
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COUNTS/MINUTE

GEOPHYSICAL WELL SURVEY

Sheet 2 of 4

CLIENT The Deltona Corp. Date 6/28/79

Well No. _____ Project No. _____

☐ Electric ☐ Caliper
☐ Gamma Ray ■ Fluid Resistivity
■ Temperature ☐ Fluid Velocity

Location: State Florida County Collier

____ ¼ ____ ¼ ____ ¼ Sec. 19 T. 56 ☐ N ■ S R 26 ■ E ☐ W

Logged by R. Sproul Observer _____

Owner: The Deltona Corp.

Well: Caxambas Point

Driller: Whatley/Miller Bro. Date Drilled: 1959

Surface Elevation: 6 ft. ■ Estimated ☐ Measured Above MSL

T.D. Logged 402' T.D. Driller 404'

Hole Dia 8" From 350' To 402' Dia. ____ From ____ To ____

Casing I. D. 8" From 0 To 350' Dia. ____ From ____ To ____

Finish: ■ Open hole ☐ Screen ☐ Gravel ☐ Other

Water Level: flow ft. ☐ Above ☐ Below MP. ____ ☐ Above ☐ Below Land Surface

Yield: Flow 450 gpm Pump ____ gpm

Drawdown: ____ ft. after ____ hours pumping @ ____ gpm

Use: ☐ Dom. ☐ Stock ☐ PS ☐ Ind ☐ Irr. ☐ Test
☐ Heating or cooling ☐ Drainage ☐ Disposal ☐ Obs.

Water Quality:

Temp. 80.8 °F. Sp. Cond. 7,800 Iron _____ ppm

Cl⁻ _____ ppm; $SO_4^=$ _____ ppm; Total Hardness _____ ppm

Color _____ Odor _____ Taste _____

Log Scales

Electric Log
SP 400 millivolts/inch
Res. 20 ohms/inch

Fluid Resistivity
on log ohm-meters/inch
@ 80.8°F

Gamma Ray Log
20 Counts/sec/in.
Time Constant 4 sec.
Logging speed 25↓ FPM

Fluid Velocity
120 Counts/min/inch (stationary)
25↓ FPM (continuous)
Q = 450 gpm

Temperature
2 °F/inch
Logging speed 25↑ FPM

Caliper
6 inches to 16 inches
Logging speed 40 FPM

Water Samples
Depths sampled: _____, _____, _____, _____, _____,

CH2M HILL
Water Resources Division
P.O. Box 1647
Gainesville, Florida 32602
(904) 377-2442

Remarks: Artesian well at tracking station. Water level 18' above surface in 1959.

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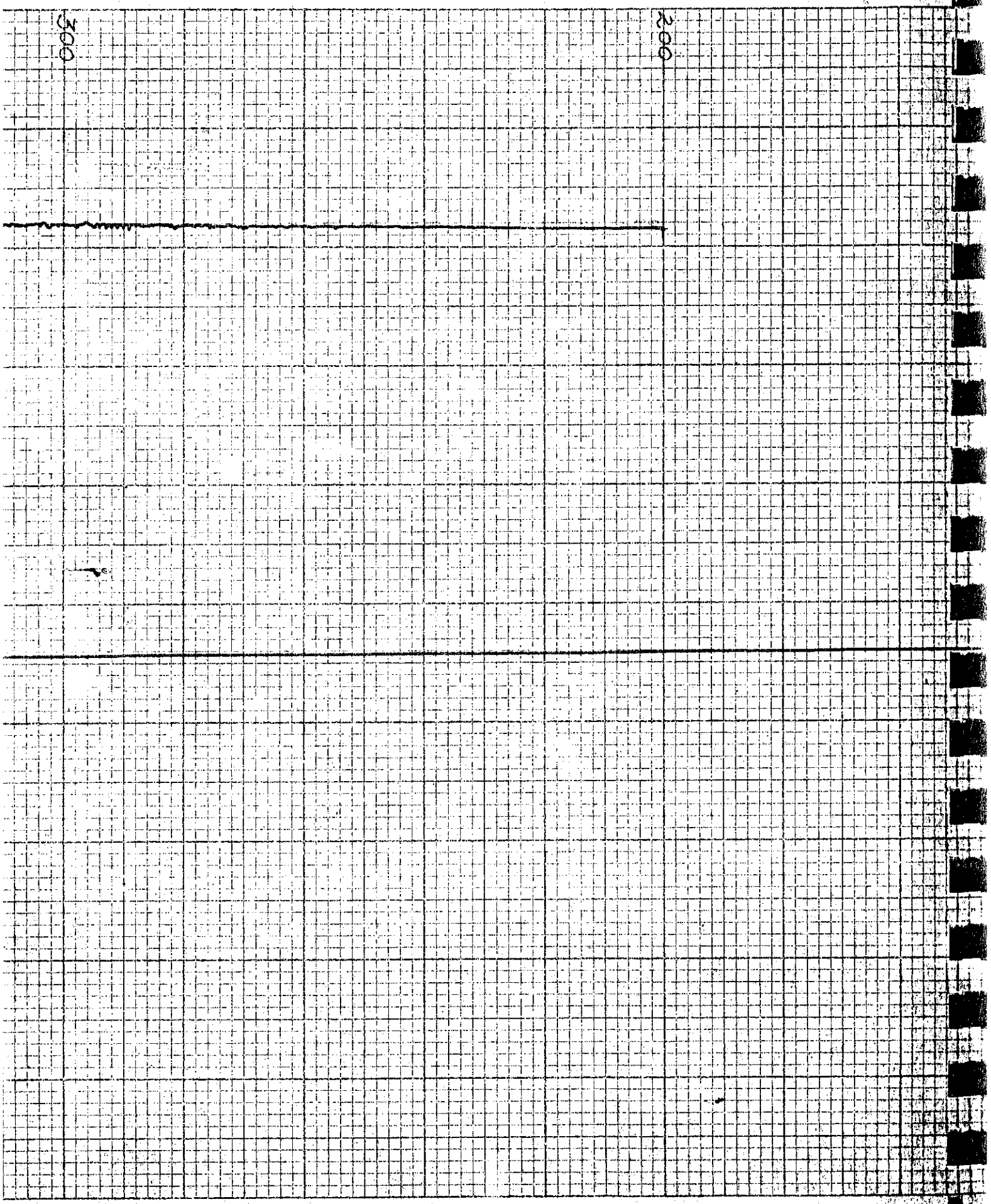
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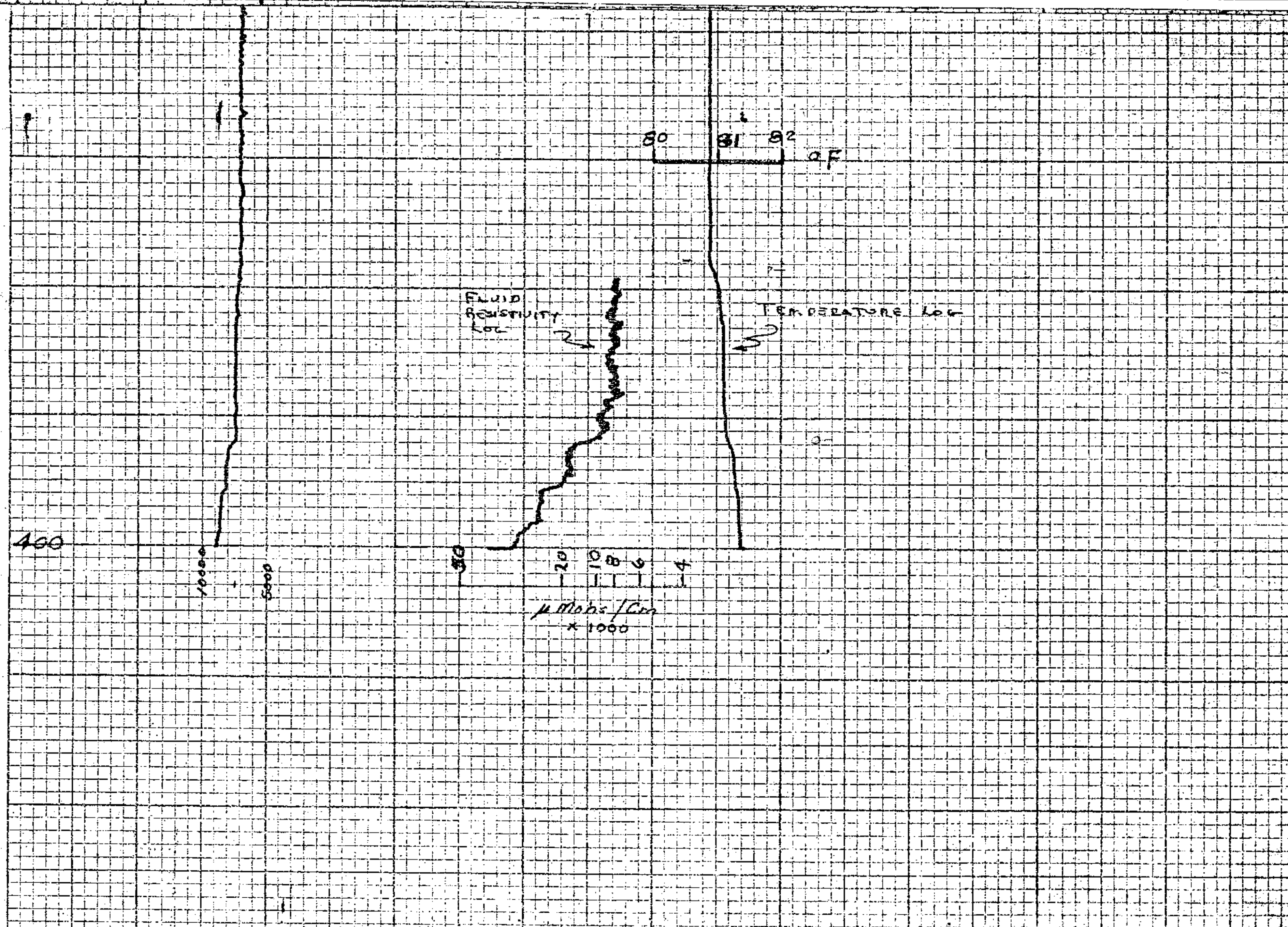

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Sheet 3 of 4

CLIENT The Deltona Corp. Date 6/28/79

Well No. _____ Project No. _____

☐ Electric ☐ Caliper
■ Gamma Ray ☐ Fluid Resistivity
☐ Temperature ☐ Fluid Velocity

Location: State Florida County Collier

____ ¼ ____ ¼ ____ ¼ Sec. 19 T. 56 ☐ N ■ S R 26 ■ E ☐ W

Logged by R. Sproul Observer _____

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Water Level: flow ft. ☐ Above ☐ Below MP, ____ ☐ Above ☐ Below Land Surface

Yield: Flow 450 gpm Pump ____ gpm

Drawdown: ____ ft. after ____ hours pumping @ ____ gpm

Use: ☐ Dom. ☐ Stock ☐ PS ☐ Ind. ☐ Irr. ☐ Test
☐ Heating or cooling ☐ Drainage ☐ Disposal ☐ Obs.

Water Quality:

Temp. 80.8 °F; Sp. Cond. 7,800 Iron ____ ppm

Cl⁻ ____ ppm; $SO_4^=$ ____ ppm; Total Hardness ____ ppm

Color ____ Odor ____ Taste ____

Log Scales

Electric Log SP 400 millivolts/inch Res. 20 ohms/inch	Fluid Resistivity on log ohm-meters/inch @ 80.8 °F
Gamma Ray Log 20 Counts/sec/in. Time Constant 4 sec. Logging speed 25↓ FPM	Fluid Velocity 120 Counts/min/inch (stationary) 25↓ FPM (continuous) Q = 450 gpm
Temperature 2 F/inch Logging speed 40↑ FPM	Caliper 6 inches to 16 inches Logging speed 40 FPM

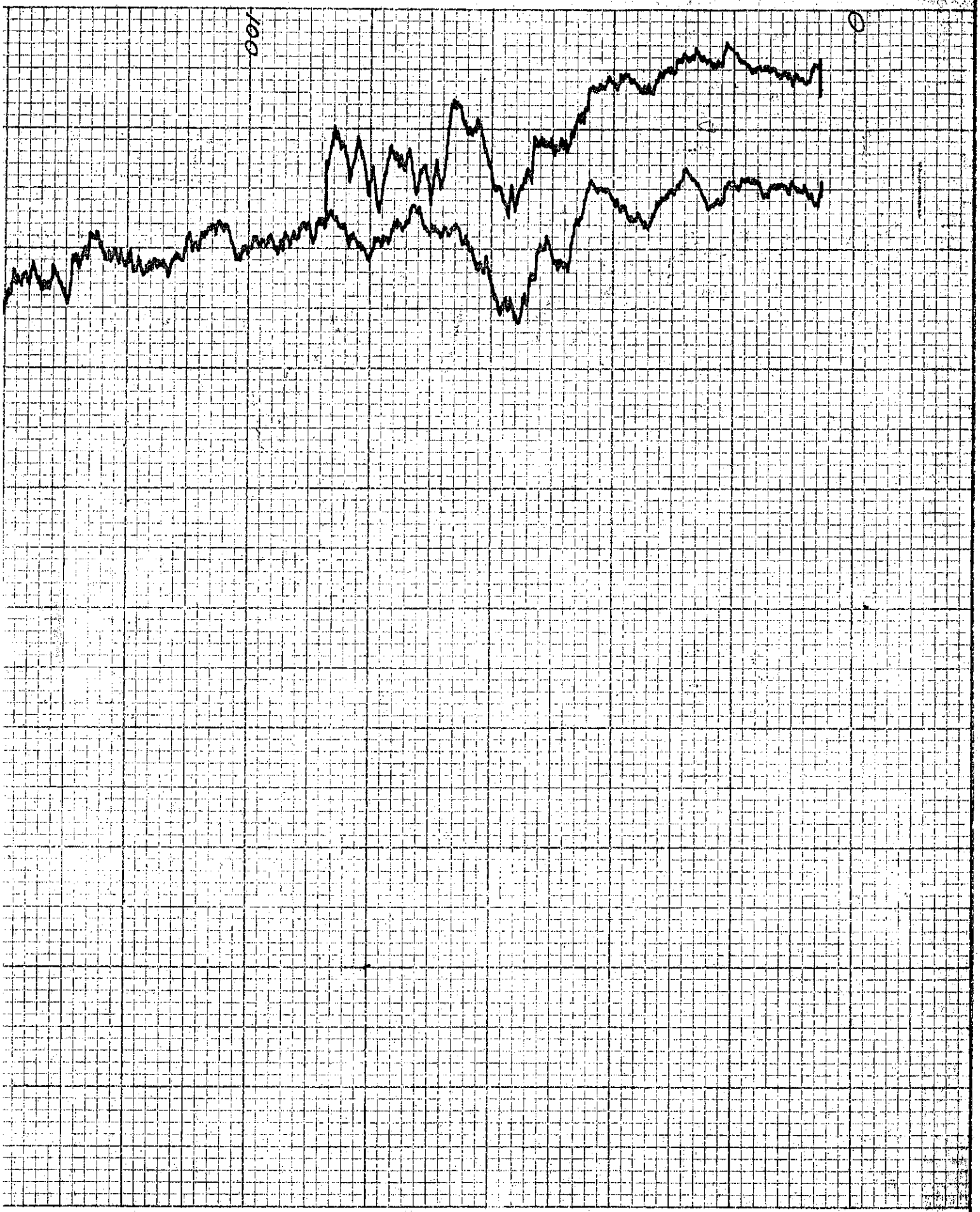
Water Samples

Depths sampled: ____, ____, ____, ____, ____,

CH2M HILL
Water Resources Division
P.O. Box 1647
Gainesville, Florida 32602
(904) 377-2442

Remarks: Artesian well at tracking station. Water level 18' above surface in 1959.

GEOPHYSICAL WELL SURVEY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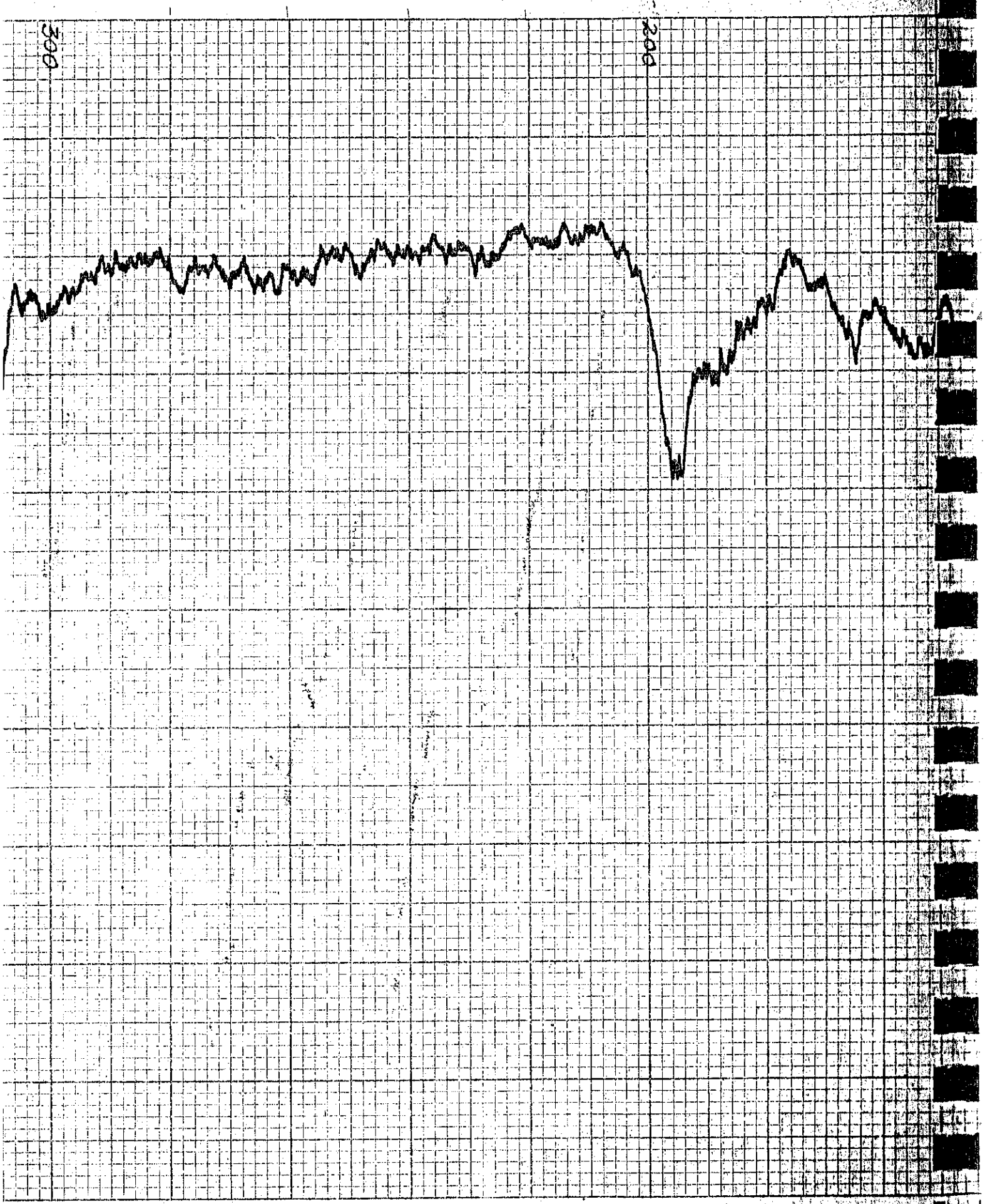
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TEXAS INSTRUMENTS INCORPOR
Casing 350'
400
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Sheet 4 of 4

GEOPHYSICAL WELL SURVEY

CH2M HILL

CLIENT The Deltona Corp. Date 6/28/79

Well No. _____ Project No. _____

Location: State Florida County Collier

____ ¼ ____ ¼ ____ ¼Sec. 19 T. 56 ☐ N ■ S R 26 ■ E ☐ W

Logged by R. Sproul Observer _____

■ Electric ☐ Caliper

☐ Gamma Ray ☐ Fluid Resistivity

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Water Quality:

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Temperature 2 F/inch Logging speed 40↑ FPM	Caliper 6 inches to 16 inches Logging speed 40 FPM

Water Samples

Depths sampled: ____, ____, ____, ____, ____,

CH2M HILL
Water Resources Division
P.O. Box 1647
Gainesville, Florida 32602
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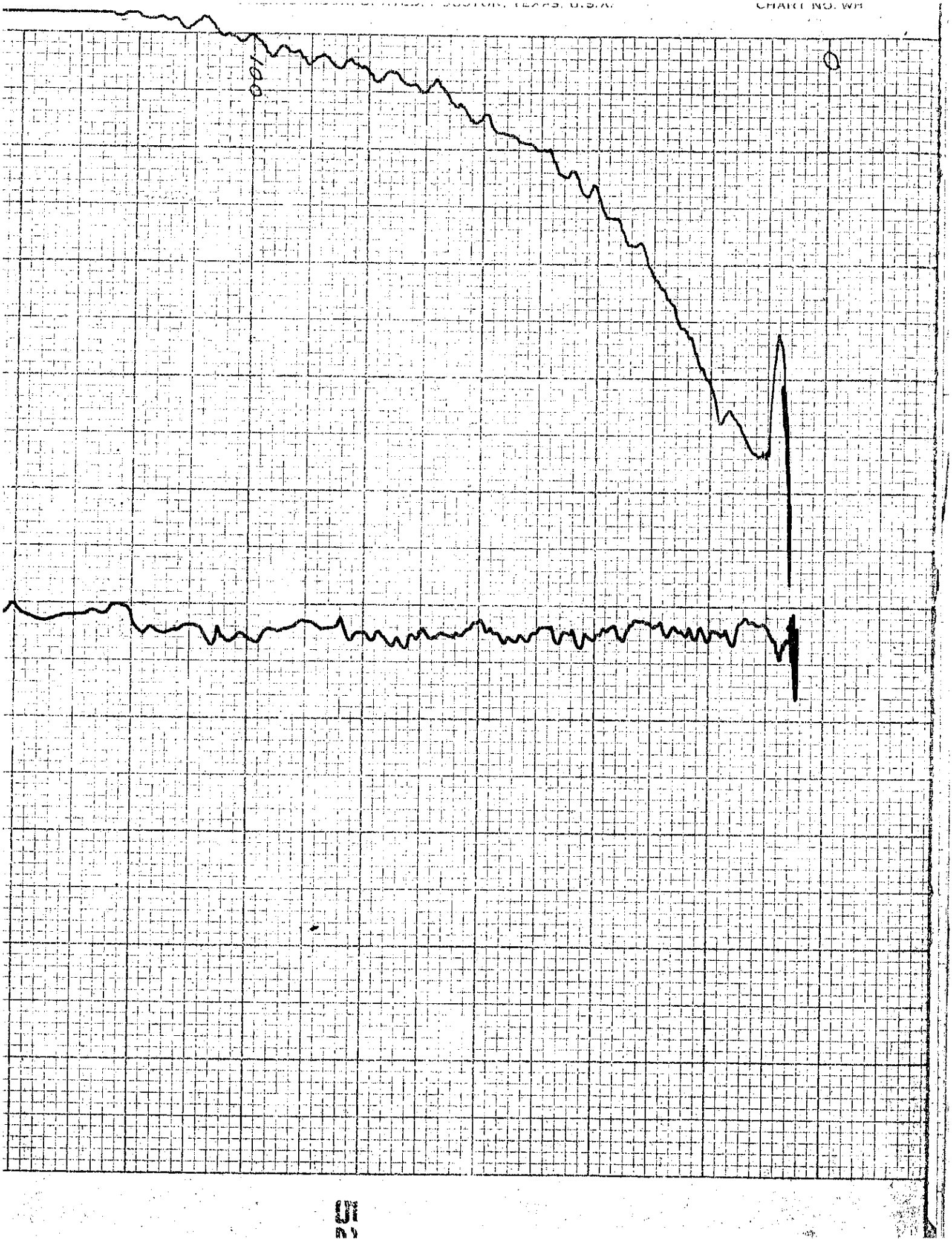
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