

FILE FOLDER

DESCRIPTION ON TAB:

Well #709

Outside/inside of actual folder did not contain hand written information

Outside/inside of actual folder did contain hand written information

***Scanned as next image**

709

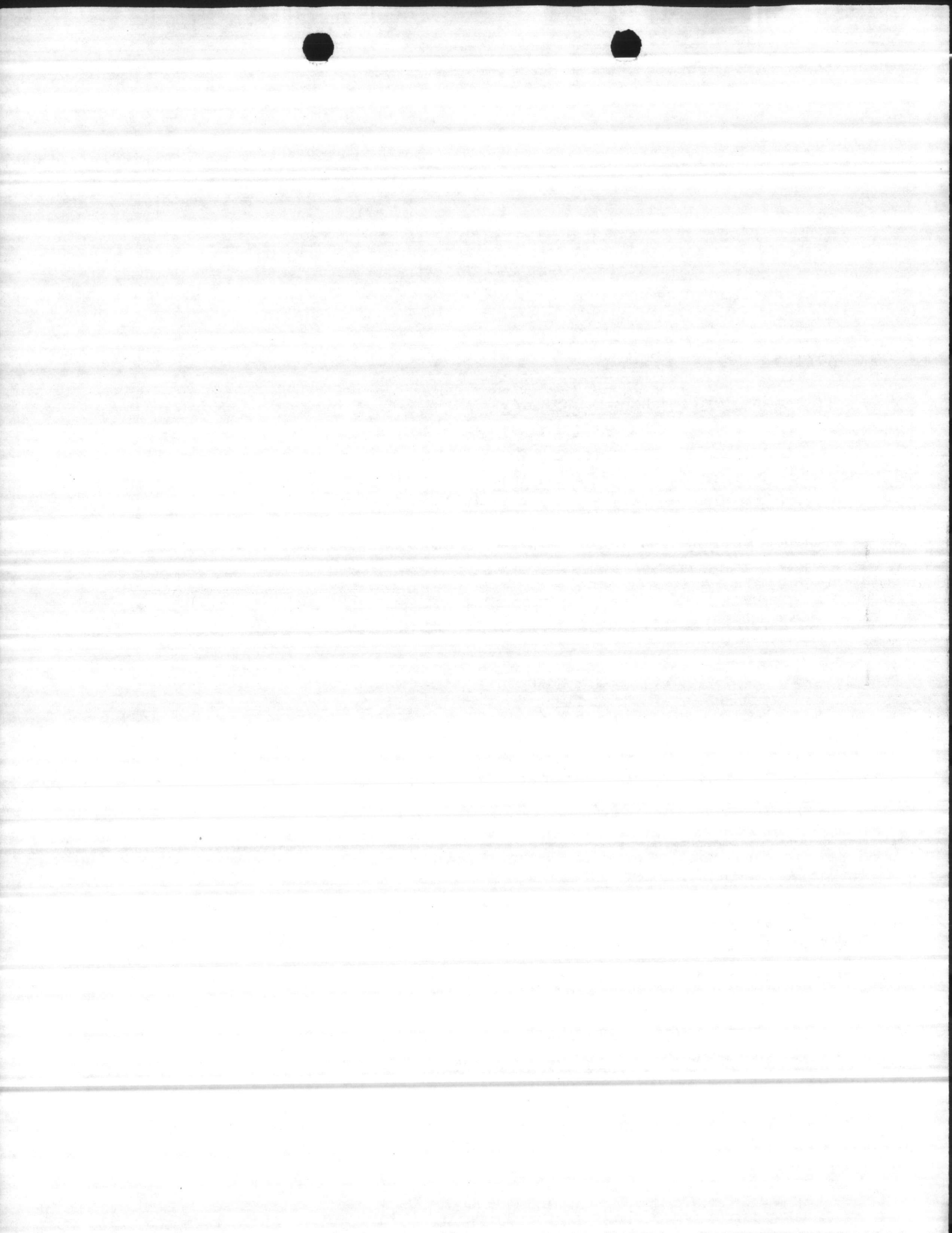
11

02

00

DATE 7-25-00
PWSID 04-67-041

WELL # HP-709
WELL NAME HADNOT POINT HP20
BLDG. HP709
CODE G
AVAILABILITY P
LOCATION D-LINE ROAD
LATITUDE 34.7034
LONGITUDE 77.31749
WELL DIAMETER 10"
WELL DEPTH 140'
SCREEN INTERVAL _____
YIELD 190
STATIC LEVEL 2
PUMPING LEVEL 77
PUMP TYPE VERTICAL TURBINE
MOTOR HP 15
INTAKE DEPTH 86
DESIGN CAPACITY 225
ACTUAL GPM 225
SIZE OF CONCRETE SLAB 10X10
HEIGHT OF CASING 18"



SOURCE INFORMATION GROUND WATER

Date Form Completed

M M D D Y Y
0 1 2 5 9 5

PWSID
0467041

Owner Assigned
source Code

Well Name (If purchase, name of system)

Code

G=Ground
W=Purchase/G
Y=G w/direct influence
Z=W w/direct influence

709

HADNOT POINT 709

G

If Purchase, seller ID#

Source Begin Date

Source exempt—

Direct Influence Date

Availability

P=Permanent
E=Emergency
S=Seasonal
I=Interim
O=Other

Y
N

P

Location of well within the system (If purchase, location of master meter)

D-LINE ROAD

Latitude (N)

Longitude (W)

How Determined

GPS Data

No. of Sats. Locked on

3 4 4 2 1 2 6

0 7 7 1 9 0 3 4

G

G=GPS
M=Map
S=Surveyed

Q# or
DOP #

4

4

(If purchase, use seller's primary source lat/long)

Vulnerable (VOCs) Y
N

Assessment Date

ENTRY POINT INFORMATION

Use Code

Availability

Owner Assigned
Entry Point Code

Entry Point Name

C=Ground/Permanent
D=Ground/non-permanent

P=Year-round
E=Emergency
S=Seasonal
I=Interim
O=Other

100

~~HP-20~~ MCB HADNOT PT WTP

Location:

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius)? N (Y,N) If no, explain: _____

Sources of pollution/distance: DIRT ROAD @ 50'

Surface water within 200'? Y (Y,N) If yes, actual distance feet If yes, bact. samples collected? (Y,N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: OK

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N)

Condition of house: OK Type of freeze protection: Elec Heater

Well: Diameter: 10" Type: SCRENGED Yield (gpm): 225 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing depth 50 ft. (If unknown, put 'UNK') Well depth: 140' Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: _____ Size: 10x10

Size of blow-off: 4" (N) Sample tap: Before treatment? Y (Y,N) After treatment? (Y,N)

Pumps: Capacity: GPM: 235 172 HP: 15 Pump intake depth: 80 Auxiliary Power? Y (Y,N)

Type pump: VERTICAL TURBINE Height above floor (pump/casing): 18

Storage at well site: Elev: Hydro: Ground:

If hydroautomatic, air volume control? (Y,N) Safety valves? (Y,N) Coded? (Y,N)

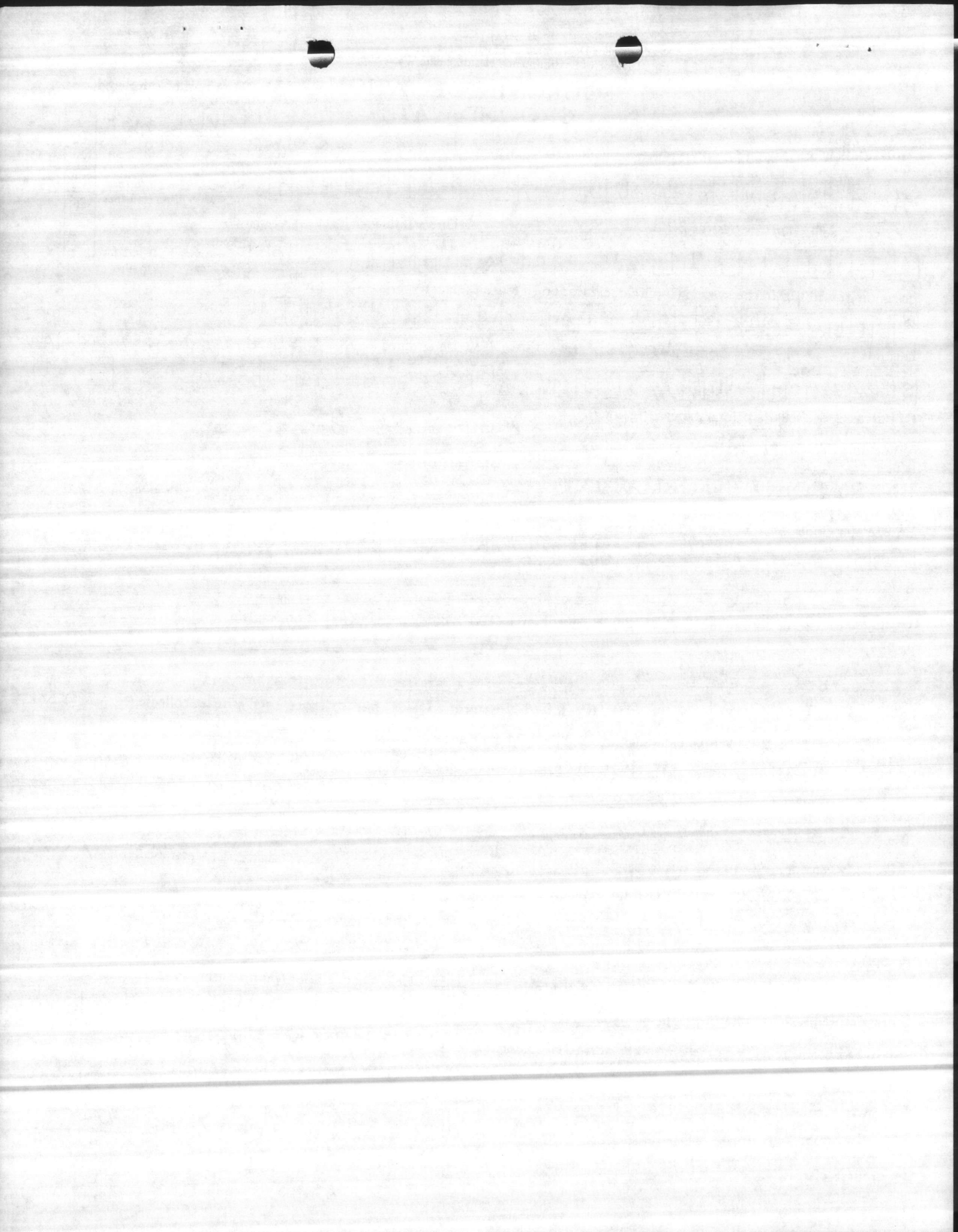
High service pumps: 1. gpm hp 2. gpm hp 3. gpm hp Auxiliary Power? (Y,N)

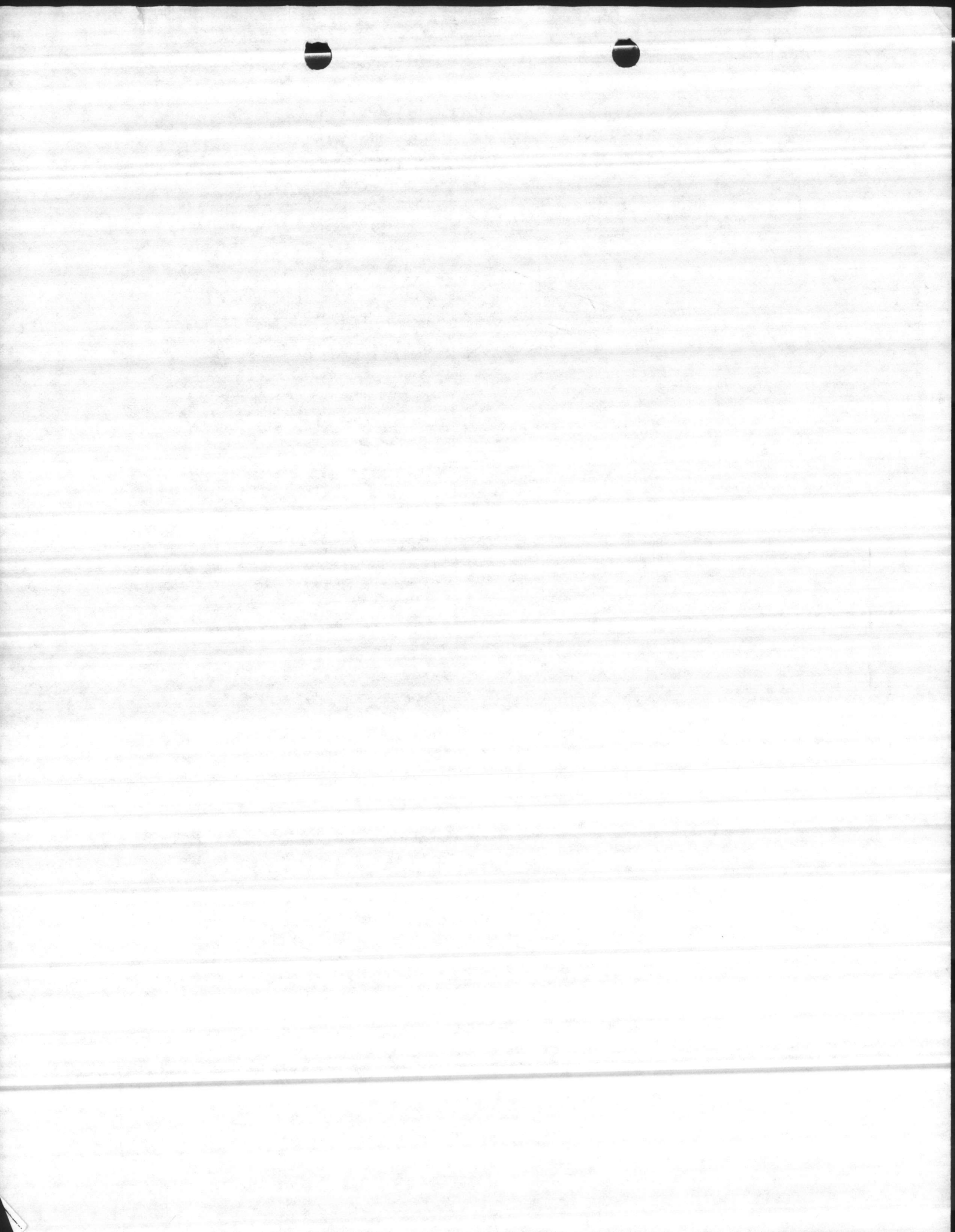
Is the water treated at this well? Y (Y,N) If yes, complete back of form.

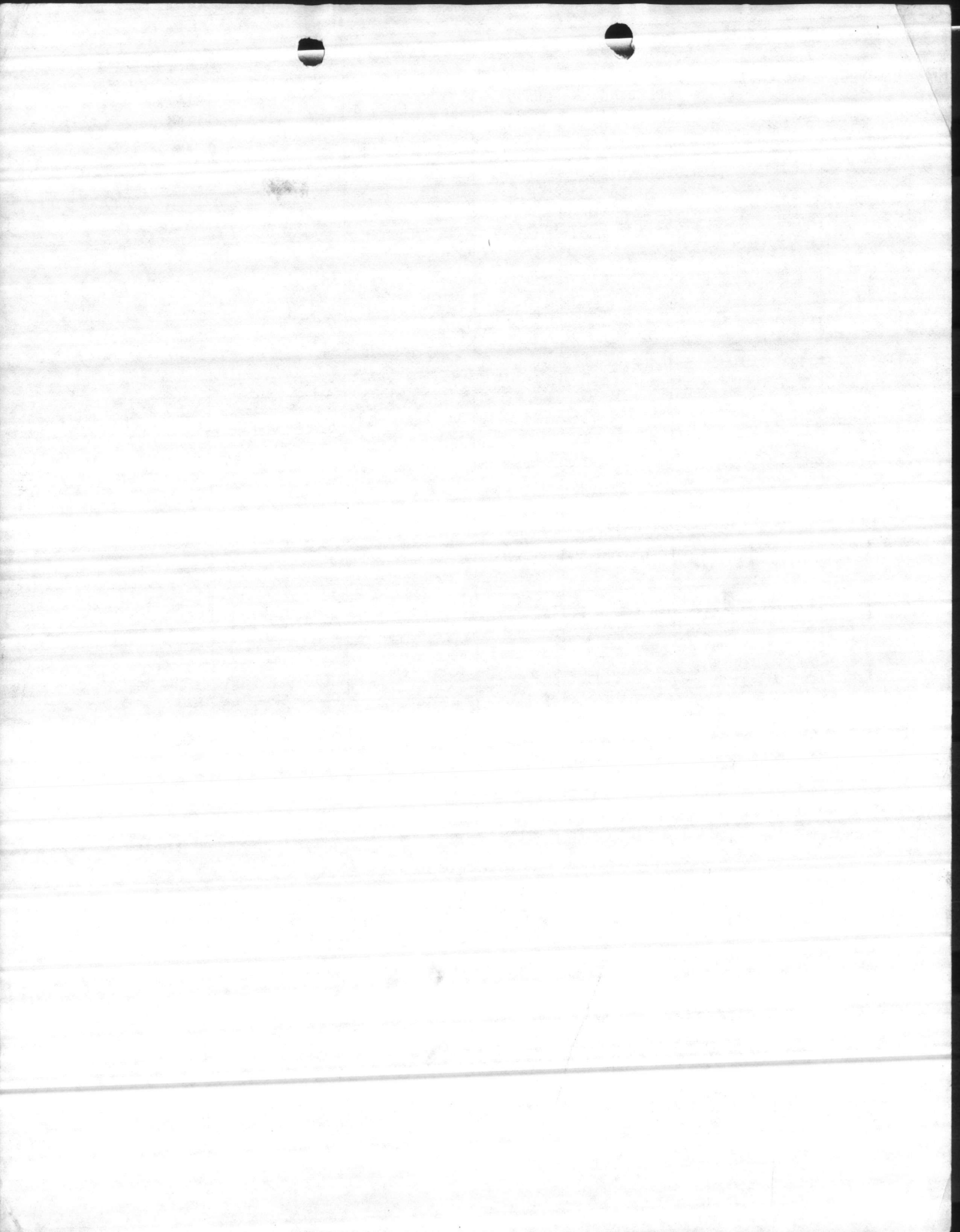
If other wells are treated here, which ones? _____ If treated elsewhere, where? HP-20 PLANT

If purchase, retreat? (Y,N) If yes, complete back of form. Repair Vent

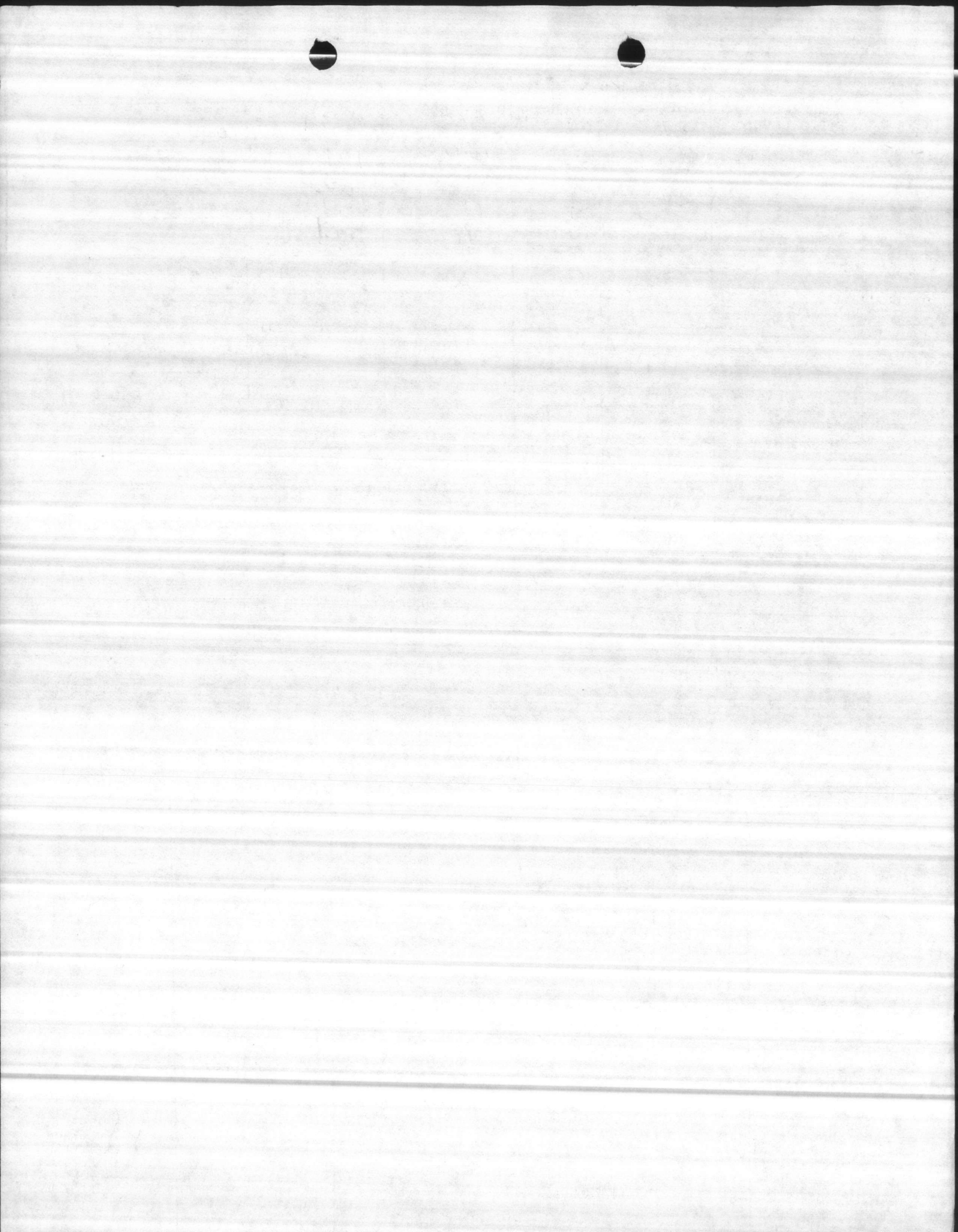
Bearing noisy





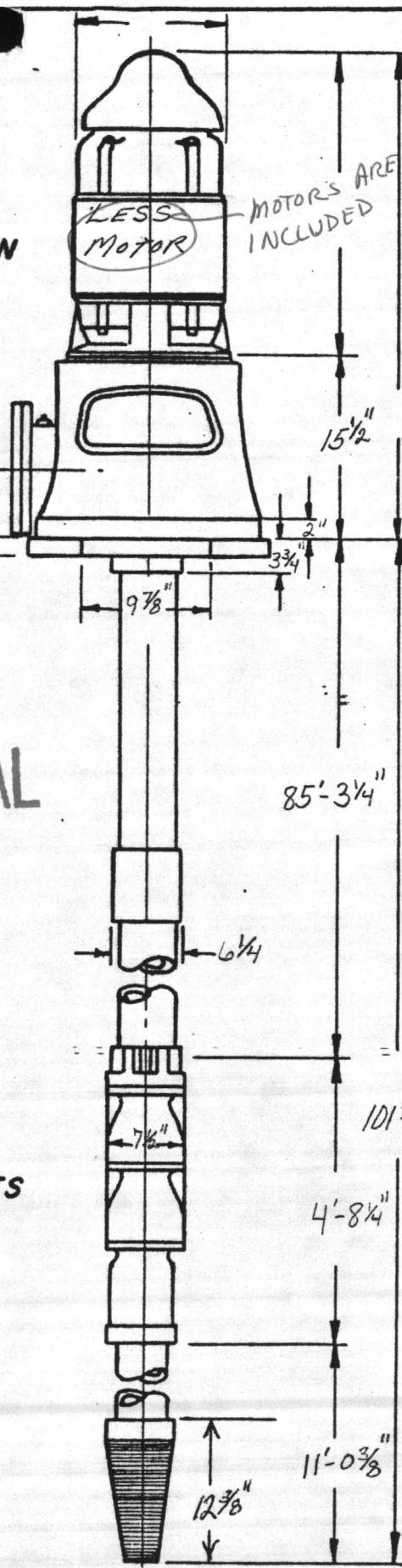
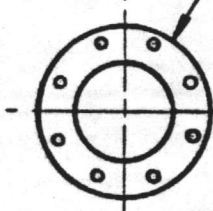




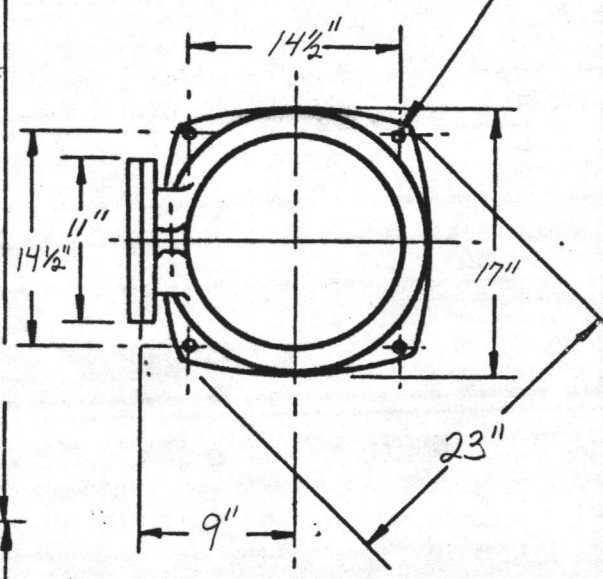


_____ H.P.
 _____ R.P.M.
 _____ MOTOR
 _____ FRAME

6" DISCHARGE
 8 - 3/4" CAPSCREWS ON
 9 1/2" BOLT CIRCLE

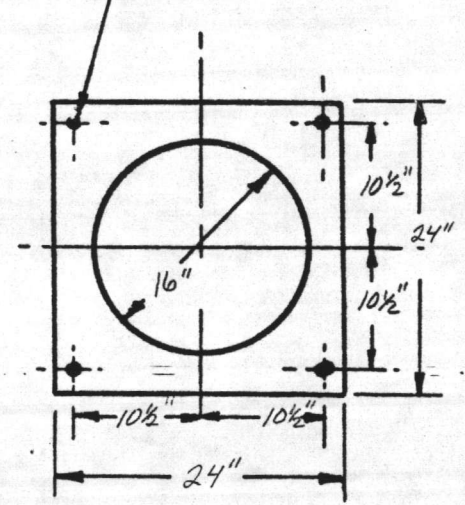


4 - 7/8" DRILLED HOLES



PLAN VIEW

4 7/8" FOUNDATION HOLES



PLAN VIEW FOR SUPPORT PLATE

FOR APPROVAL
 FABRICATION PENDING

6 STAGES

5" SUCTION PIPE
 5" STRAINER

CAMP LEJEUNE
 No. 11 WELL

T- 82523 =

HARRY PEPPER & ASSOC. INC. S.O. 14635-18 P.O. C642-0001

DATE OF ISSUE 2/25/85	
DESTROY ALL PREVIOUS PRINTS	
FIG. 4700	SIZE M-8
DRAWING NO. 115-027	

THE DEMING CO. SALEM, OHIO	TITLE DIMENSION SHEET
HB	DATE 5-28-58
	SCALE -

FOR APPROVAL
FABRICATION PENDING

CAMP LEJEUNE No. 11 WELL

DEMING PUMP CO.

SALEM, OHIO, U.S.A.

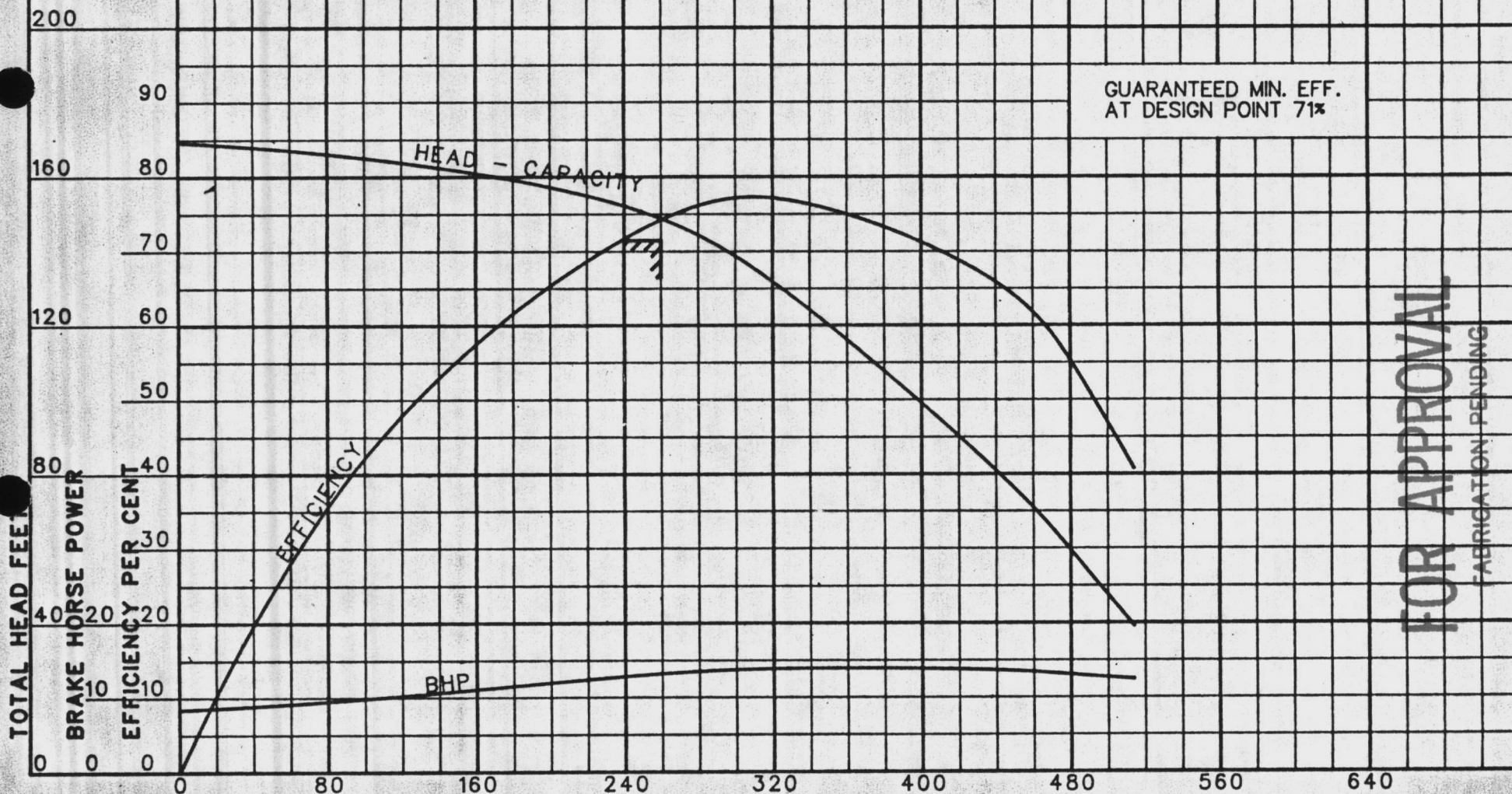
240 HARRY PEPPER & ASSOC. INC. S.D. 1635-18 P.O. C642-0001

CHARACTERISTIC CURVES

FIG. 4700 SIZE M 8 STAGES 6 IMPELLER 22665

DESIGNED RATING: G.P.M. 260 HEAD 143 R.P.M. 1770

OTHER CURVE POINTS AND GENERAL SHAPE OF CURVES ARE APPROXIMATE



GUARANTEED MIN. EFF. AT DESIGN POINT 71%

FOR APPROVAL
FABRICATION PENDING

SERIAL NO. ****

U. S. GALLONS PER MINUTE

DATE 2-21-85

IMP. DIA. 5 5/8"

NO. Q23634

FABRICATION PENDING

FOR APPROVAL

Hunt

CONTRACTOR'S SUBMITTAL TRANSMITTAL

LANTDIV NORFOLK 4-4355/3 (Rev. 11-80)

CONTRACT NO 81-C-1644	TRANSMITTAL NO 182	DATE 3-18-86
---------------------------------	------------------------------	------------------------

FROM CONTRACTOR
Harry Pepper & Associates, Inc.

TO
Henry Von Oesen & Associates, Inc.

PROJECT TITLE AND LOCATION
Holcomb Blvd Water Treatment Plant

MGB, Cp Lejeune, North Carolina

CONTRACTOR USE ONLY

**List only one specification division per form.*

List only one of the following categories on each transmittal form, and indicate which is being submitted

- Contractor Approved OICC Approval Deviation/Substitution For OICC Approval

REVIEWER USE ONLY

****ACTION CODES**

- A-Approved
- D-Disapproved
- AN-Approved as noted
- RA-Receipt acknowledged.
- C-Comments
- R-Resubmit

ITEM NO.	PROJ. SPEC. SECT. & PARA. and/or PROJ. DWG. NO. *	ITEM IDENTIFICATION (Type, size, model no., Mfg. name, dwg. or brochure number)	NO. OF COPIES	ACTION CODES **	REVIEWER'S INITIALS CODE AND DATE
	02734	ROTARY DRILLED WATER WELLS WELL # 11			
1		Step Test	7	A	JRB

-3 APR 2005 12 00

CONTRACTOR'S COMMENTS

COPY OF TRANSMITTAL AND SUBMITTALS TO ROICC

CONTRACTOR REPRESENTATIVE (Signature)

ONE COPY TO ROICC

Phil Reese *Phil Reese*

DATE RECEIVED BY REVIEWER

FROM (Reviewer)

TO

3/21/86

Henry von Oesen & Assoc., Inc.

Submittals are returned with action indicated. Approval of an item does not include approval of any deviation from the contract requirements unless the contractor calls attention to and supports the deviation.

Submittals are forwarded to LANTDIV with A-E recommendations indicated in REVIEWER USE ONLY Section and in comments below on **ONE COPY** of the transmittal form.

REVIEWER'S COMMENTS

Contractor's approval appearsto be appropriate.

COPIES TO
ROICC (2)
LANTDIV (1)
A-E (1)

DATE

4/2/86

SIGNATURE

[Signature]

Well # 11
 Step Test
 3-17-86

ITEM # 1

TIME	STATIC	PUMPING LEVEL	PUMPING RATE
2:15	12'7"	33'5"	100GPM
2:30		34'7"	"
2:45		35'8"	"
3:00		35'10"	"
3:30		35'4"	"
4:00		36'4"	"
4:30		36'7"	"
5:00		36'7"	"
5:15		44'5"	150GPM
5:30		45'1"	"
5:45		45'2"	"
6:00		45'9"	"
6:30		46'2"	"
7:00		46'2"	"
7:30		46'4"	"
8:00		46'4"	"
8:15		54'4"	200GPM
9:30		54'11"	"
9:45		55'3"	"
10:00		55'9"	"
10:30		56'4"	"
11:00		56'6"	"
11:30		56'6"	"
12:00		56'6"	"
12:15		62'11"	250GPM
12:30		63'10"	"
12:45		64'8"	"
1:00		64'10"	"
1:30		64'10"	"
2:00		64'10"	"
2:30		64'10"	"
3:00		64'10"	"

ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
 NORFOLK, VIRGINIA 23511

APPROVED _____
 APPROVED AS NOTED _____
 DISAPPROVED _____

SUBJECT TO THE REQUIREMENTS OF
 CONTRACT NO. N62470-81-C-1644
 APPROVAL OF A SUBMITTAL DOES NOT INCLUDE
 APPROVAL OF ANY DEVIATION FROM THE CON-
 TRACT REQUIREMENTS UNLESS THE CONTRAC-
 TOR CALLS ATTENTION TO AND SUPPORTS THE
 DEVIATION -- THE CONTRACTOR SHALL BE RES-
 PONSIBLE FOR PROVIDING PROPER PHYSICAL
 DIMENSIONS & WEIGHTS, COORDINATION OF
 TRADES, ETC., AS REQUIRED.

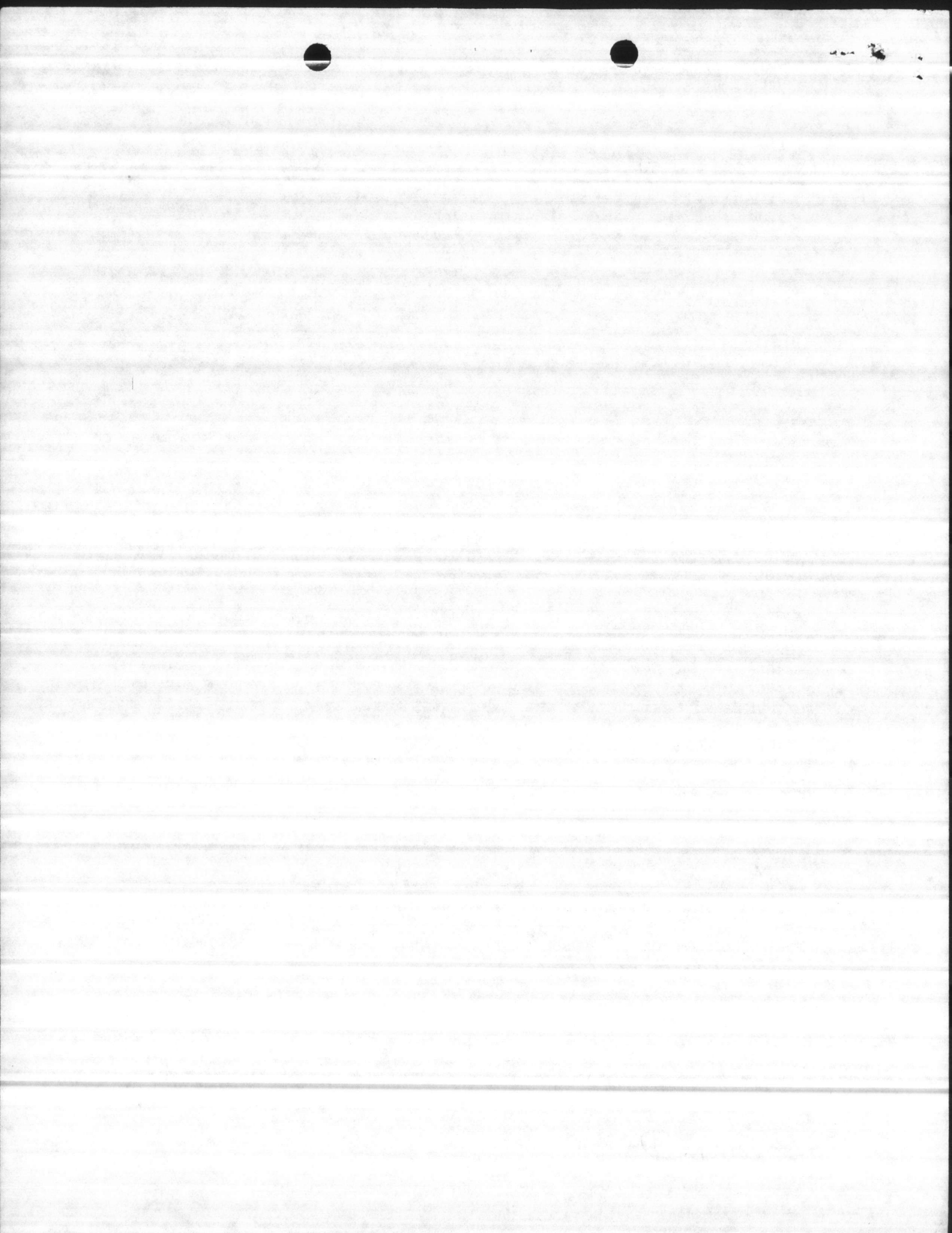
REVIEWER [Signature] DATE APR 02 1986

FOR OFFICER IN CHARGE OF CONSTRUCTION

I am hereby certified that the (material) (equipment) shown and
 marked in this submittal, shop drawings, catalog cut (s), etc., and
 approved/proposed to be incorporated into Contract Number
 N62470-81-C-1644 is in compliance with the Contract Drawings
 and Specifications and can be installed in the allocated space,
 and is:

- _____ Approved for use.
- Submitted for Government approval.
- _____ Approved for use subject to Government approval of
 specific deviation.

Authorized Reviewer _____ DATE _____
 Signature CQC Rep. [Signature] DATE 3-18-86



Hunt

CONTRACTOR'S SUBMITTAL TRANSMITTAL

LANTDIV NORFOLK 4-4355/3 (Rev. 11-80)

CONTRACT NO 81-C-1644	TRANSMITTAL NO 190	DATE 3-24-86
--------------------------	-----------------------	-----------------

FROM CONTRACTOR
Harry Pepper & Associates, Inc.

TO
Henry Von Oesen & Associates, Inc.

PROJECT TITLE AND LOCATION
Holcomb Blvd Water Treatment Plant

MCB, Cp Lejeune, North Carolina

CONTRACTOR USE ONLY

REVIEWER USE ONLY

*List only one specification division per form.

**ACTION CODES

List only one of the following categories on each transmittal form, and indicate which is being submitted

A-Approved
D-Disapproved
AN-Approved as noted
RA-Receipt acknowledged.
C-Comments
R-Resubmit

- Contractor Approved OICC Approval Deviation/Substitution For OICC Approval

ITEM NO.	PROJ. SPEC. SECT. & PARA. and/or PROJ. DWG. NO. *	ITEM IDENTIFICATION (Type, size, model no., Mfg. name, dwg. or brochure number)	NO. OF COPIES	ACTION CODES **	REVIEWER'S INITIALS CODE AND DATE
	02734	ROTARY DRILLED WATER WELLS WELL # 11			
1	3.1.6	24 Hour Pump Test	7	A	JRB
2	3.1.6	2 Hour Recovery Test	7	A	JRB

CONTRACTOR'S COMMENTS

Contractor was advised by Title II Inspector to pump at 200 GPM.

3 APR 1986 12 00

COPY OF TRANSMITTAL AND SUBMITTALS TO ROICC

CONTRACTOR REPRESENTATIVE (Signature)

ONE COPY TO ROICC

Phil Reese

DATE RECEIVED BY REVIEWER
3/27/86

FROM (Reviewer)
Henry von Oesen & Assoc., Inc.

TO

Submittals are returned with action indicated. Approval of an item does not include approval of any deviation from the contract requirements unless the contractor calls attention to and supports the deviation.

Submittals are forwarded to LANTDIV with A-E recommendations indicated in REVIEWER USE ONLY Section and in comments below on ONE COPY of the transmittal form.

REVIEWER'S COMMENTS

Contractor's approval appears to be appropriate.

COPIES TO ROICC (2) LANTDIV (1) A-E (1)	DATE 4/2/86	SIGNATURE <i>[Signature]</i>
--	----------------	---------------------------------

Project Name: [Illegible]

Contract No.: [Illegible]

Contractor's Name: [Illegible]

Contractor's Address: [Illegible]

Contractor's Phone: [Illegible]

Contractor's Fax: [Illegible]

Contractor's E-mail: [Illegible]

Contractor's Website: [Illegible]

Contractor's License No.: [Illegible]

Contractor's Registration No.: [Illegible]

Contractor's State: [Illegible]

Contractor's City: [Illegible]

Contractor's State: [Illegible]

Contractor's City: [Illegible]

Contractor's State: [Illegible]

Contractor's City: [Illegible]

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Contractor's State: [Illegible]

Contractor's City: [Illegible]

Contractor's State: [Illegible]

Contractor's City: [Illegible]

[Handwritten signature]

BETTY WOODRUFF - PROJECT - 1001

[Handwritten signature]

24 Hour Pump Test 3-20-86
Well # 11

Pumping Rate 200 GPM

ITEM # 1

<u>TIME</u>	<u>PUMP SETTING</u>	<u>STATIC</u>
11:30	84'	12'7"
	<u>Pumping Level</u>	<u>Drawdown</u>
11:31	41'10"	29'3"
11:32	50'	1'3"
11:33'	51'3"	1'7"
11:34	52'10"	-
11:35	53'8"	10"
11:36	53'11"	3"
11:37	54'8"	9"
11:38	55'1"	2"
11:39	55'3"	4"
11:40	55'7"	4"
11:45	55'11"	5"
11:50	56'4"	2"
11:55	56'6"	3"
12:00	56'9"	7"
12:05	57'2"	-
12:10	57'4"	2"
12:15	57'4"	-
12:20	57'4"	-
12:25	57'4"	-
12:30	57'4"	-
12:30	57'6"	2"
2:30	57'6"	2'
3:30	57'6"	-
4:30	57'6"	-
5:30	57'7"	1"
6:30	57'7"	-
7:30	57'7"	-
8:30	57'7"	-
9:30	57'7"	-
10:30	57'7"	-
11:30	57'8"	1"
12:30	57'8"	-
1:30	57'8"	-
2:30	57'8"	-
3:30	57'8"	-
4:30	57'8"	-
5:30	57'10"	2"
6:30	"	-
7:30	"	-
8:30	"	-
9:30	"	-
10:30	"	-
11:30	57'11"	1"

is hereby certified that the (material) (equipment) shown and marked in this submittal, shop drawings, catalog cut(s), etc., and approved/proposed to be incorporated into Contract Number N62470-81-C-1644 is in compliance with the Contract Drawings and Specifications and can be installed in the allocated space, and is:

- Approved for use.
- Submitted for Government approval.
- Approved for use subject to Government approval of specific deviation.

Authorized Reviewer _____ DATE _____
Signature CQC Rep. Phil Peue DATE 3-24-86

ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511

APPROVED _____
APPROVED AS NOTED _____
DISAPPROVED _____

SUBJECT TO THE REQUIREMENTS OF
CONTRACT NO. N62470-81-C-1644

APPROVAL OF A SUBMITTAL DOES NOT INCLUDE APPROVAL OF ANY DEVIATION FROM THE CONTRACT REQUIREMENTS UNLESS THE CONTRACTOR CALLS ATTENTION TO AND SUPPORTS THE DEVIATION--- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING PROPER PHYSICAL DIMENSIONS & WEIGHTS, COORDINATION OF TRADES, ETC., AS REQUIRED.

REVIEWER [Signature] DATE APR 02 1986

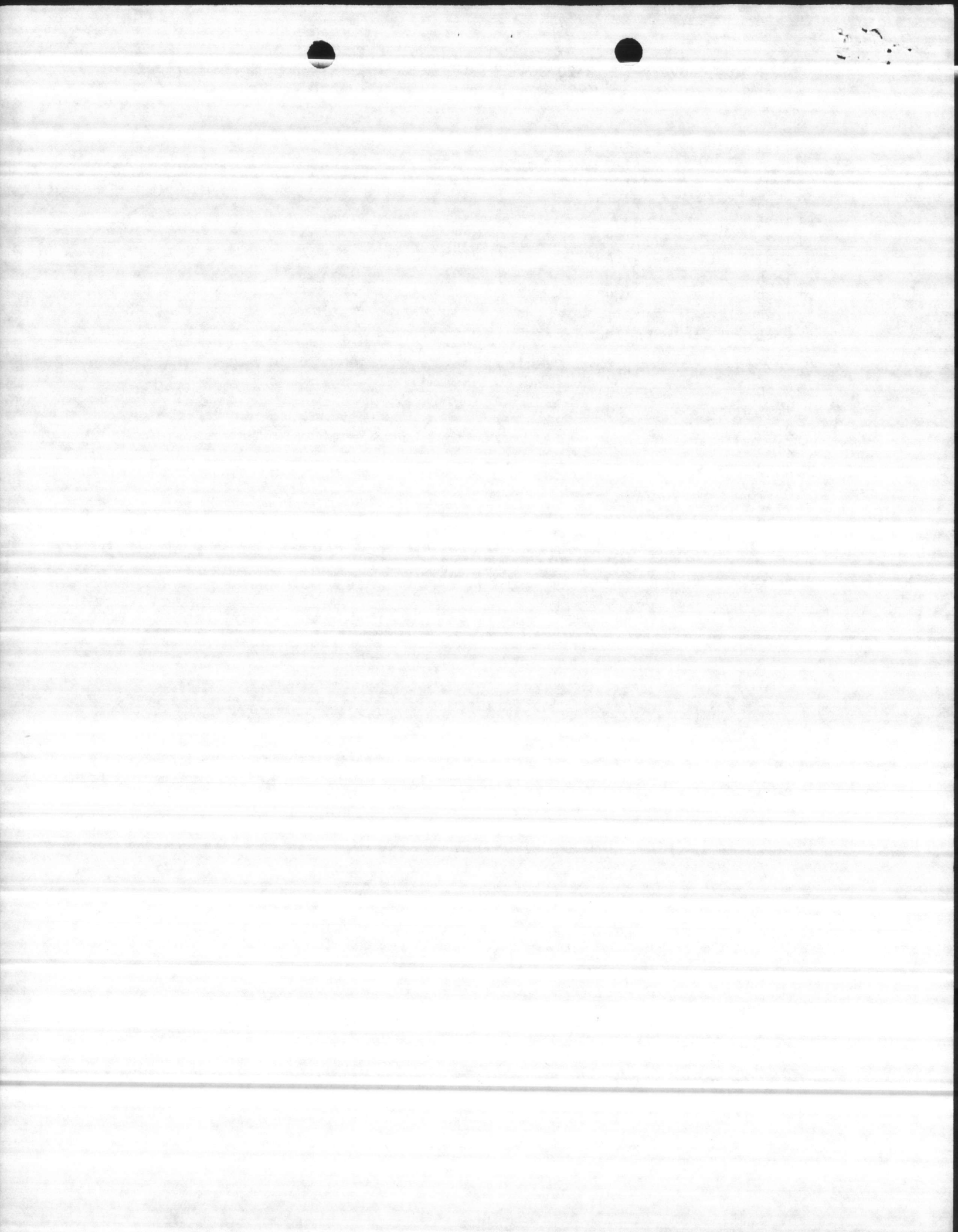
FOR OFFICER IN CHARGE OF CONSTRUCTION

Two Hour Recovery
Well # 11

3-20-86

ITEM # 2

11:31	34'8"
11:32	25'1"
11:33	20'6"
11:34	17'11"
11:35	18"
11:36	17'5"
11:37	16'10"
11:38	16'1"
11:39	15'6"
11:40	14'11"
11:45	14'7"
11:50	14'
11:55	13'10"
12:00	13'2"
12:05	12'10"
12:10	12'7"
12:15	"
12:20	"
12:25	"
12:30	"
1:30	"



Hunt

CONTRACTOR'S SUBMITTAL TRANSMITTAL
LANTDIV NORFOLK 4-4355/3 (Rev. 11-80)

CONTRACT NO 81-C-1644	TRANSMITTAL NO 218	DATE 5-30-86
---------------------------------	------------------------------	------------------------

FROM CONTRACTOR
Harry Pepper & Associates, Inc.

TO
Henry Von Oesen & Associates, Inc.

PROJECT TITLE AND LOCATION
Holcomb Blvd Water Treatment Plant
MCB, Cp Lejeune, North Carolina

CONTRACTOR USE ONLY

REVIEWER USE ONLY

*List only one specification division per form.

**ACTION CODES

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- A-Approved
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- R-Resubmit

- Contractor Approved OICC Approval Deviation/Substitution For OICC Approval

ITEM NO.	PROJ. SPEC. SECT. & PARA. and/or PROJ. DWG. NO. *	ITEM IDENTIFICATION (Type, size, model no., Mfg. name, dwg. or brochure number)	NO. OF COPIES	ACTION CODES **	REVIEWER'S INITIALS CODE AND DATE
	02734	ROTARY DRILLED WATER WELLS			
1	1.2.1	Shop Drawings	7	A	JRB

CONTRACTOR'S COMMENTS

An Additional ten (10) feet of screen was added.

This Shop Drawing replaces Shop Drawing previously submitted. See Transmittal # 150 dated 1-16-86.

COPY OF TRANSMITTAL AND SUBMITTALS TO ROICC

CONTRACTOR REPRESENTATIVE (Signature)

ONE COPY TO ROICC

Phil Reese *Phil Reese*

DATE RECEIVED BY REVIEWER

FROM (Reviewer)

TO

6/3/86

HENRY VON OESSEN & ASSOC., INC.

Submittals are returned with action indicated. Approval of an item does not include approval of any deviation from the contract requirements unless the contractor calls attention to and supports the deviation.

Submittals are forwarded to LANTDIV with A-E recommendations indicated in REVIEWER USE ONLY Section and in comments below on **ONE COPY** of the transmittal form.

REVIEWER'S COMMENTS

COPIES TO
ROICC (2)
LANTDIV (1)
A-E (1)

DATE

6/13/86

SIGNATURE

REVISION HISTORY

CONTRACT NUMBER

1. APPROVED
2. DISAPPROVED
3. APPROVED WITH RESERVATIONS
4. APPROVED WITH COMMENTS

1. APPROVED
2. DISAPPROVED
3. APPROVED WITH RESERVATIONS
4. APPROVED WITH COMMENTS

CONTRACT APPROVED

DISAPPROVED

DISAPPROVED
 APPROVED WITH RESERVATIONS
 APPROVED WITH COMMENTS

1. APPROVED
2. DISAPPROVED
3. APPROVED WITH RESERVATIONS
4. APPROVED WITH COMMENTS

1. APPROVED
2. DISAPPROVED
3. APPROVED WITH RESERVATIONS
4. APPROVED WITH COMMENTS

1. APPROVED
2. DISAPPROVED
3. APPROVED WITH RESERVATIONS
4. APPROVED WITH COMMENTS

1. APPROVED
2. DISAPPROVED
3. APPROVED WITH RESERVATIONS
4. APPROVED WITH COMMENTS

REVISION DATE

INITIALS

REVISION NUMBER

DESCRIPTION

DATE

BY

FOR

REVISION

NUMBER

DATE

BY

FOR

REVISION

NUMBER

DATE

BY

FOR

REVISION

NUMBER

DATE

BY

FOR

REVISION

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FOR

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NUMBER

DATE

BY

FOR

REVISION

NUMBER

DATE

BY

FOR

REVISION

NUMBER

DATE

BY

FOR

FCR

R. L. MAGETTE COMPANY

Item # 1

WATER SUPPLY CONTRACTORS
DOMESTIC : INDUSTRIAL : MUNICIPAL

Wells, Pumps and Community Water Systems

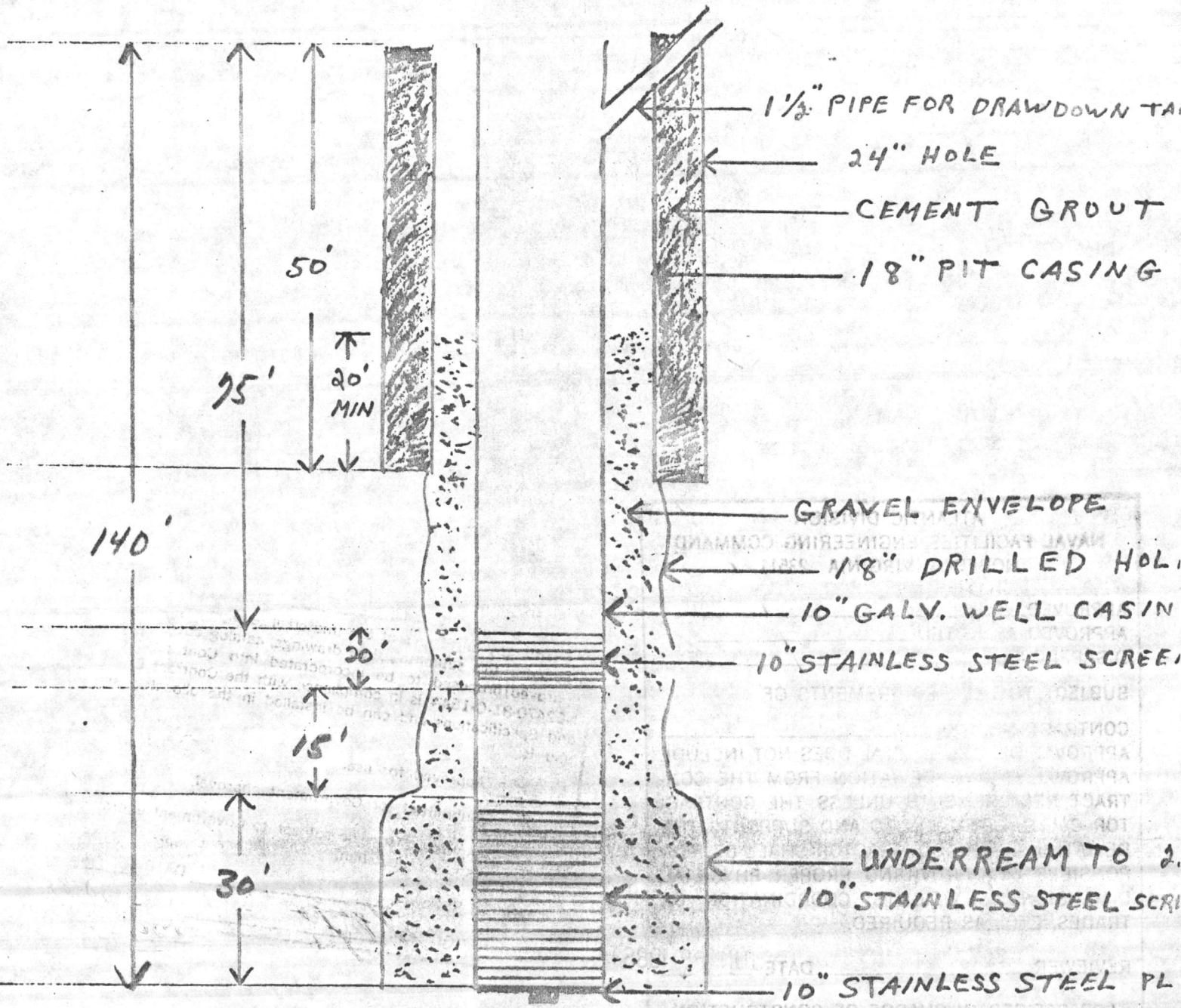


Serving Tidewater, Virginia and Eastern North Carolina

P. O. Box 908 Phone - 804 - 357-4105

Smithfield, Virginia 23430

WELL # 11.



ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511

APPROVED ✓ _____
APPROVED AS NOTED _____
DISAPPROVED _____

SUBJECT TO THE REQUIREMENTS OF
CONTRACT NO. NG2470-81-C-1644
APPROVAL OF A SUBMITTAL DOES NOT INCLUDE
APPROVAL OF ANY DEVIATION FROM THE CON-
TRACT REQUIREMENTS UNLESS THE CONTRAC-
TOR CALLS ATTENTION TO AND SUPPORTS THE
DEVIATION --- THE CONTRACTOR SHALL BE RES-
PONSIBLE FOR PROVIDING PROPER PHYSICAL
DIMENSIONS & WEIGHTS, COORDINATION OF
TRADES, ETC., AS REQUIRED.

REVIEWER [Signature] DATE JUN 9 1986

FOR OFFICER IN CHARGE OF CONSTRUCTION

It is hereby certified that the (material) (equipment) shown and
marked in this submittal, shop drawings, catalog cut (s), etc., and
approved/proposed to be incorporated into Contract Number
NG2470-81-C-1644 is in compliance with the Contract Drawings
and Specifications and can be installed in the allocated space,
and is:

____ Approved for use.
 Submitted for Government approval.
____ Approved for use subject to Government approval of
specific deviation.

Authorized Reviewer

Signature CQC Rep. [Signature]

DATE

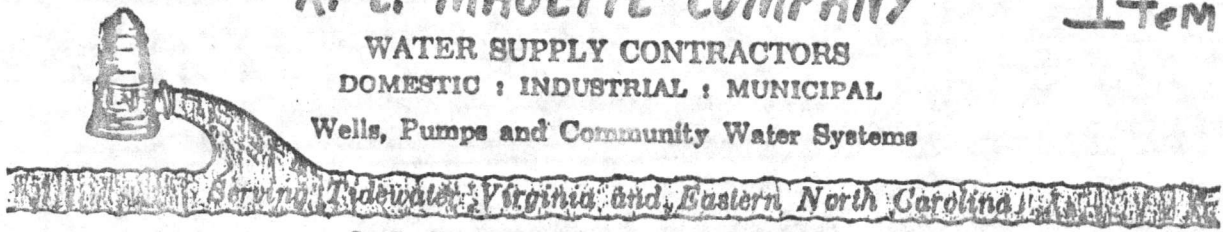
DATE 5-30-86

R. L. MAGETTE COMPANY

Item # 1

WATER SUPPLY CONTRACTORS
DOMESTIC : INDUSTRIAL : MUNICIPAL

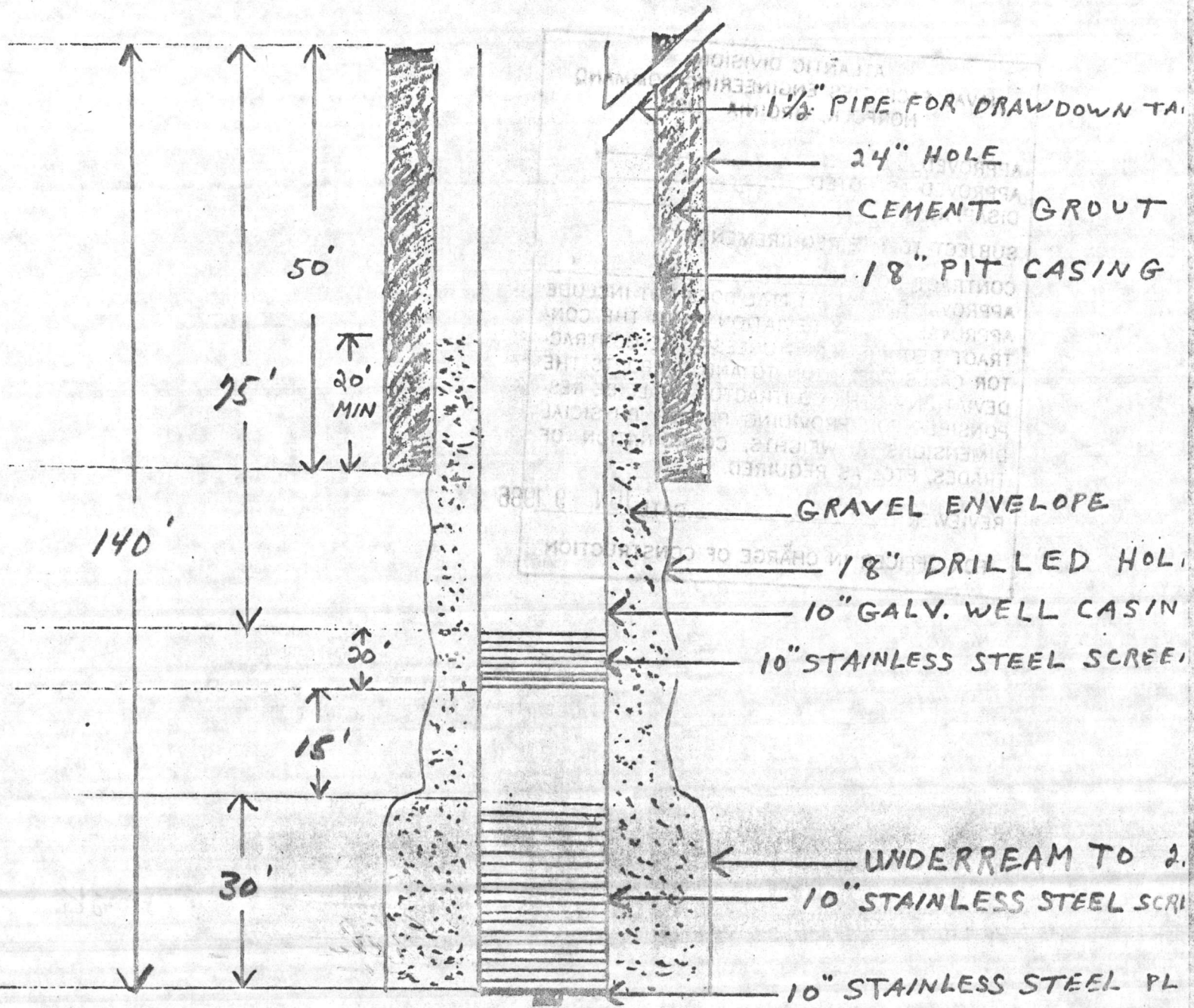
Wells, Pumps and Community Water Systems



P. O. Box 908 Phone • 604 • 357-4105

Smithfield, Virginia 23430

WELL # 11.



ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511

APPROVED _____
APPROVED AS NOTED _____
DISAPPROVED _____

SUBJECT TO THE REQUIREMENTS OF
CONTRACT NO. N62470-81-C-1644
APPROVAL OF A SUBMITTAL DOES NOT INCLUDE
APPROVAL OF ANY DEVIATION FROM THE CON-
TRACT REQUIREMENTS UNLESS THE CONTRAC-
TOR CALLS ATTENTION TO AND SUPPORTS THE
DEVIATION. --- THE CONTRACTOR SHALL BE RES-
PONSIBLE FOR PROVIDING PROPER PHYSICAL
DIMENSIONS & WEIGHTS, COORDINATION OF
TRADES, ETC., AS REQUIRED.

REVIEWER *M. Benson* DATE JUN 9 1986

FOR OFFICER IN CHARGE OF CONSTRUCTION

It is hereby certified that the (material) (equipment) shown and
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N62470-81-C-1644 is in compliance with the Contract Drawings
and Specifications and can be installed in the allocated space,
and is:

- Approved for use.
 Submitted for Government approval.
 Approved for use subject to Government approval of
specific deviation.

Authorized Reviewer _____ DATE _____
Signature CQC Rep. *Phil Reese* DATE 5-30-86

Hunt

CONTRACTOR'S SUBMITTAL TRANSMITTAL

LANTDIV NORFOLK 4-4355/3 (Rev. 11-80)

FROM CONTRACTOR

Harry Pepper & Associates, Inc.

TO

Henry Von Oesen & Associates, Inc.

CONTRACT NO

81-C-1644

TRANSMITTAL NO

151

DATE

1-16-86

PROJECT TITLE AND LOCATION

Holcomb Blvd Water Treatment Plant

MCB, Cp Lejeune, North Carolina

CONTRACTOR USE ONLY

*List only one specification division per form.

List only one of the following categories on each transmittal form, and indicate which is being submitted

Contractor Approved

OICC Approval

Deviation/Substitution For OICC Approval

REVIEWER USE ONLY

**ACTION CODES

- A-Approved
- D-Disapproved
- AN-Approved as noted
- RA-Receipt acknowledged.
- C-Comments
- R-Resubmit

ITEM NO.	PROJ. SPEC. SECT. & PARA. and/or PROJ. DWG. NO. *	ITEM IDENTIFICATION (Type, size, model no., Mfg. name, dwg. or brochure number)	NO. OF COPIES	ACTION CODES **	REVIEWER'S INITIALS CODE AND DATE
	02734	ROTARY DRILLED WATER WELLS -----Well # 12		A	AB
1	2.2.4	Recommendation and Data Submittal	7		
2	2.2	Driller's Log	7		
3	2.2.3	Electric Log and Gamma Log	7		
4	2.2.2	Water Analysis	7		
5	2.2.2	Sieve Analysis	7		
6	1.2.1	Shop Drawings	7		

CONTRACTOR'S COMMENTS

COPY OF TRANSMITTAL AND SUBMITTALS TO ROICC

ONE COPY TO ROICC

CONTRACTOR REPRESENTATIVE (Signature)

Phil Reese

DATE RECEIVED BY REVIEWER

1/22/86

FROM (Reviewer)

Henry von Oesen & Assoc., Inc.

TO

AROICC

Submittals are returned with action indicated. Approval of an item does not include approval of any deviation from the contract requirements unless the contractor calls attention to and supports the deviation.

Submittals are forwarded to LANTDIV with A-E recommendations indicated in REVIEWER USE ONLY Section and in comments below on **ONE COPY** of the transmittal form.

REVIEWER'S COMMENTS

COPIES TO
ROICC (2)
LANTDIV (1)
A-E (1)

DATE

1/21/86

SIGNATURE

[Signature]

CONTRACT NO. 1-10-80

REVIEWER USE ONLY

CONTRACTOR USE ONLY

REVIEWER USE ONLY
REVIEWER'S INITIALS
CODE AND DATE

CONTRACTOR USE ONLY
DATE OF SUBMITTAL

CONTRACTOR USE ONLY
DATE OF SUBMITTAL

CONTRACTOR USE ONLY
DATE OF SUBMITTAL

REVIEWER USE ONLY
REVIEWER'S INITIALS
CODE AND DATE

CONTRACTOR USE ONLY
DATE OF SUBMITTAL

CONTRACTOR USE ONLY
DATE OF SUBMITTAL

CONTRACTOR USE ONLY
DATE OF SUBMITTAL

[Handwritten signature]

WAS WARRI & ASSOC., INC. (ARCHITECT)

DATE

Hunt

CONTRACTOR'S SUBMITTAL TRANSMITTAL

LANTDIV NORFOLK 4-4355/3 (Rev. 11-80)

CONTRACT NO 81-C-1644	TRANSMITTAL NO 150	DATE 1-16-86
PROJECT TITLE AND LOCATION Holcomb Blvd Water Treatment Plant		
MCB, Cp Lejeune, North Carolina		

FROM CONTRACTOR
Harry Pepper & Associates, Inc.

TO
Henry Von Oesen & Associates, Inc.

CONTRACTOR USE ONLY

*List only one specification division per form.

List only one of the following categories on each transmittal form, and indicate which is being submitted

- Contractor Approved OICC Approval Deviation/Substitution For OICC Approval

REVIEWER USE ONLY

**ACTION CODES

- A-Approved
D-Disapproved
AN-Approved as noted
RA-Receipt acknowledged.
C-Comments
R-Resubmit

ITEM NO.	PROJ. SPEC. SECT. & PARA. and/or PROJ. DWG. NO. *	ITEM IDENTIFICATION (Type, size, model no., Mfg. name, dwg. or brochure number)	NO. OF COPIES	ACTION CODES **	REVIEWER'S INITIALS CODE AND DATE
	02734	ROTARY DRILLED WATER WELLS -----Well # 11			<i>MB</i>
1	2.2.4	Recommendation and Data Submittal	7		
2	2.2	Driller's Log	7		
3	2.2.3	Electric Log and Gamma Log	7		
4	2.2.2	Water Analysis	7		
5	2.2.2	Sieve Analysis	7		
6	1.2.1	Shop Drawings	7		

CONTRACTOR'S COMMENTS

COPY OF TRANSMITTAL AND SUBMITTALS TO ROICC

ONE COPY TO ROICC

CONTRACTOR REPRESENTATIVE (Signature)

Phil Reese *Phil Reese*

DATE RECEIVED BY REVIEWER

FROM (Reviewer)

TO

1/21/86

Henry von Oesen & Assoc., Inc. AROICC

Submittals are returned with action indicated. Approval of an item does not include approval of any deviation from the contract requirements unless the contractor calls attention to and supports the deviation.

Submittals are forwarded to LANTDIV with A-E recommendations indicated in REVIEWER USE ONLY Section and in comments below on ONE COPY of the transmittal form.

REVIEWER'S COMMENTS

COPIES TO
ROICC (2)
LANTDIV (1)
A-E (1)

DATE

1/22/86

SIGNATURE

Phil Reese

PROJECT NO. 1-1000

CONTRACTOR: [Illegible]

REVIEWER USE ONLY

CONTRACTOR USE ONLY

REVIEWER USE ONLY
NO. [Illegible]

CONTRACTOR USE ONLY
NO. [Illegible]

ACTION CODES
REVIEWER USE ONLY

ITEM IDENTIFICATION
CONTRACTOR USE ONLY

DATE RECEIVED
CONTRACTOR USE ONLY

DATE [Illegible]

DESCRIPTION [Illegible]

DATE [Illegible]

DATE [Illegible]

DESCRIPTION [Illegible]

DATE [Illegible]

DATE [Illegible]

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DATE [Illegible]

DATE [Illegible]

DESCRIPTION [Illegible]

DATE [Illegible]

23 JAN 1986 12 03



HARRY PEPPER & ASSOCIATES, INC. ENGINEERING CONTRACTORS
NORFOLK, VIRGINIA 23511

Item # 1

ATLANTIC DIVISION
 APPROVED ENGINEERING CONTRACTORS
 APPROVED AS NOTED _____
 DISAPPROVED _____
 SUBJECT TO THE REQUIREMENTS OF
 CONTRACT NO. N62470-81-C-1644
 APPROVAL OF A SUBMITTAL DOES NOT INCLUDE
 APPROVAL OF ANY DEVIATION FROM THE CON-
 TRACT REQUIREMENTS UNLESS THE CONTRAC-
 TOR CALLS ATTENTION TO AND SUPPORTS THE
 DEVIATION --- THE CONTRACTOR SHALL BE RES-
 PONSIBLE FOR PROVIDING PROPER PHYSICAL
 DIMENSIONS & WEIGHTS, COORDINATION OF
 TRADES, ETC., AS REQUIRED.
 REVIEWER [Signature] DATE JAN 21 1986
 FOR OFFICER IN CHARGE OF CONSTRUCTION

January 16, 1986

Henry Von Oesen
611 Princess Street
Wilmington, NC 28402

RE: N62470-81-C-1644
Expansion of Holcomb Blvd
Water Treatment Plant
Camp Lejeune, NC 28542
Well # 11

Gentlemen:

We are enclosing seven (7) copies of the Driller's Log, Electric Log, Gamma Log, Water Analysis and Sieve Analysis for your review. The test well was drilled at 250'. Water samples were taken at the 92' and 135' level.

We recommend a line of .030 slot stainless steel screen set at the 105' - 145' level for a total of 40 VF of screen. The gravel pack recommended is 8-12. It is our best estimate that this well may yield 260 GPM.

Please review the data and advise if we are to proceed with developing a permanent well at this site.

Very truly yours,
HARRY PEPPER & ASSOCIATES, INC.

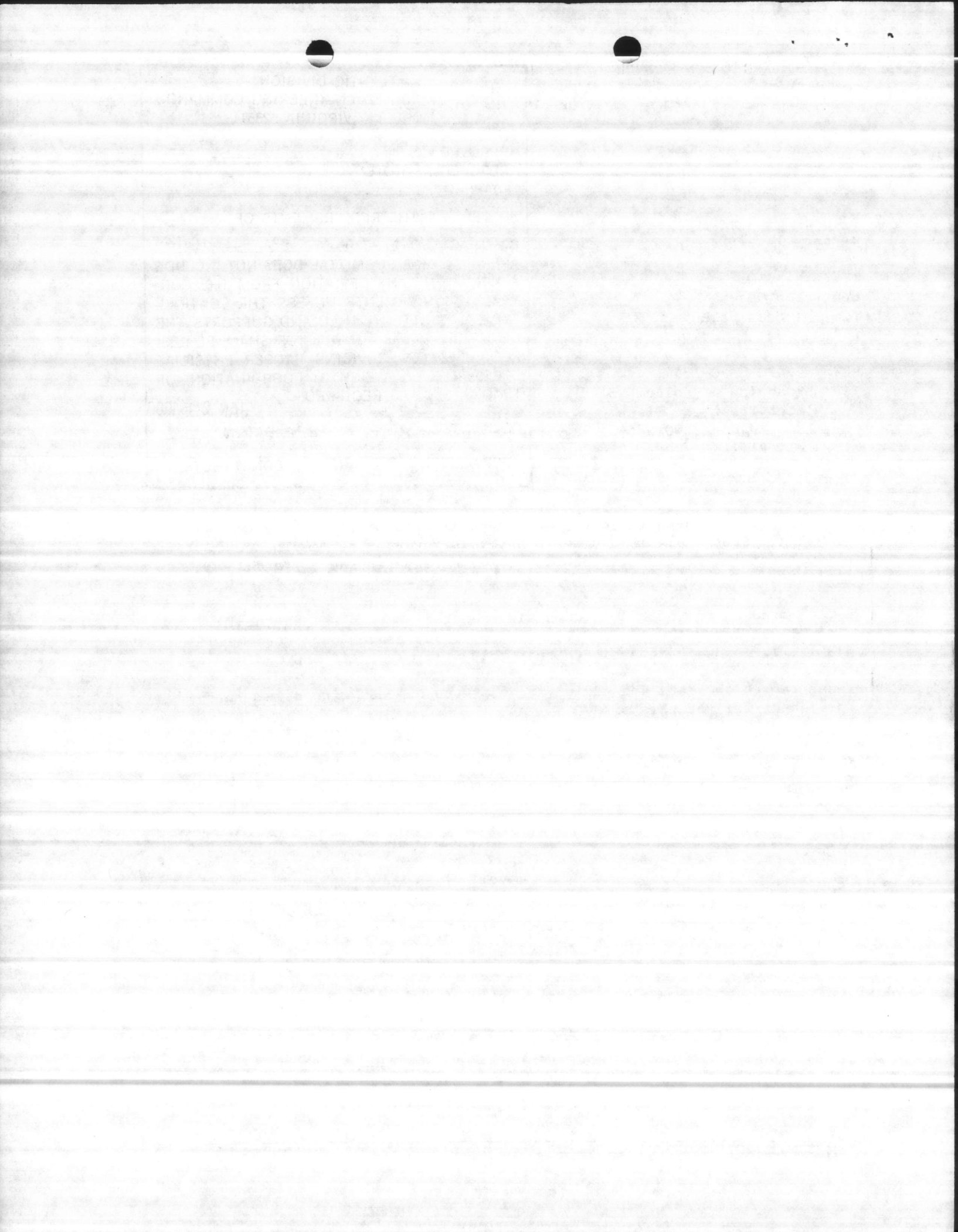
[Signature]
Phil Reese
CQC Officer

Enclosures

It is hereby certified that the (material) (equipment) shown and marked in this submittal, shop drawings, catalog cut(s), etc., and approved/proposed to be incorporated into Contract Number N62470-81-C-1644 is in compliance with the Contract Drawings and Specifications and can be installed in the allocated space, and is:

____ Approved for use.
 Submitted for Government approval.
 ____ Approved for use subject to Government approval of specific deviation.

Authorized Reviewer _____ DATE _____
 Signature CQC Rep. [Signature] DATE 1-16-86

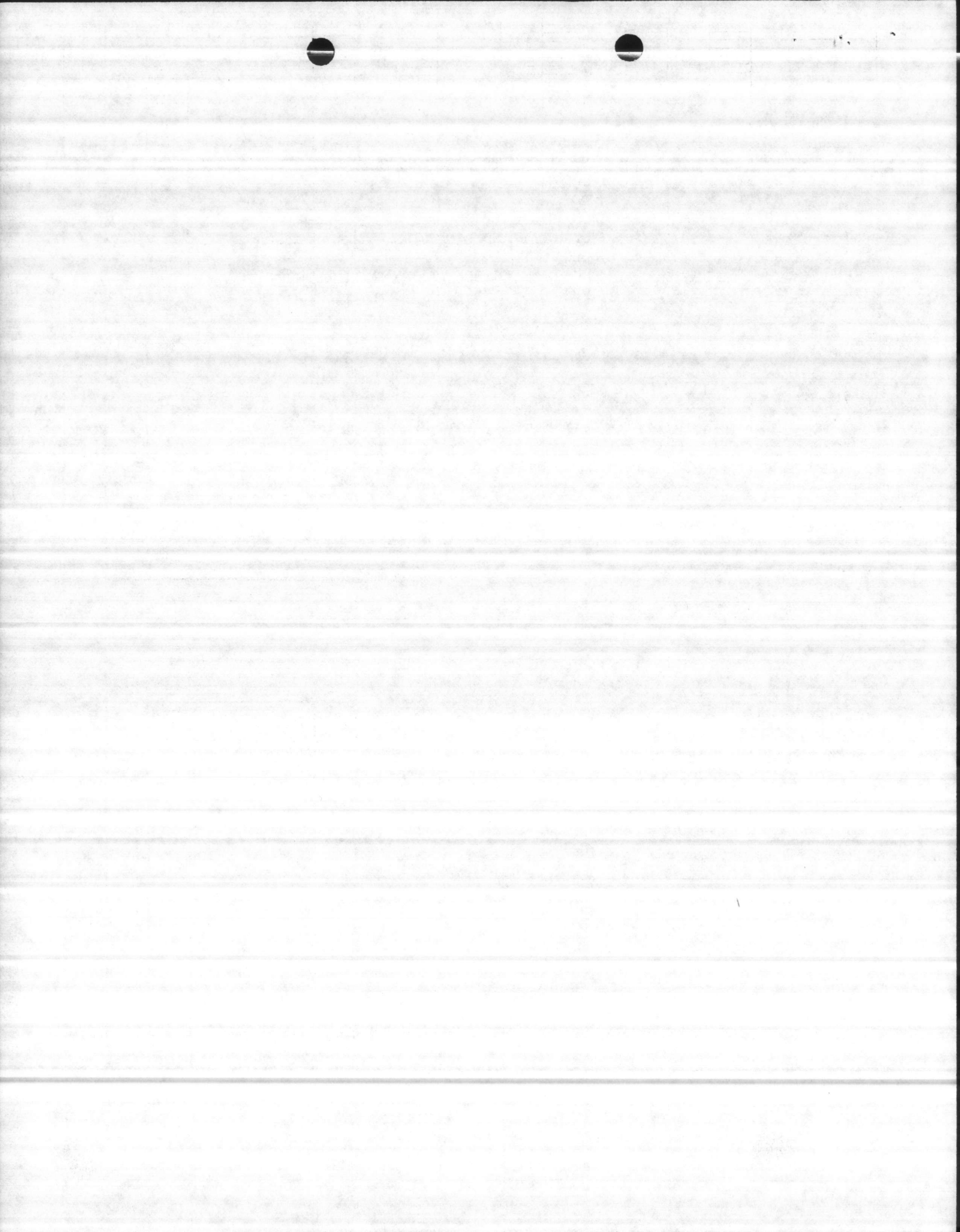


DRILLERS LOG CAMP LEJEUNE WELL # 11

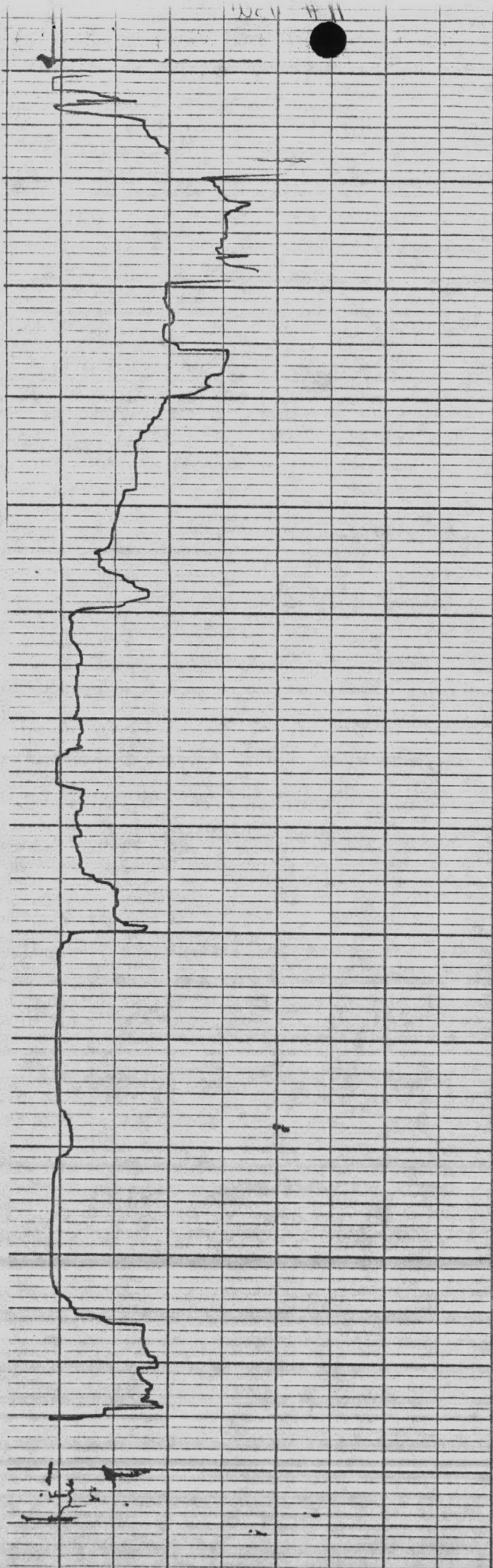
Item # 2

DEPTH OF SAMPLE

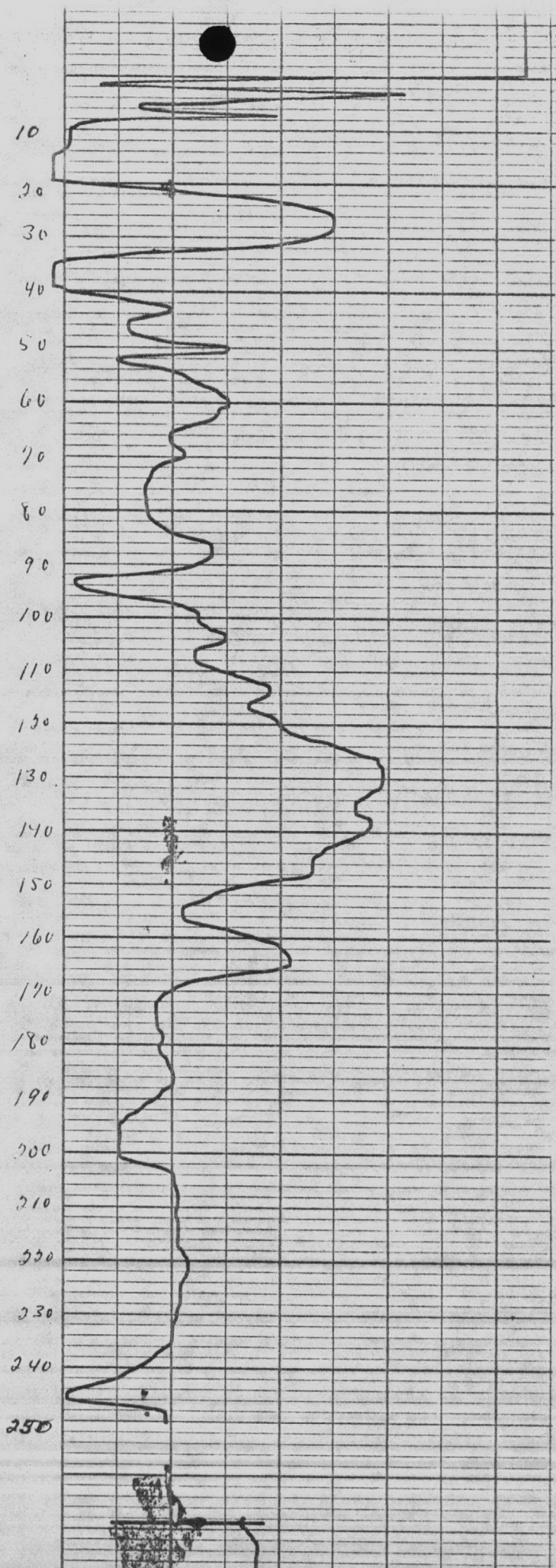
1	-	10 FT	TOPSOIL WHITE SAND AND CLAY
10	-	20 FT	GRAY CLAY
20	-	35 FT	FINE SAND
35	-	40 FT	GRAY CLAY
40	-	95 FT	GRAY CLAY AND LIMESTONE
95	-	150 FT	LIMESTONE
150	-	200 FT	GRAY CLAY, GREEN CLAY AND LIMESTONE
200	-	250 FT	GREEN CLAY AND FINE SAND

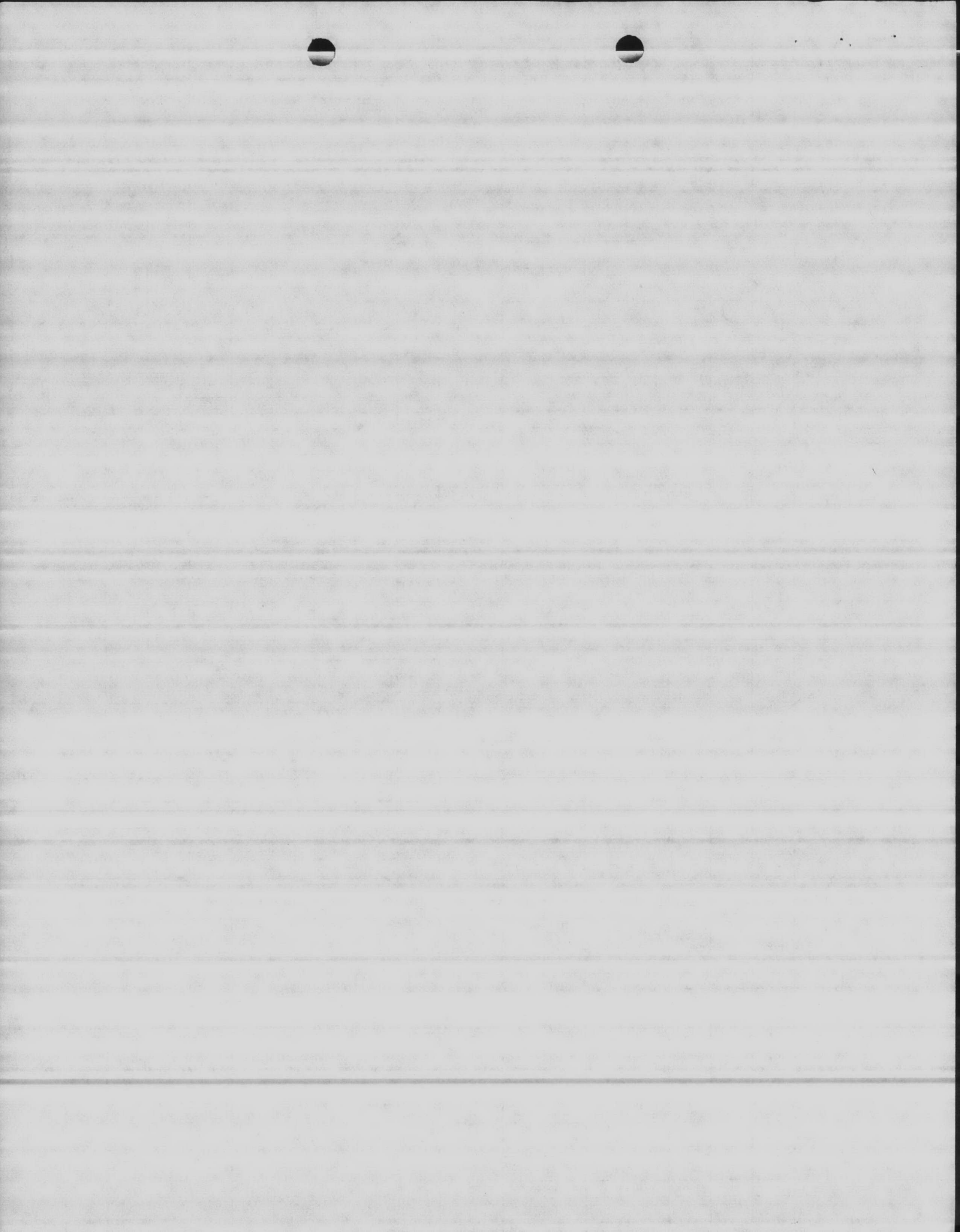


Dec 11 # 11



tem # 3





Consulting and Analytical Chemists

Item # 4

ESTABLISHED 1903

Main Office
1711 Castle Street
P.O. Box 629
Wilmington, N.C. 28402

RICHARD SPIVEY, President
919 762 7082 919 762 8956
TWX 510 937 0280

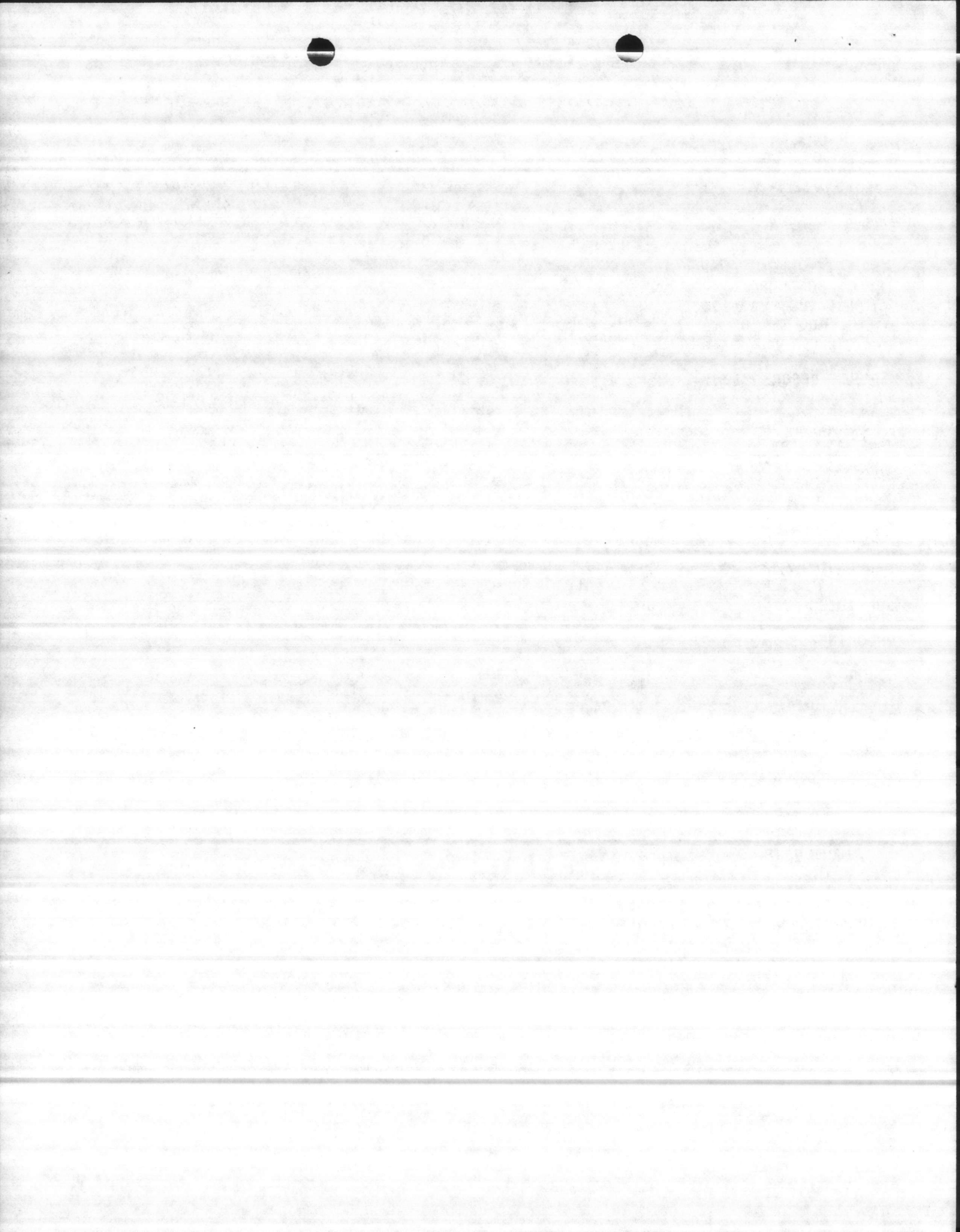
MAJETTE WELL & PUMP CO
P. O. BOX 908
SMITHFIELD, VA 23430
ATTN: BUD KELLOG

DATE COLLECTED: 9-13-85
DATE RECEIVED: 9-13-85
COLLECTED BY: CUSTOMER
LAB ID# EW 9531

SAMPLE DESCRIPTION: WELL #11

<u>TESTS/UNITS</u>		82'-92'	129'-135'
		<u>RESULTS</u>	<u>RESULTS</u>
DISSOLVED OXYGEN	(MG/L)	6	6
TEMPERATURE		19.5°C	19.5°C
pH		8.0	8.0
CARBON DIOXIDE	(PPM)	0	0
SULFIDES	(PPM)	.6	4.8
CHLORINE DEMAND	(PPM)	.4	.2
COLOR	(APHA)	110	50
TURBIDITY	(NTU)	66	24
TOTAL ALKALINITY	(PPM)	181	164
HYDROXIDE	(PPM)	0	0
BICARBONATE	(PPM)	164	152
CARBONATE	(PPM)	17	12
TOTAL HARDNESS	(PPM)	154	88
NON-CARBONATE	(PPM)	0	0
CARBONATE	(PPM)	154	88
TOTAL DISSOLVED SOLIDS	(PPM)	520	210

CONTINUED.....



WALKER COMPANY
Consulting and Analytical Chemists

ESTABLISHED 1903

PAGE -2-
WELL #11

Main Office
1711 Castle Street
P.O. Box 629
Wilmington, N.C. 28402

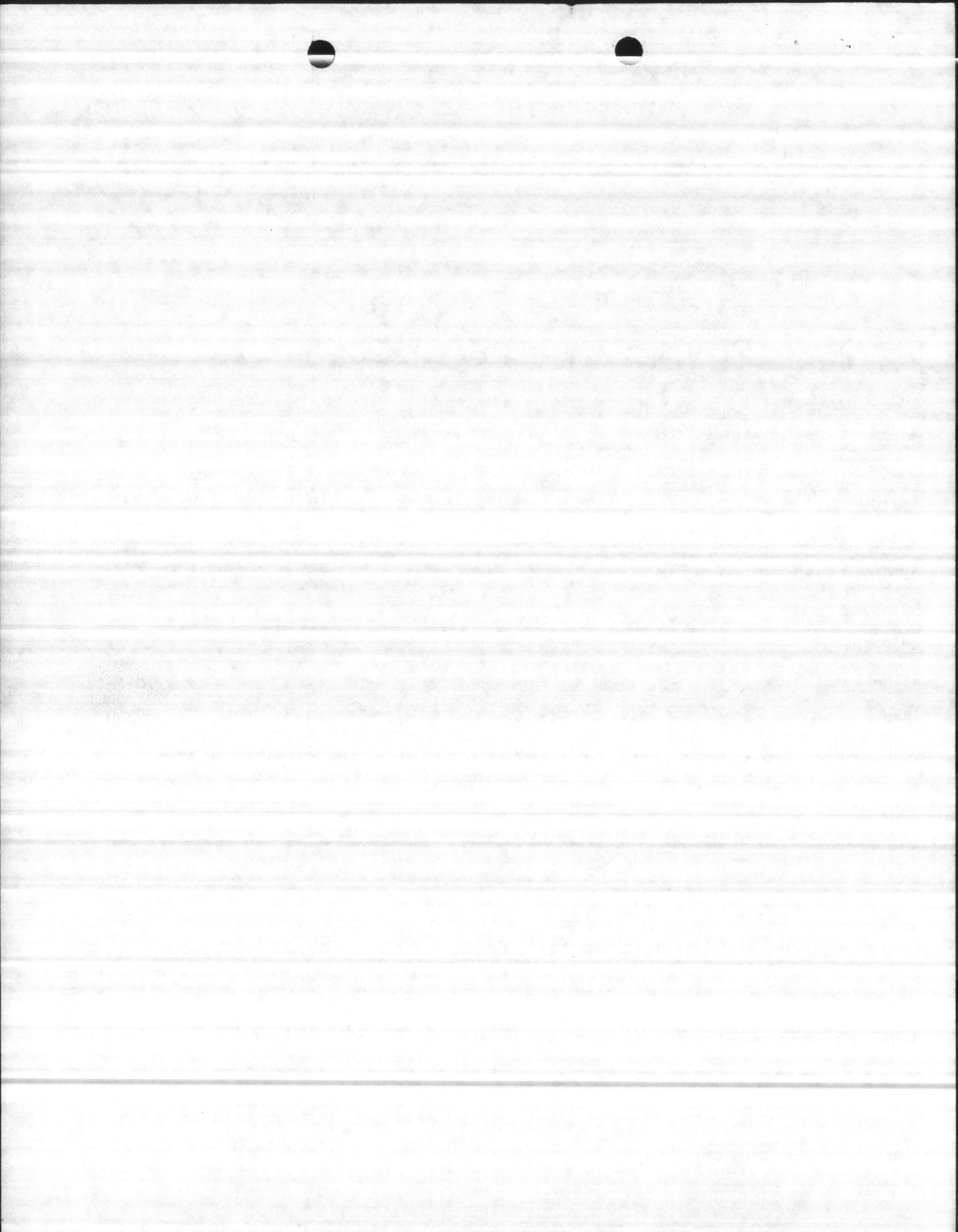
RICHARD SPIVEY, President
919 762 7082 919 762 8956
TWX 510 937 0280

<u>TESTS/UNITS</u>		<u>82'-92'</u> <u>RESULTS</u>	<u>129'-135'</u> <u>RESULTS</u>
SPECIFIC CONDUCTANCE	(UMHOS)	325	205
SULFATES	(PPM)	84.4	12.3
CALCIUM	(PPM)	50	38
MAGNESIUM	(PPM)	3.3	1.0
SODIUM	(PPM)	12.0	12.8
POTASSIUM	(PPM)	2.0	1.2
CHLORIDE	(PPM)	11.7	9.4
NITRATE NITROGEN	(PPM)	<.2	<.2
IRON	(PPM)	1.3	.20
MANGANESE	(PPM)	.03	<.02
SILICON	(PPM)	2.1	3.6
FLOURIDE	(PPM)	.94	.96

CHEMIST

Dolly Bidwan

TOTAL CHARGES: \$360.00



Item #5

HSSC

HOWARD SMITH
SCREEN COMPANY

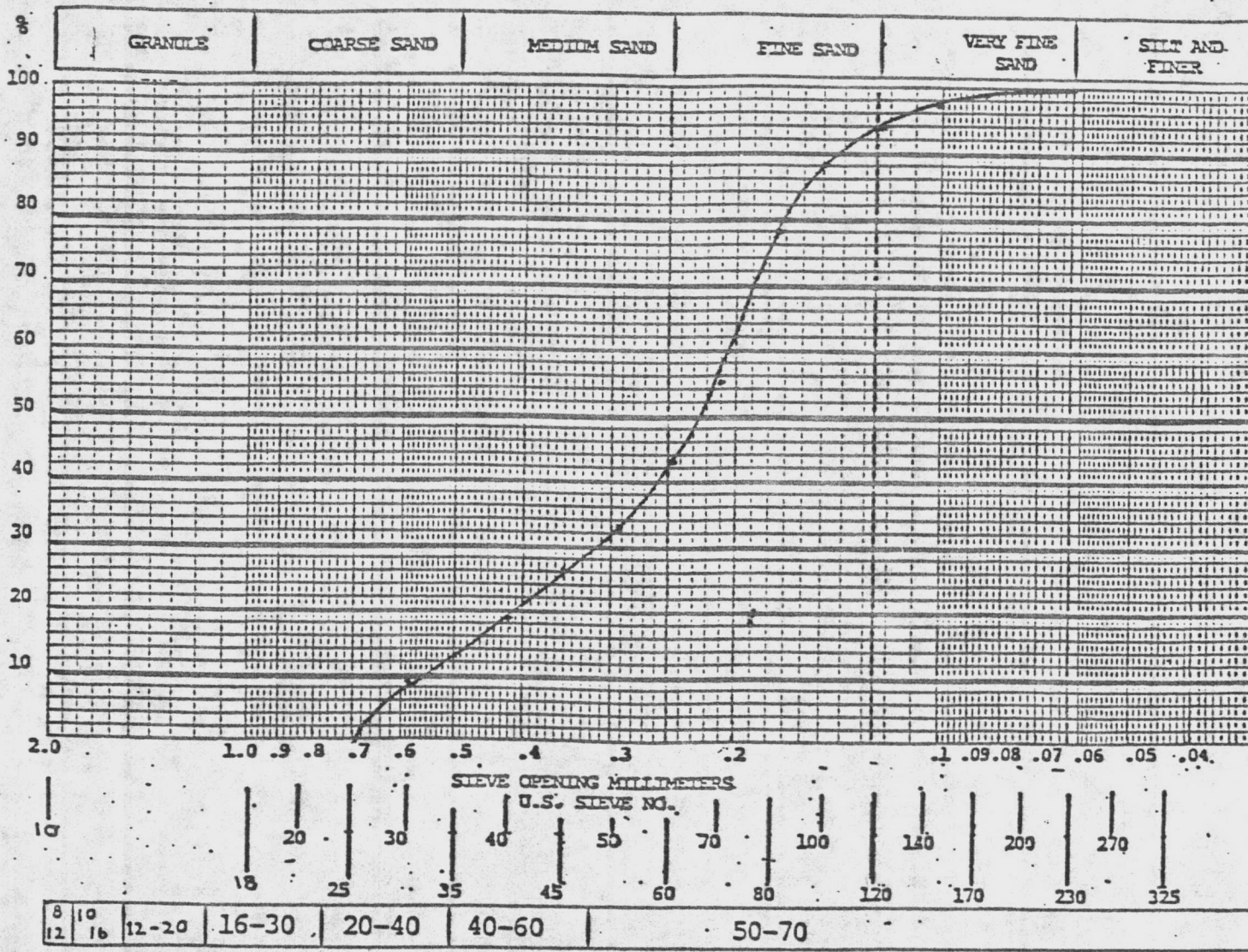
A Halliburton Company
P.O. Box 666 • Houston, Texas 77001
713-869-5771 • Telex: 77-4667

COMPANY...R.L.MAGETTE COMPANY
WELL..... 11
DEPTH... 105-145
FIELD.....-
COUNTY....-
STATE.....VA

CONTACT...-
TELEPHONE...-
REMARKS...WATER WELL
RECOMMENDATIONS:
GRAVEL SIZE _____
SCREEN SIZE _____

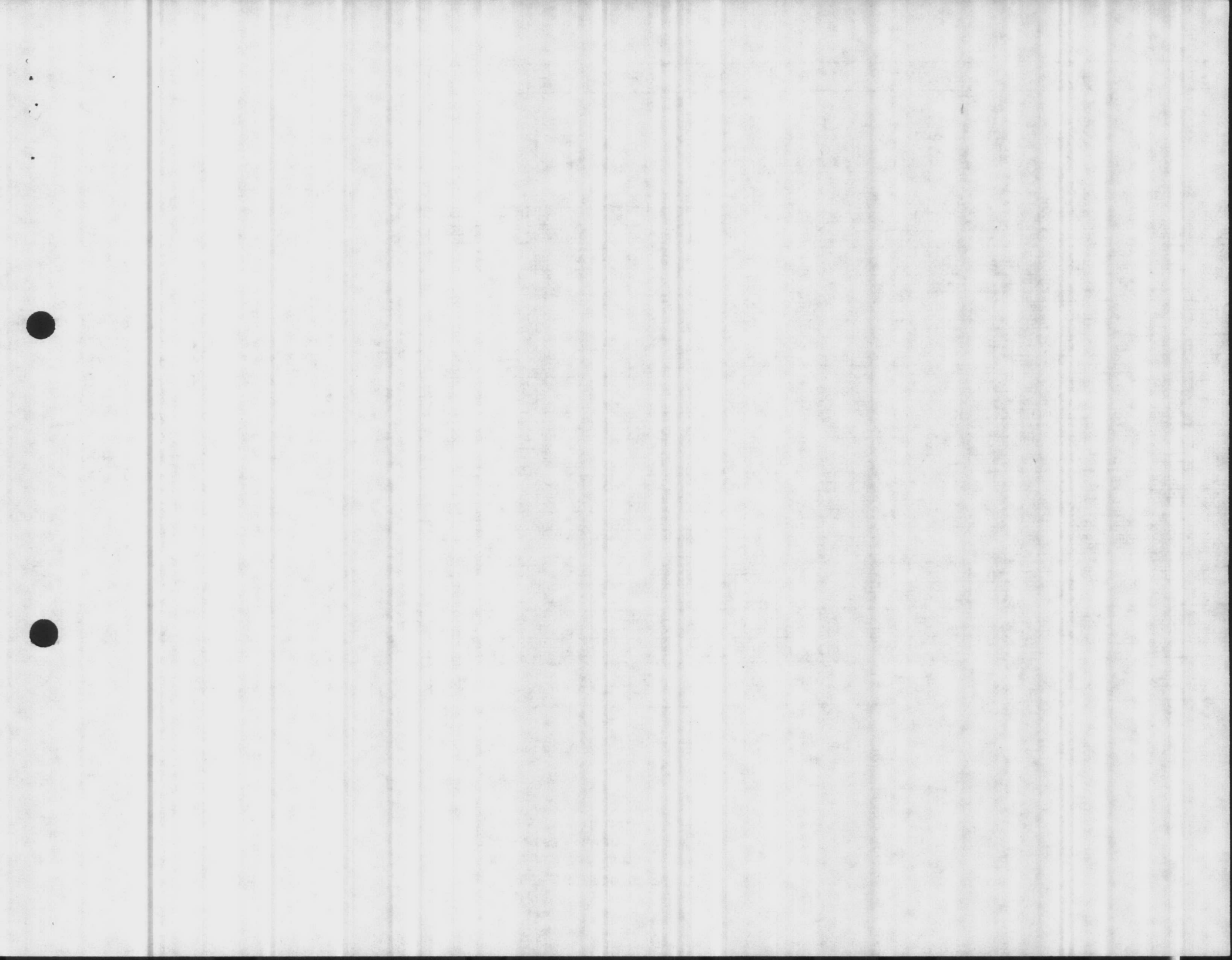
SIEVE ANALYSIS REPORT

U.S. SIEVE	IN	MM	WT RET	CUM WT	CUM %
18	.0787	2.000	--	--	--
20	.0394	1.000	--	--	--
25	.0331	0.840	--	--	--
30	.0280	0.710	--	--	--
35	.0234	0.589	2.2	2.2	8.7
40	.0197	0.500	1.1	3.3	13.1
45	.0165	0.420	1.6	4.9	18.4
50	.0139	0.351	1.7	6.6	26.2
60	.0117	0.297	1.7	8.3	32.9
70	.0098	0.250	2.7	11.0	43.7
80	.0083	0.210	3.0	14.0	55.6
100	.0070	0.177	5.7	19.7	78.2
120	.0059	0.149	2.5	22.2	88.1
140	.0049	0.124	1.7	23.9	94.8
170	.0041	0.104	0.7	24.6	97.6
200	.0035	0.088	0.4	25.0	99.2
250	.0029	0.074	0.1	25.1	99.6
300	.0024	0.062	0.1	25.2	100.0
350	.0021	0.053	--	--	--
400	.0017	0.044	--	--	--
450	--	--	--	--	--



MES E JACKSON
-22-85

8	10	12-20	16-30	20-40	40-60	50-70
12	16					



R. L. MAGETTE COMPANY

WATER SUPPLY CONTRACTORS
DOMESTIC : INDUSTRIAL : MUNICIPAL

Wells, Pumps and Community Water Systems



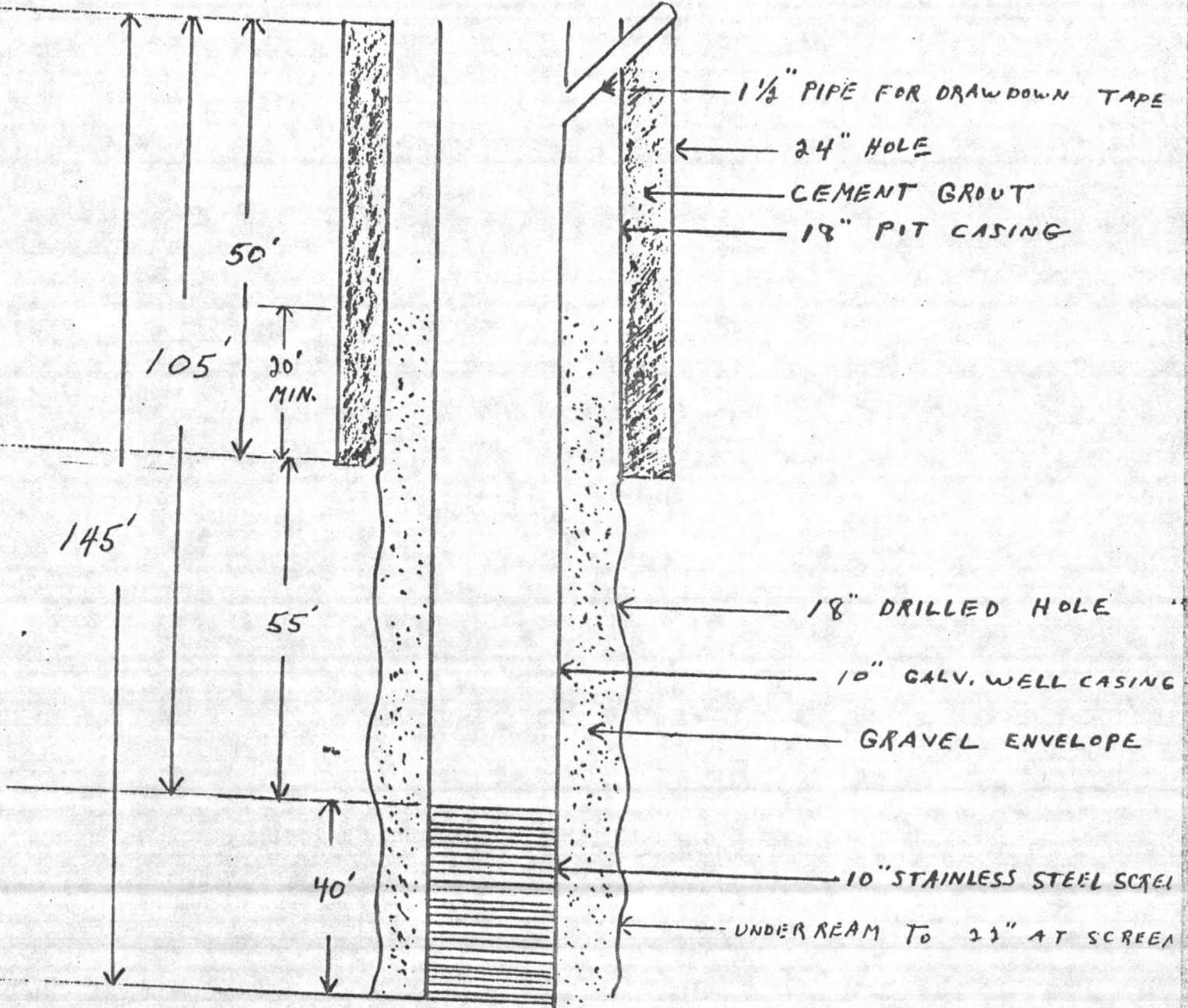
Item # 6

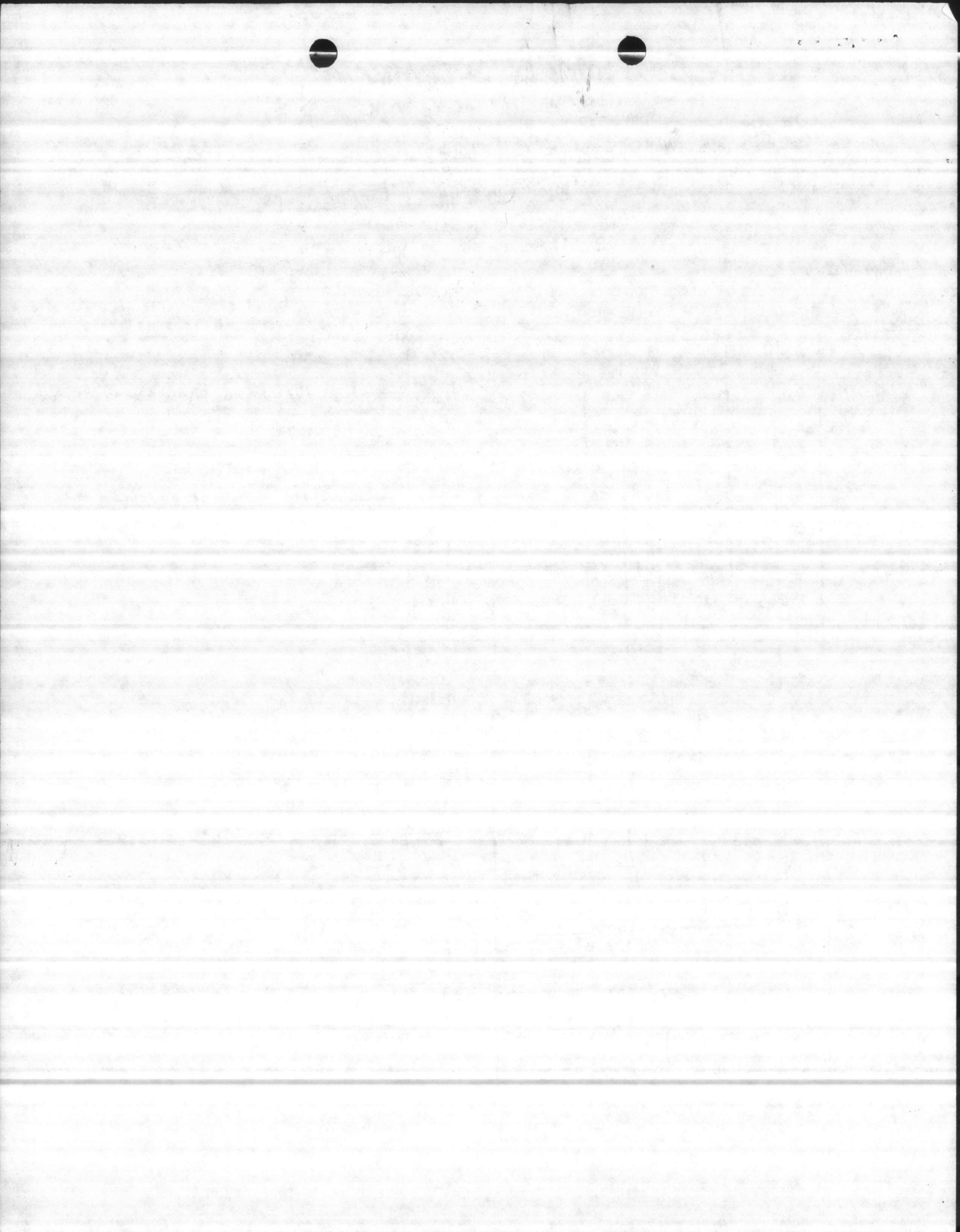
Serving Tidewater Virginia and Eastern North Carolina

P. O. Box 908 Phone - 804 - 357-4103

Smithfield, Virginia 23430

WELL # 11





FILE FOLDER

DESCRIPTION ON TAB:

Well # 710

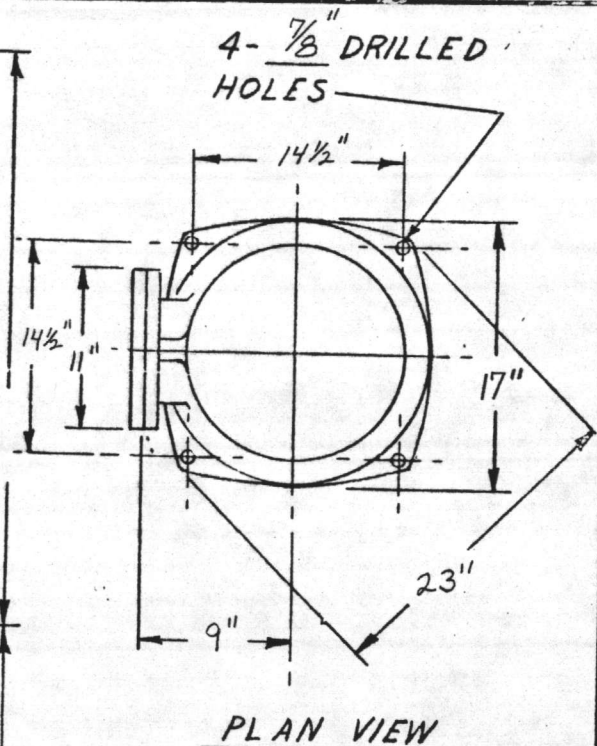
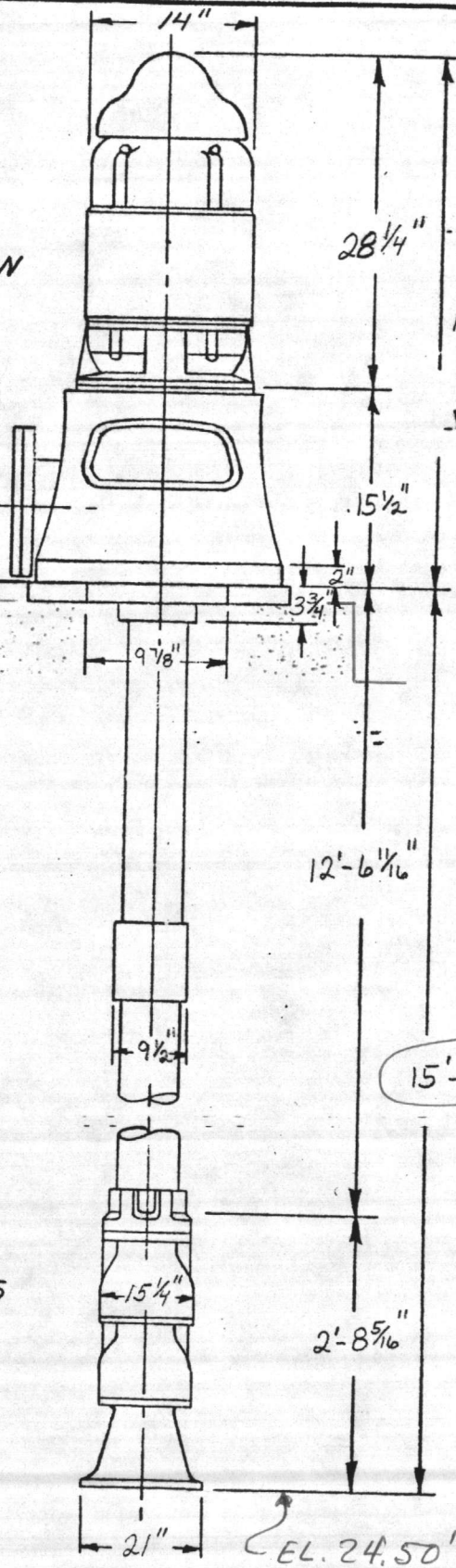
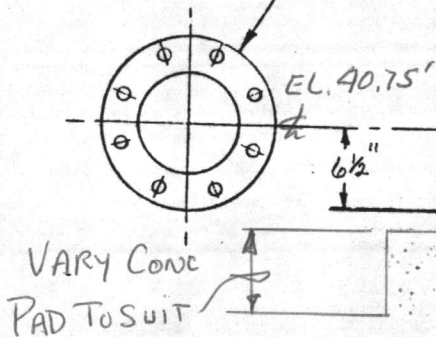
Outside/inside of actual folder did not contain hand written information

Outside/inside of actual folder did contain hand written information

***Scanned as next image**

20 H.P.
1200 R.P.M.
U.S. MOTOR
286TP FRAME

8" FLNG. DISCHARGE
8 - 3/4 CAPSCREWS ON
9 1/2 BOLT CIRCLE



FOR APPROVAL
FABRICATION PENDING

15'-3"

1 STAGES

CAMP LEJEUNE
FINISH WATER NO. 1 & 2

HARRY PEPPER & ASSOC. INC. S.O. 1635-11 P.O. C642-0001

T-82518-19

THE DEMING CO. SALEM, OHIO	TITLE DIMENSION SHEET		DATE OF ISSUE 2/20/85
	DATE 10-3-61	SCALE <i>nr</i>	DESTROY ALL PREVIOUS PRINTS
		FIG. 4700	SIZE M 16
		DRAWING NO. 117-319	

A D C

FOR APPROVAL
FABRICATION PENDING

CAMP LEJEUNE No. 12 WELL

DEMING PUMP CO.

SALEM, OHIO, U.S.A.

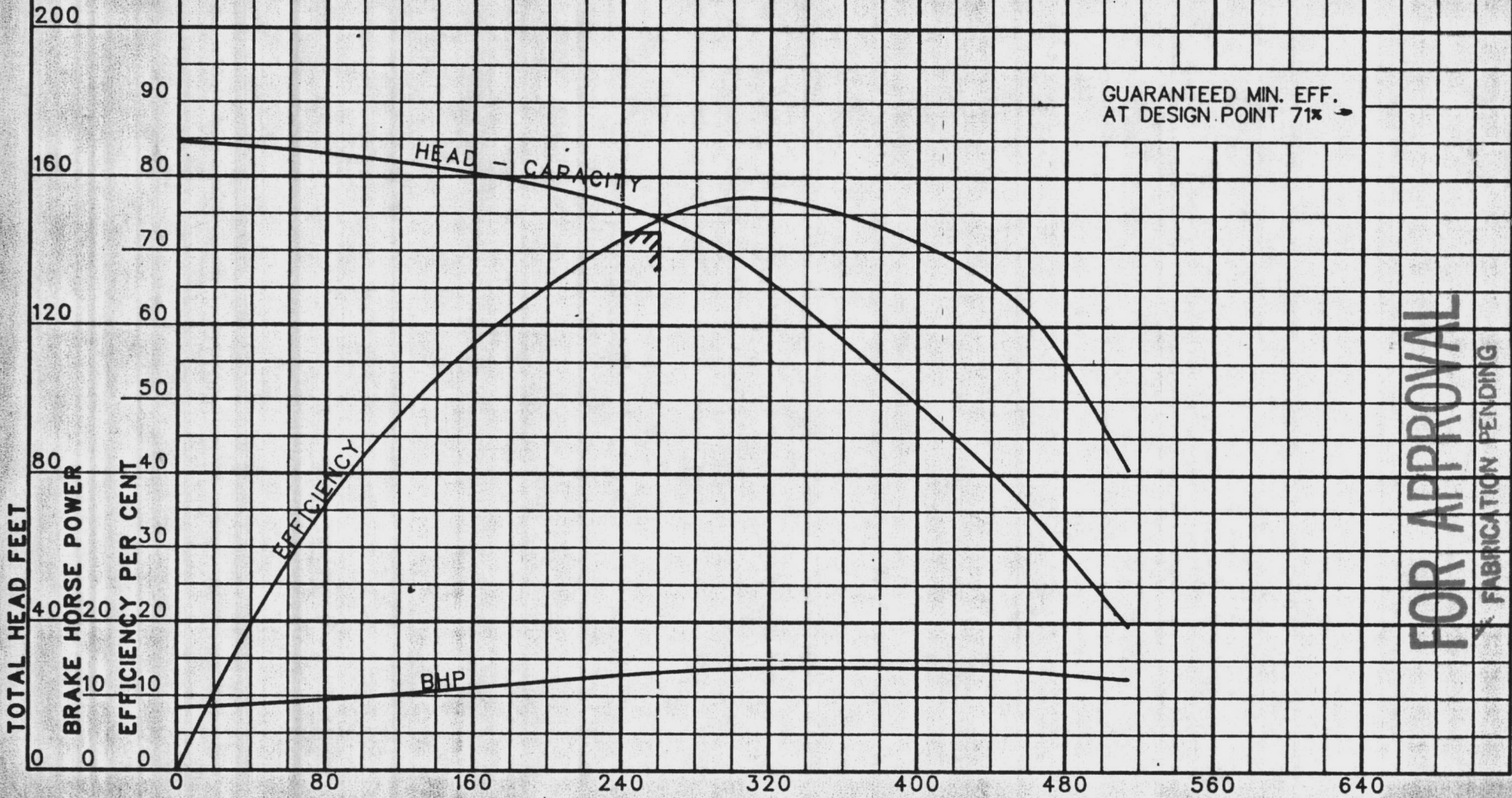
240 HARRY PEPPER & ASSOC. INC. S.O. 1635-19 P.O. C642-0001

CHARACTERISTIC CURVES

FIG. 4700 SIZE M 8 STAGES 6 IMPELLER 22665

DESIGNED RATING: G.P.M. 260 HEAD 145 R.P.M. 1770

OTHER CURVE POINTS AND GENERAL SHAPE OF CURVES ARE APPROXIMATE



GUARANTEED MIN. EFF. AT DESIGN POINT 71% →

SERIAL NO. ****

U. S. GALLONS PER MINUTE

DATE 2-21-85

IMP. DIA. 5 5/8"

NO. Q23633

✓ FABRICATION PENDING

FOR APPROVAL

DATE 7-25-00

PWSID 04-67-041

WELL # HP 710

WELL NAME HADNOT POINT HP20

BLDG. HP 710

CODE G

AVAILABILITY P.

LOCATION D-LINE ROAD.

LATITUDE 34.70391

LONGITUDE 77.31042

WELL DIAMETER 10"

WELL DEPTH 140'

SCREEN INTERVAL

YIELD 100

STATIC LEVEL 28'

PUMPING LEVEL 53'

PUMP TYPE VERTICAL TURBINE

MOTOR HP 15

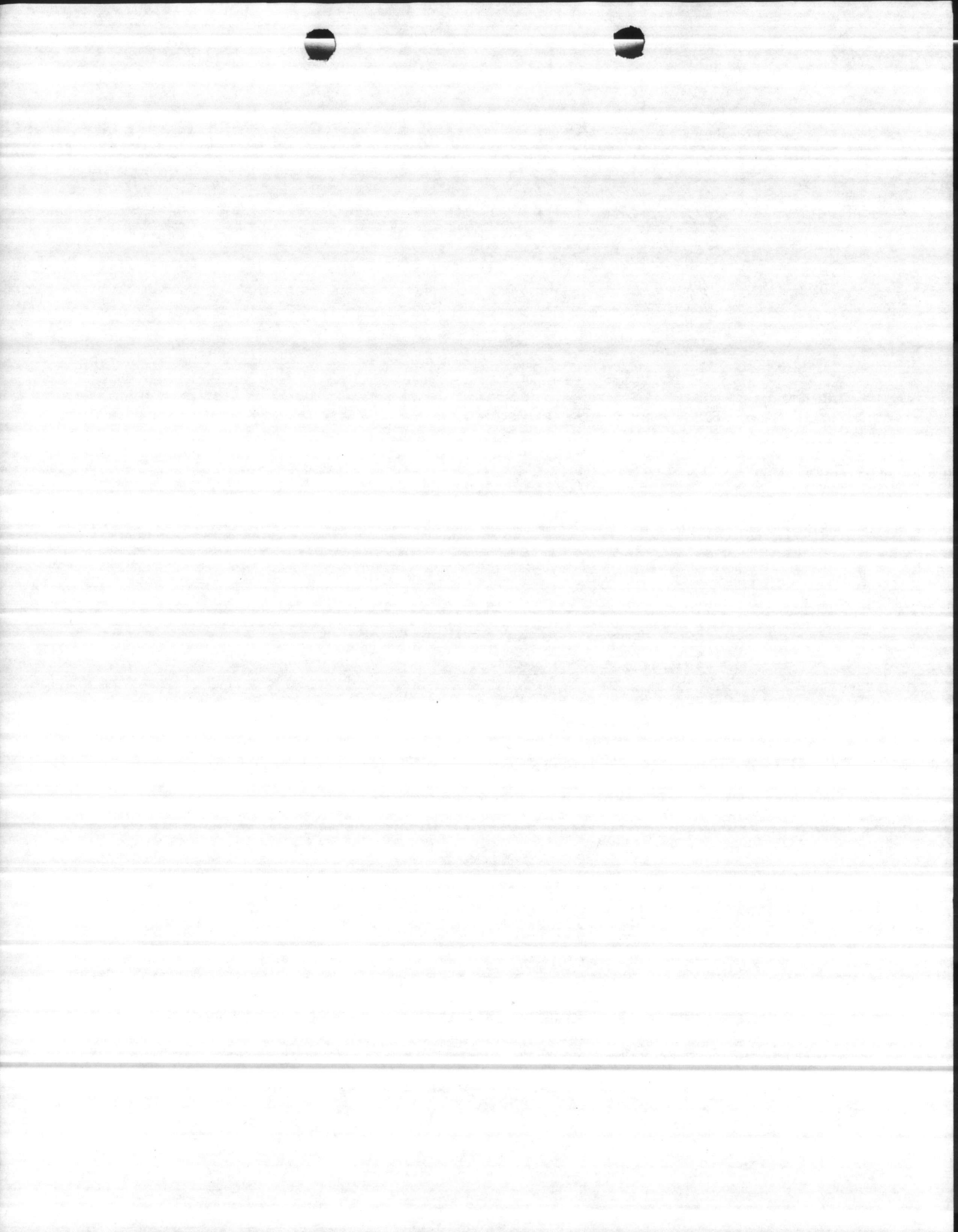
INTAKE DEPTH 86

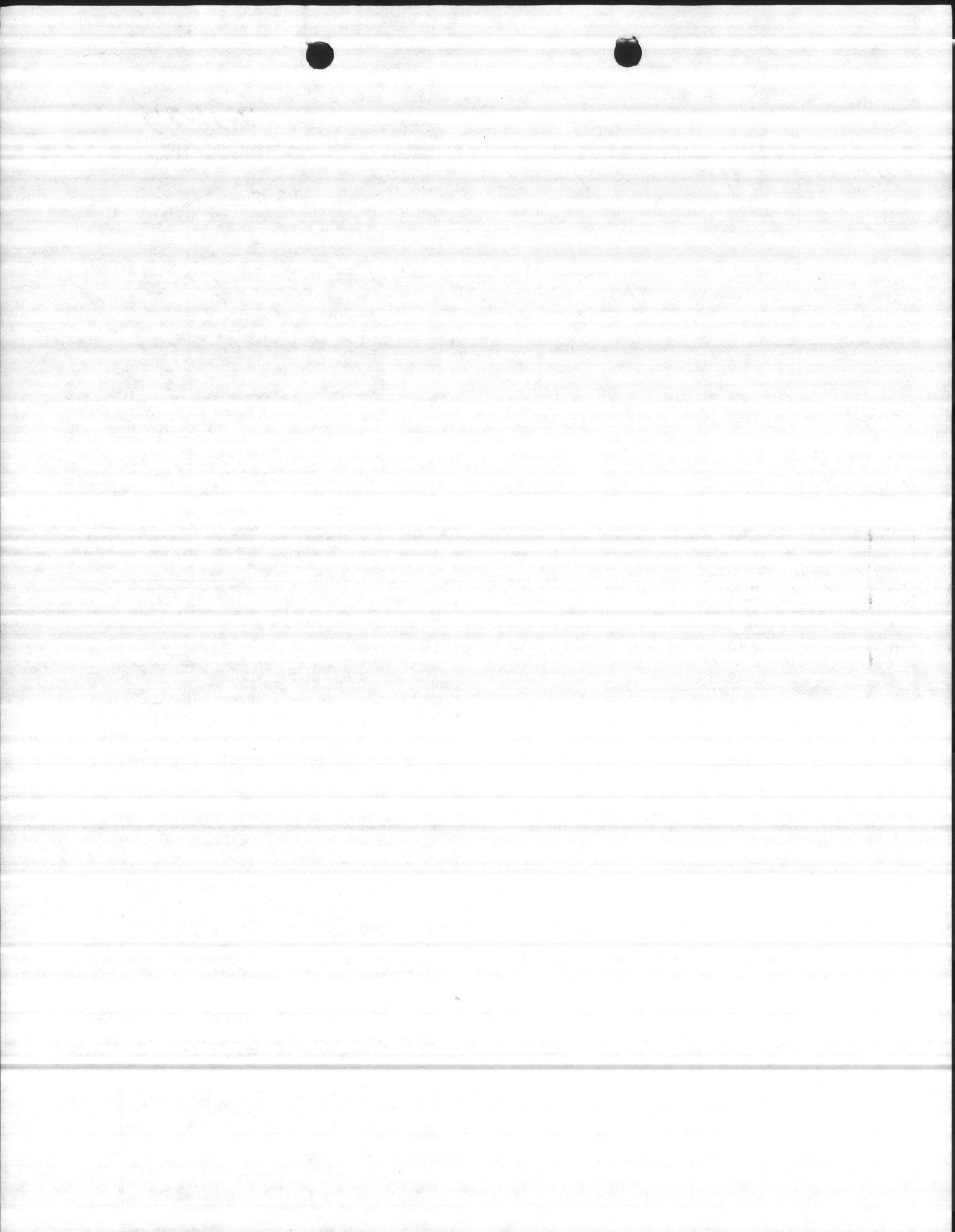
DESIGN CAPACITY 200

ACTUAL GPM 200

SIZE OF CONCRETE SLAB 10X10

HEIGHT OF CASING 18"





North Carolina Department of Environment, Health, and Natural Resources
 Division of Environmental Health, Public Water Supply Section

SOURCE INFORMATION GROUND WATER

Date Form Completed

M M D D Y Y
 0 1 2 5 9 5

PWSID
 0467041

Owner Assigned Source Code: 710 Well Name (If purchase, name of system): HAD NOT POINT 710

Code: G
 G=Ground
 W=Purchase/G
 Y=G w/direct influence
 Z=W w/direct influence

If Purchase, seller ID#: Source Begin Date: Source exempt—SWTR? Y N Direct Influence Date:

Availability: P
 P=Permanent
 E=Emergency
 S=Seasonal
 I=Interim
 O=Other

Location of well within the system (If purchase, location of master meter): D-LINE ROAD

Latitude (N): 344214.0 Longitude (W): 0771839.0 How Determined: G GPS Data: Q2 No. of Sats. Locked on: 3
G=GPS, M=Map, S=Surveyed; Q# or DOP #

(If purchase, use seller's primary source lat/long)
 Vulnerable (VOCs) Y N Assessment Date:

ENTRY POINT INFORMATION

Use Code: C
 C=Ground/Permanent
 D=Ground/non-permanent

Availability: P
 P=Year-round
 E=Emergency
 S=Seasonal
 I=Interim
 O=Other

Owner Assigned Entry Point Code: 100 Entry Point Name: HP 710 MCA HAD NOT POINT 710

Location: _____
 Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius)? Y (Y,N) If no, explain: _____
 Sources of pollution/distance: None - woods

Surface water within 200'? Y N If yes, actual distance feet If yes, bact. samples collected? _____ (Y,N)
 Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: OK

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N)
 Condition of house: OK Type of freeze protection: Electric heater

Well: Diameter: 10" Type: SCREENED Yield (gpm): 100-200 Properly sealed? Y (Y,N)
 Properly vented? Y (Y,N) Casing depth 50 ft. (If unknown, put 'UNK') Well depth: 140' Meter available? Y (Y,N)
 Concrete slab adequate? Y (Y,N) If no, explain: _____ Size: 10x10

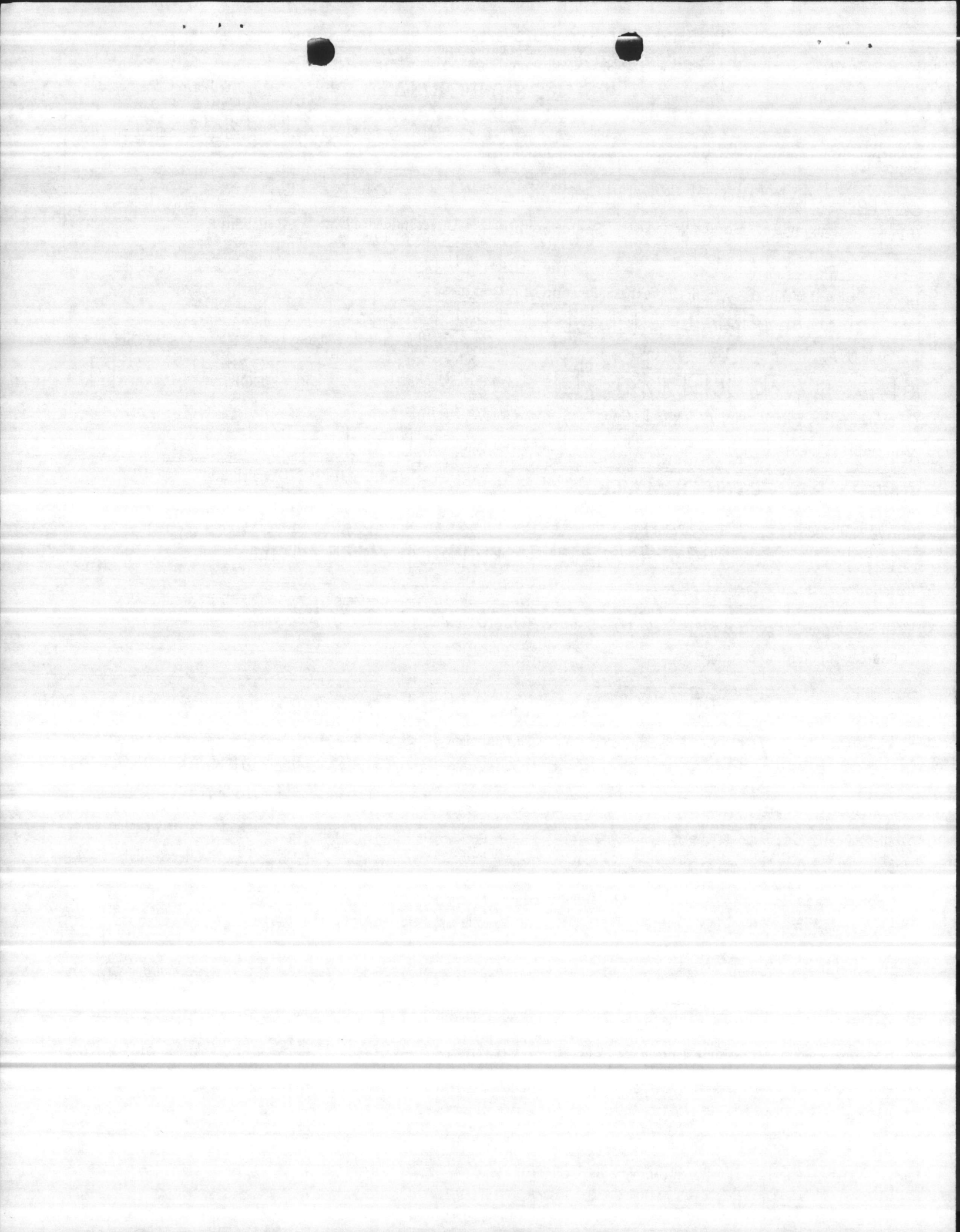
Size of blow-off: 4" (V) Sample tap: Before treatment? Y (Y,N) After treatment? _____ (Y,N)
 Pumps: Capacity: GPM: 300-105 HP: 15 Pump intake depth: 86 Auxiliary Power? Y (Y,N)

Type pump: VERTICAL TURBINE Height above floor (pump/casing): 18"
 Storage at well site: Elev: Hydro: Ground:

If hydroautomatic, air volume control? _____ (Y,N) Safety valves? _____ (Y,N) Coded? _____ (Y,N)
 High service pumps: 1. _____ gpm _____ hp 2. _____ gpm _____ hp 3. _____ gpm _____ hp Auxiliary Power? _____ (Y,N)
 Is the water treated at this well? Y N If yes, complete back of form.

If other wells are treated here, which ones? _____ If treated elsewhere, where? HP-20 PLANT
 If purchase, retreat? Y N If yes, complete back of form. Repair vent

*





35
23
58

S/L

R/L

OP

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10-11-01



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HARRY PEPPER & ASSOCIATES, INC.

ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511
ENGINEERING CONTRACTORS

Item # 1

APPROVED _____
APPROVED AS NOTED _____
DISAPPROVED _____

January 16, 1986

Henry Von Oesen
611 Princess Street
Wilmington, NC 28402

RE: N62470-81-C-1644
Expansion of Holcomb Blvd
Water Treatment Plant
Camp Lejeune, NC 28542
Well # 12

SUBJECT TO THE REQUIREMENTS OF
CONTRACT NO. N62470-81-C-1644
APPROVAL OF A SUBMITTAL DOES NOT INCLUDE
APPROVAL OF ANY DEVIATION FROM THE CON-
TRACT REQUIREMENTS UNLESS THE CONTRAC-
TOR CALLS ATTENTION TO AND SUPPORTS THE
DEVIATION---THE CONTRACTOR SHALL BE RES-
PONSIBLE FOR PROVIDING PROPER PHYSICAL
DIMENSIONS & WEIGHTS, COORDINATION OF
TRADES, ETC., AS REQUIRED.

REVIEWER _____ DATE JAN 21 1986

FOR OFFICER IN CHARGE OF CONSTRUCTION

Gentlemen:

We are enclosing seven (7) copies of the Driller's Log, Electric Log, Gamma Log, Water Analysis and Sieve Analysis for your review. The test well was drilled at 250'. Water samples were taken at the 95' level.

We recommend a line of .030 slot stainless steel screen set at the 84' to 124' level for a total of 40 VF of screen. The gravel pack recommended is 8-12. It is our best estimate that this well may yield 260 GPM.

Please review the data and advise if we are to proceed with developing a permanent well at this site.

Very truly yours,
HARRY PEPPER & ASSOCIATES, INC.

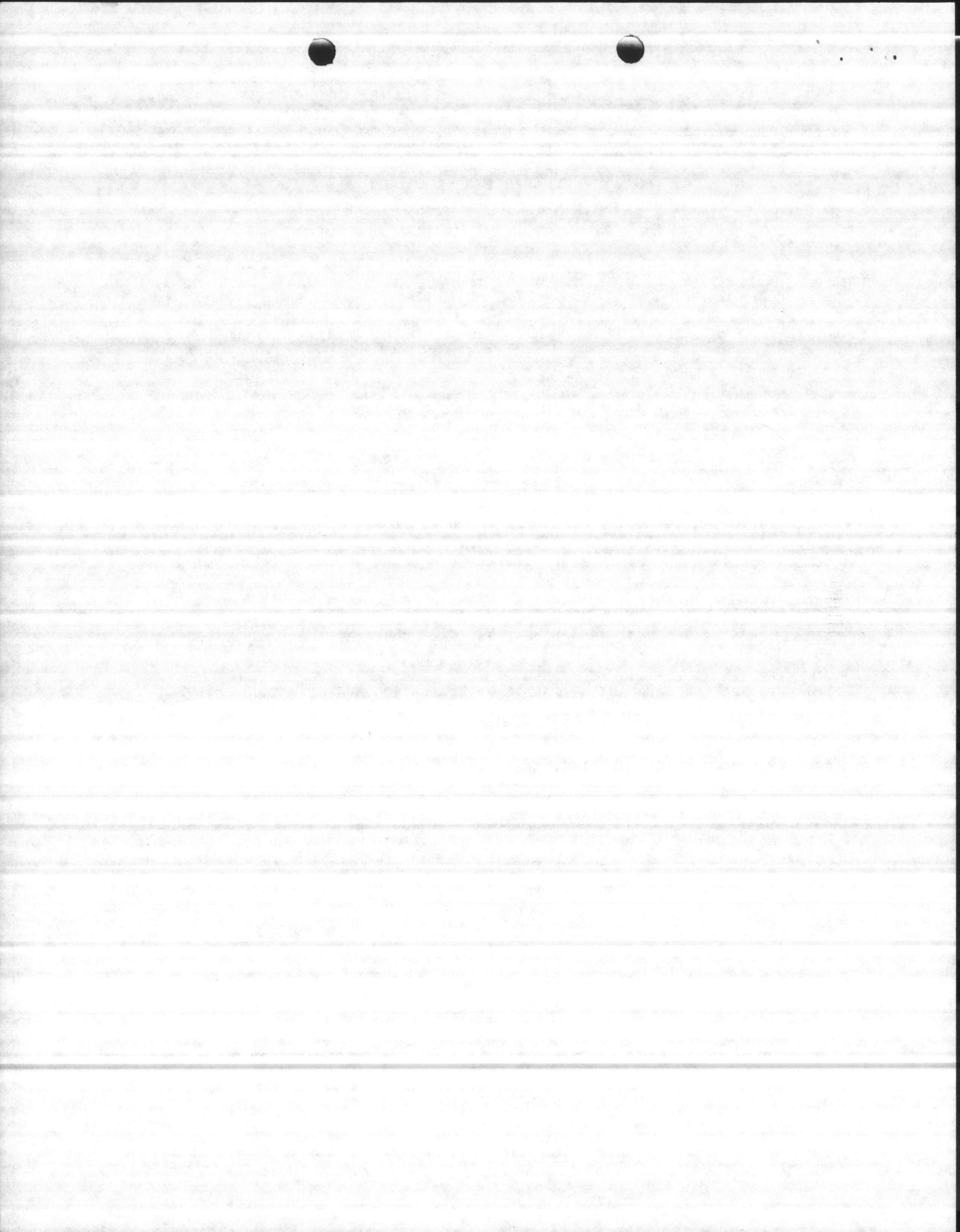
Phil Keese
CQC Officer

Enclosures

"It is hereby certified that the (material) (equipment) shown and marked in this submittal, shop drawings, catalog cut(s), etc., and approved/proposed to be incorporated into Contract Number N62470-81-C-1644 is in compliance with the Contract Drawings and Specifications and can be installed in the allocated space, and is:

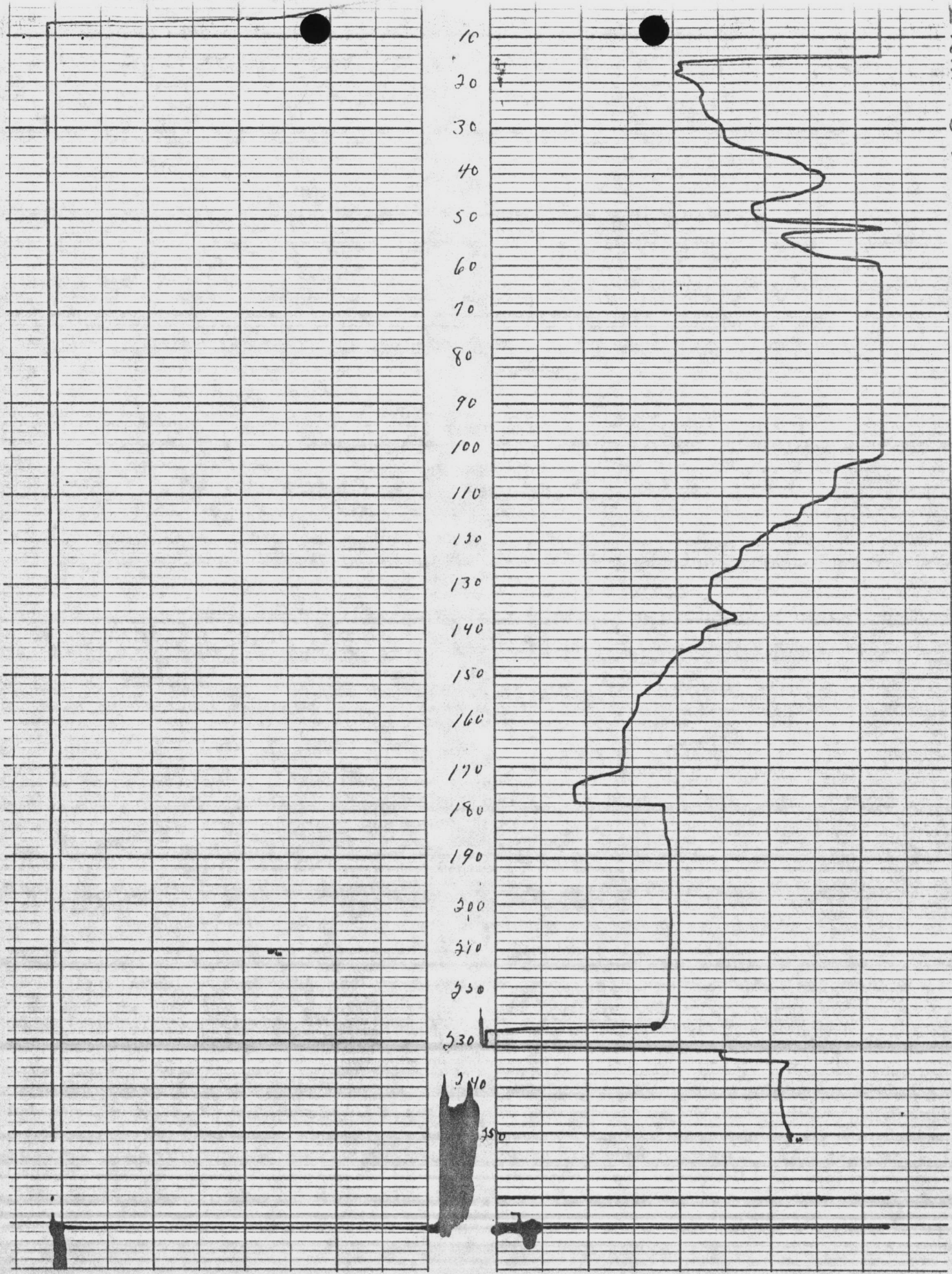
_____ Approved for use.
 Submitted for Government approval.
 _____ Approved for use subject to Government approval of specific deviation.

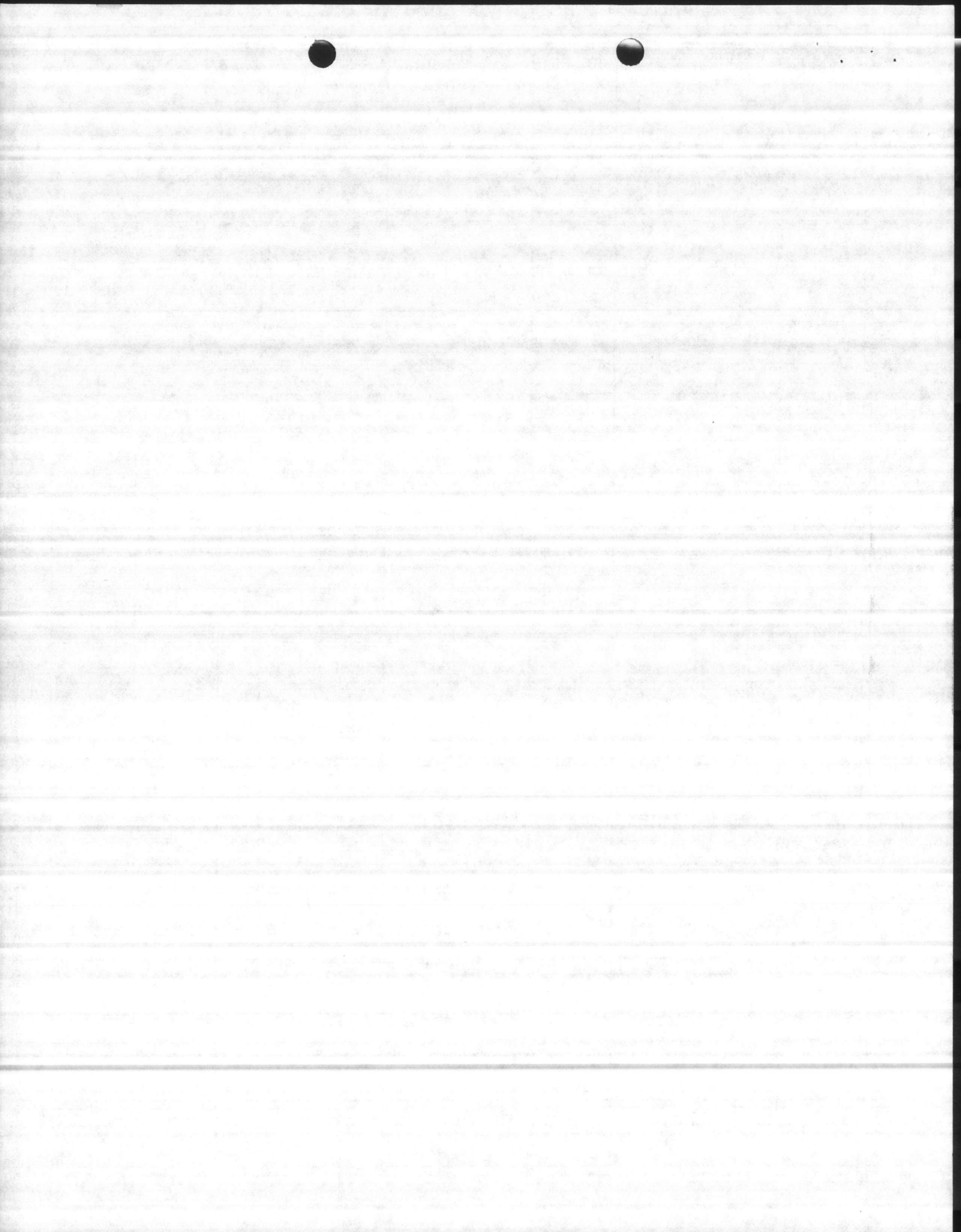
Authorized Reviewer _____ DATE _____
 Signature CQC Rep. DATE 1-16-86



Item # 3 4 4

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190
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210
230
240
250



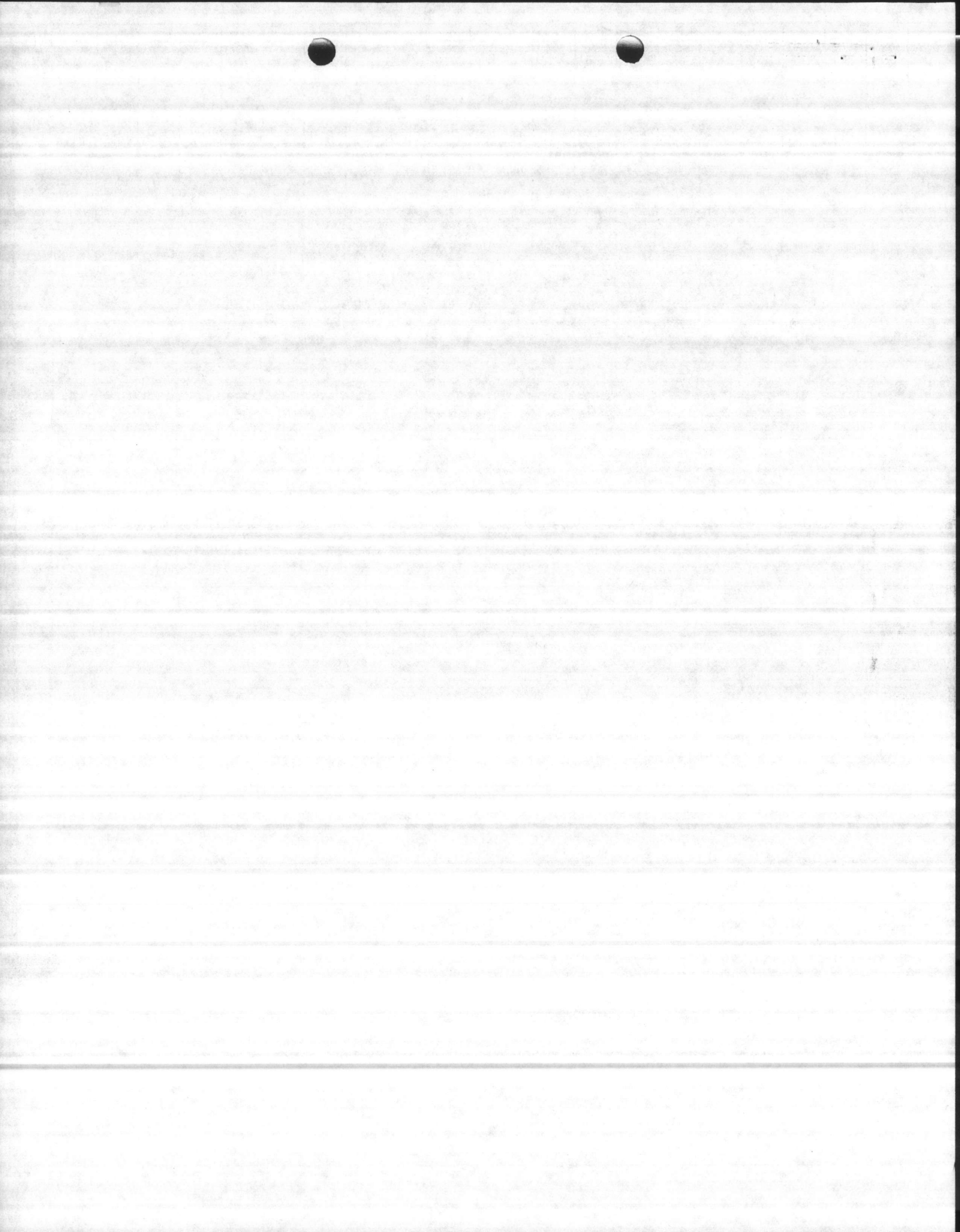


Item # 2

DRILLERS LOG CAMP LEJEUNE WELL #12

DEPTH OF SAMPLE

0 - 5 FT.	TOPSOIL AND WHITE SAND
5 - 35 FT.	GRAY CLAY AND FINE STRATA SAND
35 - 55 FT.	FINE STRATA SAND
55 - 60 FT.	GREEN CLAY AND GRAY CLAY
60 - 120 FT.	LIMESTONE AND STREAKS OF GREEN CLAY
120 - 185 FT.	GREEN CLAY , WHITE CLAY AND LIMESTONE
185 - 250 FT.	GREEN CLAY AND FINE SAND



LAW & COMPANY
Consulting and Analytical Chemists

ESTABLISHED 1903

Item # 4

Main Office
1711 Castle Street
P.O. Box 629
Wilmington, N.C. 28402

REPORT DATE: 11-04-85

RICHARD SPIVEY, President
919-762-7082 919-762-8956
TWX 510-937-0280

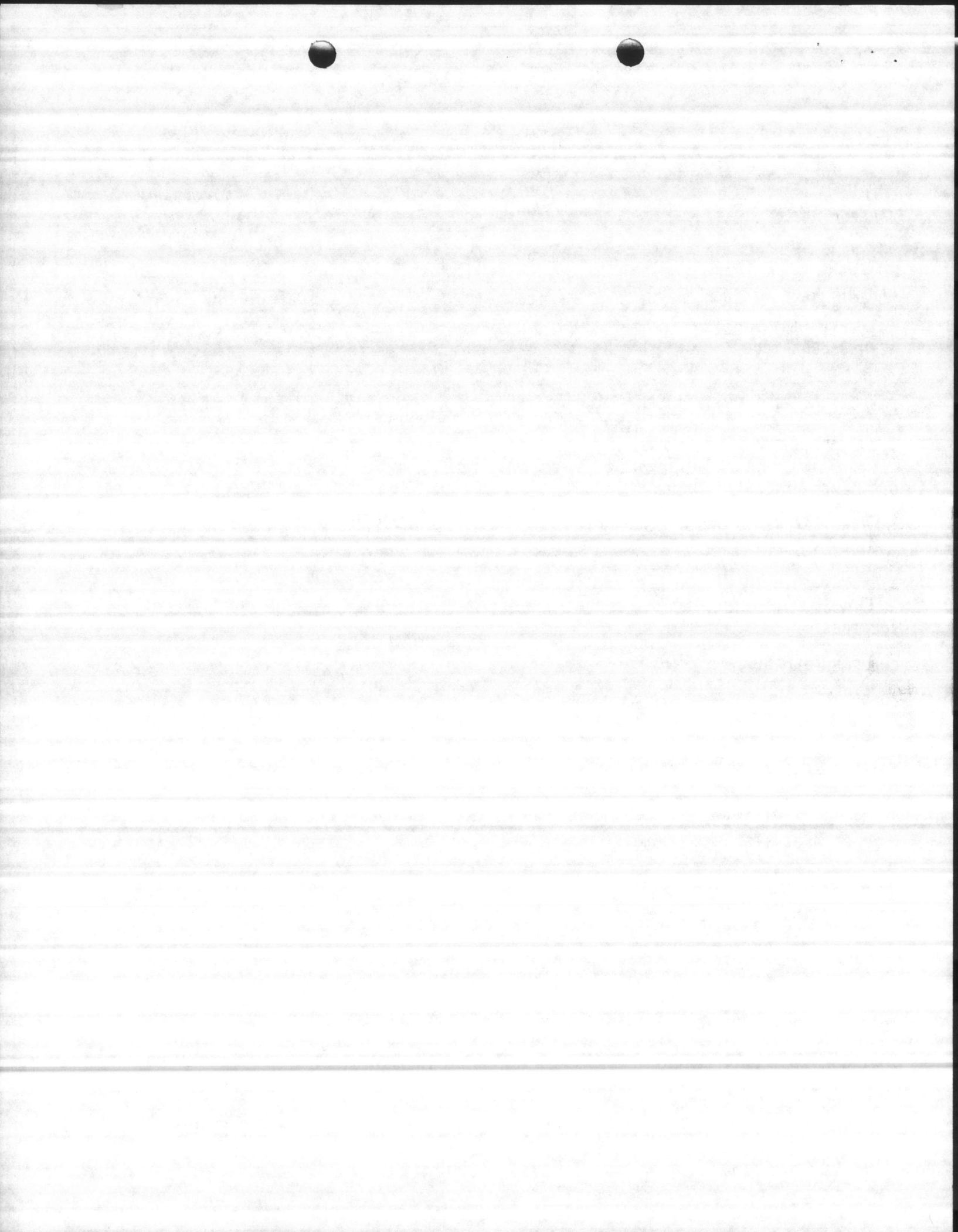
MAJETTE WELL & PUMP CO
P. O. BOX 908
SMITHFIELD, VA 23430
ATTN: BUD KELLOG

DATE COLLECTED: 9-20-85
DATE RECEIVED: 9-20-85
COLLECTED BY: CUSTOMER
LAB ID# EW 9583

SAMPLE DESCRIPTION: WELL #12 85-95

<u>TESTS/UNITS</u>	<u>RESULTS</u>
DISSOLVED OXYGEN (MG/L)	6
TEMPERATURE	19.5
pH	8.0
CARBON DIOXIDE (PPM)	0
SULFIDES (PPM)	.6
CHLORINE DEMAND (PPM)	1.2
COLOR (APHA)	65
TURBIDITY (NTU)	180
TOTAL ALKALINITY (PPM)	268
HYDROXIDE (PPM)	0
BICARBONATE (PPM)	22
CARBONATE (PPM)	246
TOTAL HARDNESS (PPM)	180
NON-CARBONATE (PPM)	0
CARBONATE (PPM)	180
TOTAL DISSOLVED SOLIDS (PPM)	318

CONTINUED.....



LAW & COMPANY
Consulting and Analytical Chemists

ESTABLISHED 1903

Main Office
1711 Castle Street
P.O. Box 629
Wilmington, N.C. 28402

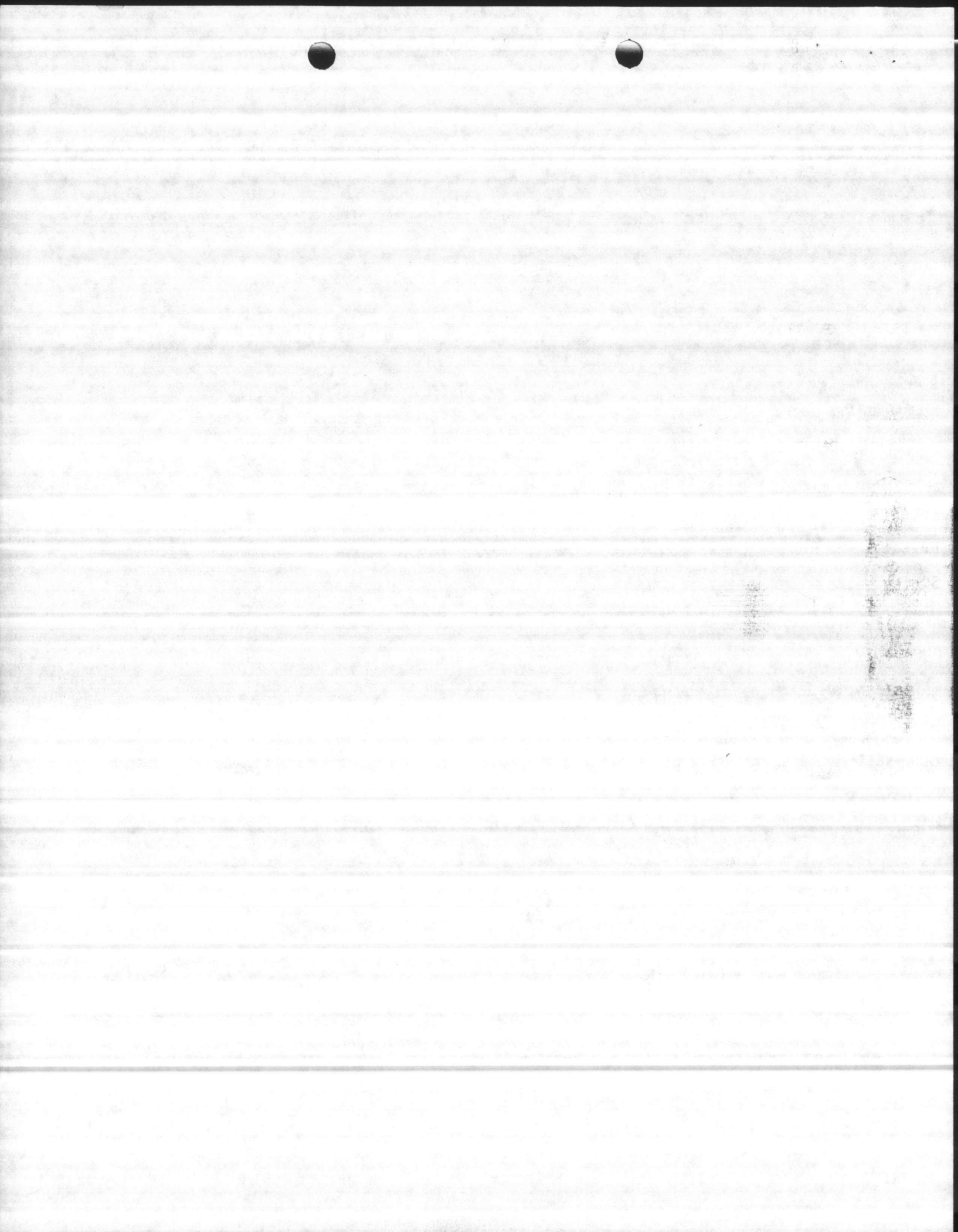
RICHARD SPIVEY, President
919 762 7082 919 762 8956
TWX 510-937 0280

<u>TESTS/UNITS</u>		<u>RESULTS</u>
SPECIFIC CONDUCTANCE	(UMHOS)	425
SULFATES	(PPM)	.16
CALCIUM	(PPM)	74
MAGNESIUM	(PPM)	2.7
SODIUM	(PPM)	12.8
POTASSIUM	(PPM)	.8
CHLORIDE	(PPM)	14
NITRATE NITROGEN	(PPM)	<.2
IRON	(PPM)	.93
MANGANESE	(PPM)	.03
SILICON	(PPM)	6.3
FLOURIDE	(PPM)	<.2

CHEMIST

Dolly Bidwan

TOTAL CHARGES: \$180.00



CONTACT...-
 TELEPHONE...-
 MARKS...WATER WELL
 RECOMMENDATIONS:
 GRAVEL SIZE-----
 SCREEN SIZE-----

Item #5

HSSC

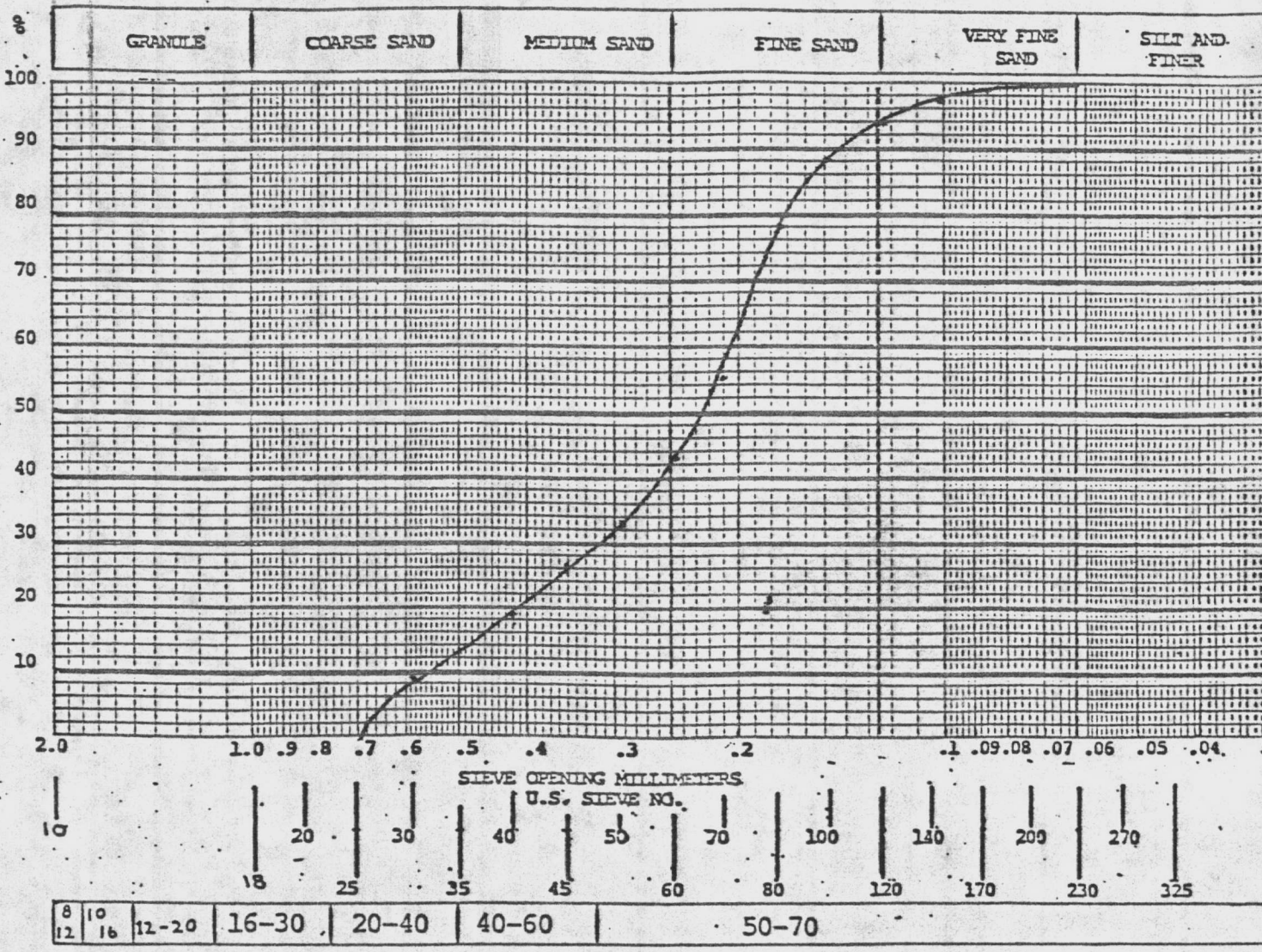
HOWARD SMITH
 SCREEN COMPANY

A Halliburton Company
 P.O. Box 666 • Houston, Texas 77001
 713-869-5771 • Telex: 77-4667

COMPANY...R.L.MAGETTE COMPANY
 WELL.....12
 DEPTH.....80-120
 FIELD.....-
 COUNTY.....-
 STATE.....VA

SIEVE ANALYSIS REPORT

SIEVE	IN	MM	WT RET	CUM WT	CUM %
10	.0787	2.000	--	--	--
18	.0394	1.000	--	--	--
20	.0331	0.840	--	--	--
25	.0280	0.710	--	--	--
30	.0234	0.589	2.2	2.2	8.7
35	.0197	0.500	1.1	3.3	13.1
40	.0165	0.420	1.6	4.9	19.4
45	.0139	0.351	1.7	6.6	26.2
50	.0117	0.297	1.7	8.3	32.9
60	.0098	0.250	2.7	11.0	43.7
70	.0083	0.210	3.0	14.0	55.6
80	.0070	0.177	5.7	19.7	78.2
100	.0059	0.149	2.5	22.2	88.1
120	.0049	0.124	1.7	23.9	94.8
140	.0041	0.104	0.7	24.6	97.6
175	.0035	0.088	0.4	25.0	99.2
200	.0029	0.074	0.1	25.1	99.6
230	.0024	0.062	0.1	25.2	100.0
270	.0021	0.053	--	--	--
325	.0017	0.044	--	--	--
325			--	--	--



JES E JACKSON
 12-22-85

8	10	12-20	16-30	20-40	40-60	50-70
12	16					



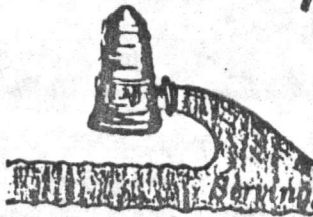
FCR

R. L. MAGETTE COMPANY

WATER SUPPLY CONTRACTORS
DOMESTIC : INDUSTRIAL : MUNICIPAL

Wells, Pumps and Community Water Systems

Item # 6

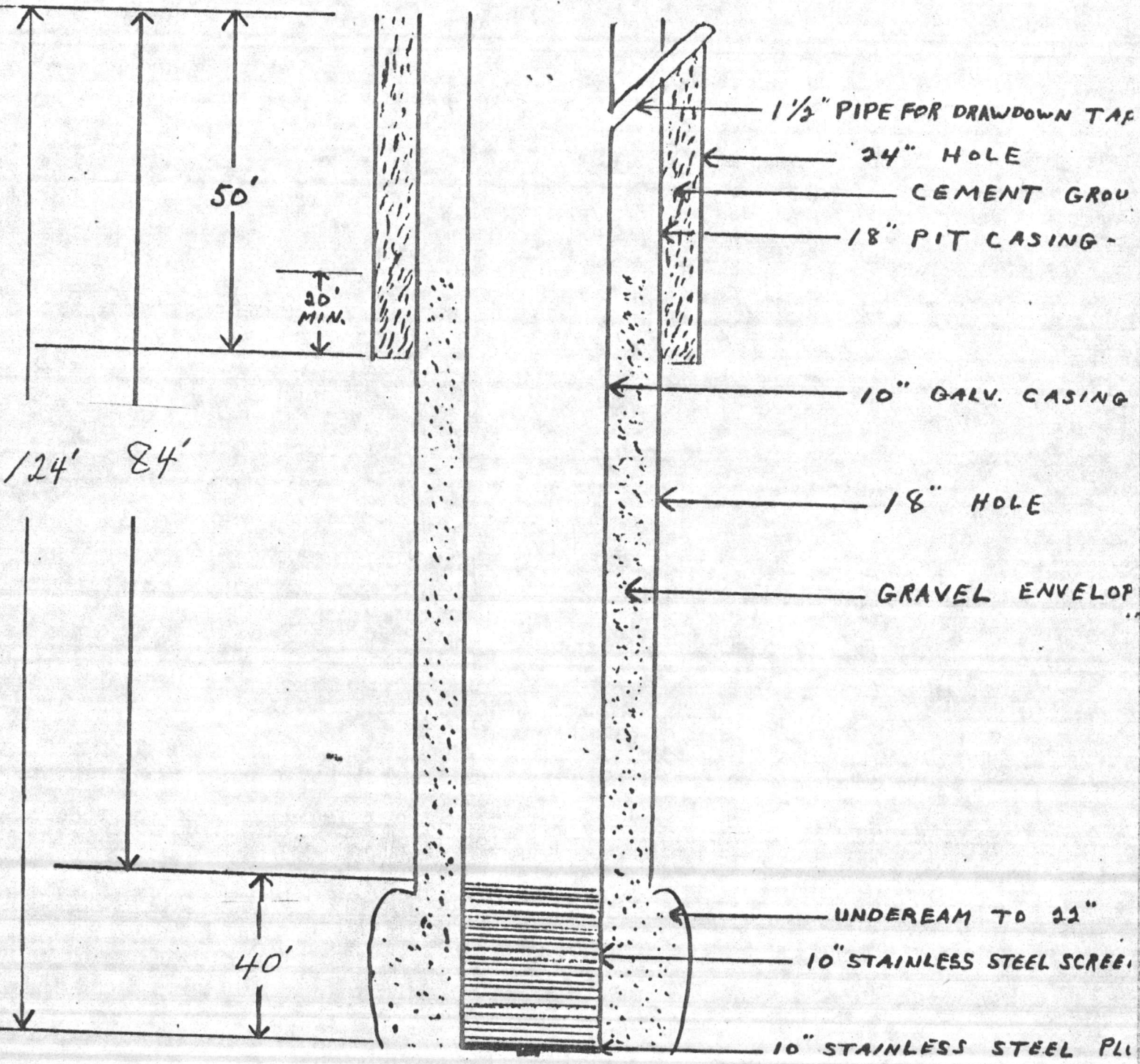


Serving Tidewater, Virginia and Eastern North Carolina

P. O. Box 908 Phone - 804 - 357-4105

Smithfield, Virginia 23430

WELL # 12



1 1/2" PIPE FOR DRAWDOWN TAP

24" HOLE

CEMENT GROUT

18" PIT CASING

10" GALV. CASING

18" HOLE

GRAVEL ENVELOPE

UNDERREAM TO 22"

10" STAINLESS STEEL SCREEN

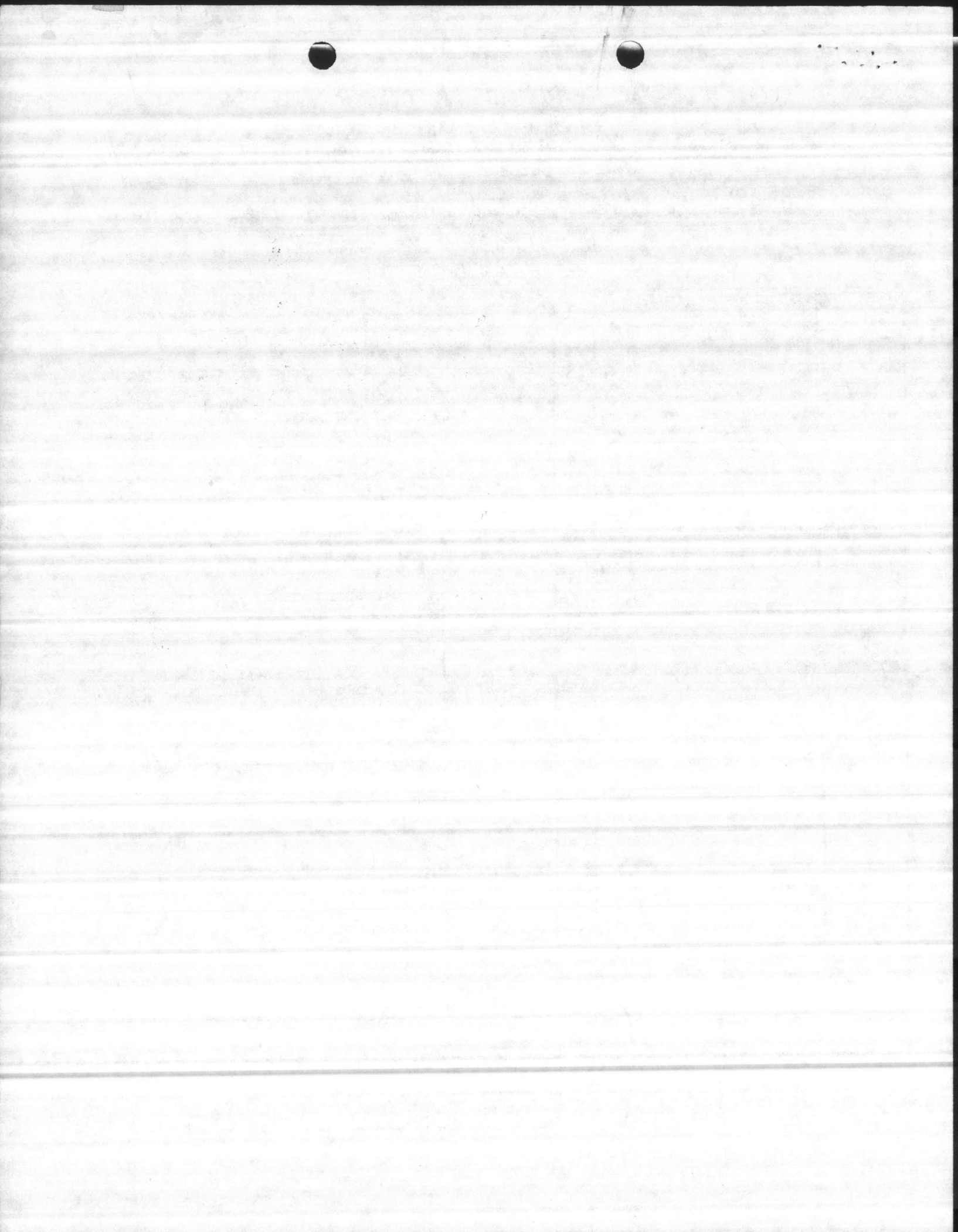
10" STAINLESS STEEL PLUG

50'

30'
MIN.

124' 84'

40'



Hunt

CONTRACTOR'S SUBMITTAL TRANSMITTAL

LANTDIV NORFOLK 4-4355/3 (Rev. 11-80)

CONTRACT NO 81-C-1644	TRANSMITTAL NO 191	DATE 3-26-86
--------------------------	-----------------------	-----------------

FROM CONTRACTOR
Harry Pepper & Associates, Inc.

TO
Henry Von Oesen & Associates, Inc.

PROJECT TITLE AND LOCATION
Holcomb Blvd Water Treatment Plant

MCB, Cp Lejeune, North Carolina

CONTRACTOR USE ONLY

*List only one specification division per form.

List only one of the following categories on each transmittal form, and indicate which is being submitted

Contractor Approved

OICC Approval

Deviation/Substitution For OICC Approval

REVIEWER USE ONLY

**ACTION CODES

- A-Approved
- D-Disapproved
- AN-Approved as noted
- RA-Receipt acknowledged.
- C-Comments
- R-Resubmit

ITEM NO.	PROJ. SPEC. SECT. & PARA. and/or PROJ. DWG. NO. *	ITEM IDENTIFICATION (Type, size, model no., Mfg. name, dwg. or brochure number)	NO. OF COPIES	ACTION CODES **	REVIEWER'S INITIALS CODE AND DATE
	02734	ROTARY DRILLED WATER WELLS WELL # 12			
1		Step Test	7	A	JRB

CONTRACTOR'S COMMENTS

COPY OF TRANSMITTAL AND SUBMITTALS TO ROICC

ONE COPY TO ROICC

CONTRACTOR REPRESENTATIVE (Signature)

Phil Reese *Phil Reese*

DATE RECEIVED BY REVIEWER

3/28/86

FROM (Reviewer)

Henry von Oesen & Assoc., Inc.

TO

Submittals are returned with action indicated. Approval of an item does not include approval of any deviation from the contract requirements unless the contractor calls attention to and supports the deviation.

Submittals are forwarded to LANTDIV with A-E recommendations indicated in REVIEWER USE ONLY Section and in comments below on ONE COPY of the transmittal form.

REVIEWER'S COMMENTS

Contractor's approval appears to be appropriate.

COPIES TO ROICC (2) LANTDIV (1) A-E (1)	DATE 4/2/86	SIGNATURE <i>Al Beusman</i>
--	----------------	--------------------------------

Contractor: *Henry von Gerner & Associates, Inc.*

Contract No. *100-100-0000*

Project Name: *LANDING HARBOR*

Project Location: *San Francisco, California*

Project Description: *Construction of Landing Harbor*

Project Start Date: *1964*

Project Completion Date: *1965*

Project Status: *Completed*

Project Manager: *Henry von Gerner*

Project Engineer: *Henry von Gerner*

Project Architect: *Henry von Gerner*

Project Consultant: *Henry von Gerner*

Project Contractor: *Henry von Gerner & Associates, Inc.*

Project Subcontractor: *Henry von Gerner & Associates, Inc.*

Project Supplier: *Henry von Gerner & Associates, Inc.*

Project Manufacturer: *Henry von Gerner & Associates, Inc.*

Project Installer: *Henry von Gerner & Associates, Inc.*

Project Maintainer: *Henry von Gerner & Associates, Inc.*

Project Operator: *Henry von Gerner & Associates, Inc.*

Project User: *Henry von Gerner & Associates, Inc.*

Project Owner: *Henry von Gerner & Associates, Inc.*

Project Sponsor: *Henry von Gerner & Associates, Inc.*

Project Stakeholder: *Henry von Gerner & Associates, Inc.*

Project Partner: *Henry von Gerner & Associates, Inc.*

Project Competitor: *Henry von Gerner & Associates, Inc.*

Project Supplier: *Henry von Gerner & Associates, Inc.*

Project Manufacturer: *Henry von Gerner & Associates, Inc.*

Project Installer: *Henry von Gerner & Associates, Inc.*

Project Maintainer: *Henry von Gerner & Associates, Inc.*

Project Operator: *Henry von Gerner & Associates, Inc.*

Project User: *Henry von Gerner & Associates, Inc.*

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Project Competitor: *Henry von Gerner & Associates, Inc.*

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Project Maintainer: *Henry von Gerner & Associates, Inc.*

Project Operator: *Henry von Gerner & Associates, Inc.*

Project User: *Henry von Gerner & Associates, Inc.*

Project Owner: *Henry von Gerner & Associates, Inc.*

Project Sponsor: *Henry von Gerner & Associates, Inc.*

Project Stakeholder: *Henry von Gerner & Associates, Inc.*

Handwritten signature

Henry von Gerner & Associates, Inc.

Handwritten signature

1/1/65

Item # 1

Well # 12
Step Test
3-25-86

TIME	STATIC	PUMPING LEVEL	PUMPING RATE
5:15PM	16'9"	36'11"	100GPM
5:30		37'5"	"
5:45		38'	"
6:00		38'4"	"
6:30		38'9"	"
7:00		38'11"	"
7:30		38'11"	"
8:00		38'11"	"
8:15		44'2"	150GPM
8:30		44'10"	"
8:45		45'5"	"
9:00		45'11"	"
9:30		46'3"	"
10:00		46'5"	"
10:30		46'5"	"
11:00		46'5"	"
11:30		51'5"	200GPM
11:45		52'1"	"
12:00		52'10"	"
12:30		53'3"	"
1:00		53'7"	"
1:30		53'11"	"
2:00		53'11"	"
2:15		57'10"	250GPM
2:30		58'7"	"
2:45		59'2"	"
3:00		59'6"	"
3:30		59'6"	"
4:00		59'8"	"
4:30		59'10"	"
5:00		59'10"	"

ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511

APPROVED X
APPROVED AS NOTED _____
DISAPPROVED _____

SUBJECT TO THE REQUIREMENTS OF
CONTRACT NO. 162470-81-C-1644

APPROVAL OF A SUBMITTAL DOES NOT INCLUDE
APPROVAL OF ANY DEVIATION FROM THE CON-
TRACT REQUIREMENTS UNLESS THE CONTRAC-
TOR CALLS ATTENTION TO AND SUPPORTS THE
DEVIATION --- THE CONTRACTOR SHALL BE RES-
PONSIBLE FOR PROVIDING PROPER PHYSICAL
DIMENSIONS & WEIGHTS, COORDINATION OF
TRADES, ETC., AS REQUIRED.

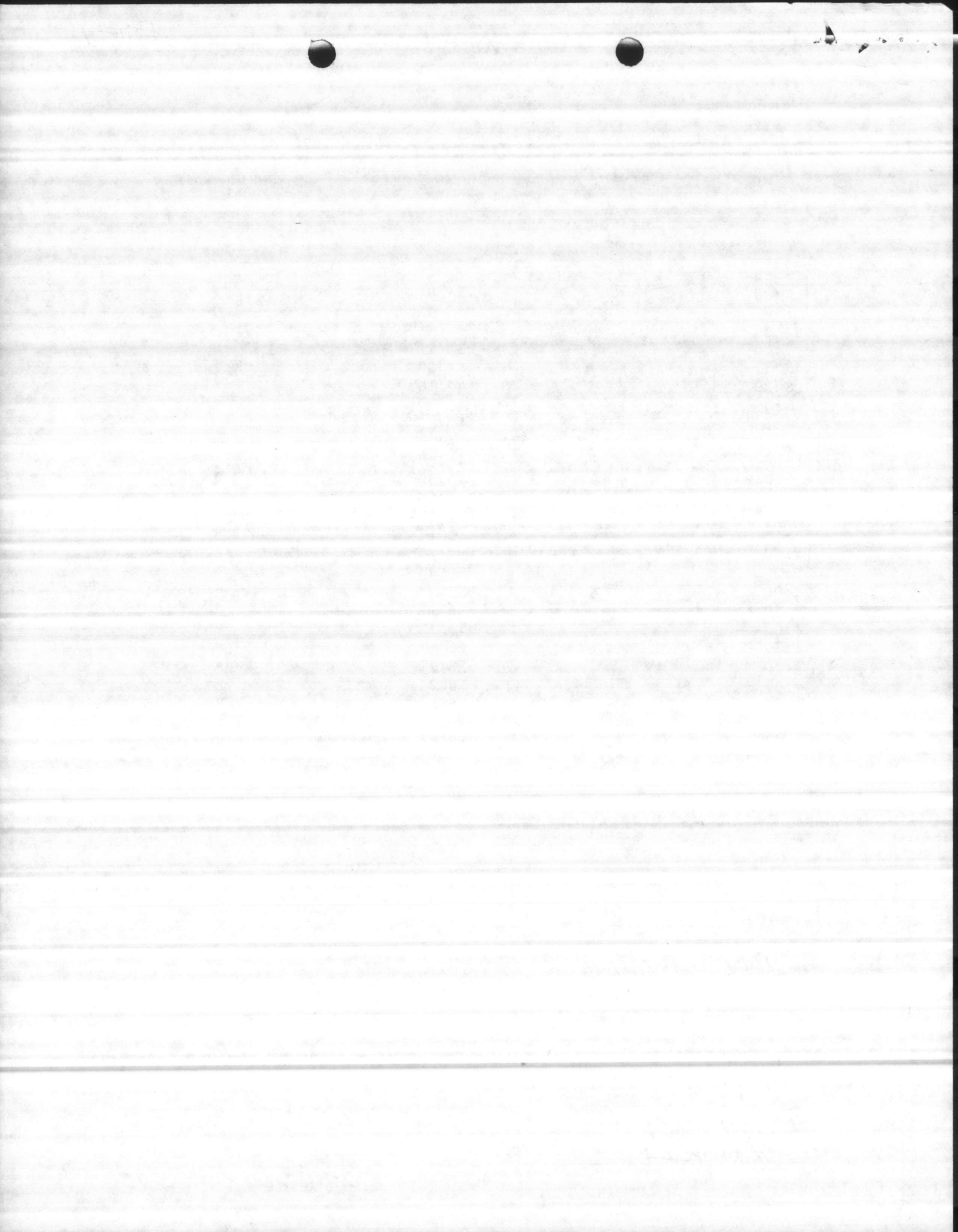
REVIEWER [Signature] DATE APR 02 1986

FOR OFFICER IN CHARGE OF CONSTRUCTION

I hereby certify that the (material/equipment) shown
in this submittal, shop drawings, catalog etc (as shown)
is approved/proposed to be incorporated into Contract Number
162470-81-C-1644 in compliance with the Contract Drawings
and Specifications and can be included in the allocated space,
and is:

- Approved for use.
- Submitted for Government approval.
- Approved for use subject to Government approval of
specific deviation.

Authorized Reviewer [Signature] DATE 3-26-86
Form OGC Rep.



Hant

CONTRACTOR'S SUBMITTAL TRANSMITTAL
LANTDIV NORFOLK 4-4355/3 (Rev. 11-80)

CONTRACT NO 81-C-1644	TRANSMITTAL NO 196	DATE 4-14-86
---------------------------------	------------------------------	------------------------

FROM CONTRACTOR
Harry Pepper & Associates, Inc.

TO
Henry Von Oesen & Associates, Inc.

PROJECT TITLE AND LOCATION
Holcomb Blvd Water Treatment Plant

MCB, Cp Lejeune, North Carolina

CONTRACTOR USE ONLY

REVIEWER USE ONLY

List only one specification division per form.

****ACTION CODES**

List only one of the following categories on each transmittal form, and indicate which is being submitted

A-Approved
D-Disapproved
AN-Approved as noted
RA-Receipt acknowledged
C-Comments
R-Resubmit

- Contractor Approved OICC Approval Deviation/Substitution For OICC Approval

ITEM NO	PROJ. SPEC. SECT. & PARA. and/or PROJ. DWG. NO. *	ITEM IDENTIFICATION (Type, size, model no., Mfg. name, dwg. or brochure number)	NO. OF COPIES	ACTION CODES **	REVIEWER'S INITIALS CODE AND DATE
	02734	ROTARY DRILLED WATER WELLS WELL # 12			
1	3.1.6	24 Hour Pump Test	7	A	JRB
2	3.1.6	2 Hour Recovery Test	7	A	JRB

CONTRACTOR'S COMMENTS

COPY OF TRANSMITTAL AND SUBMITTALS TO ROICC

CONTRACTOR REPRESENTATIVE (Signature)

ONE COPY TO ROICC

Phil Reese *Phil Reese*

DATE RECEIVED BY REVIEWER

FROM (Reviewer)

TO

4/18/86

Henry von Oesen & Assoc., Inc.

- Submittals are returned with action indicated. Approval of an item does not include approval of any deviation from the contract requirements unless the contractor calls attention to and supports the deviation.
- Submittals are forwarded to LANTDIV with A-E recommendations indicated in REVIEWER USE ONLY Section and in comments below on ONE COPY of the transmittal form.

REVIEWER'S COMMENTS

ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511

APPROVED _____
APPROVED AS NOTED _____
DISAPPROVED _____

SUBJECT TO THE REQUIREMENTS OF
CONTRACT NO. _____
APPROVAL OF A SUBMITTAL DOES NOT INCLUDE
APPROVAL OF ANY DEVIATION FROM THE CON-
TRACT REQUIREMENTS UNLESS THE CONTRAC-
TOR CALLS ATTENTION TO AND SUPPORTS THE
DEVIATION --- THE CONTRACTOR SHALL BE RES-
PONSIBLE FOR PROVIDING PROPER PHYSICAL
DIMENSIONS & WEIGHTS, COORDINATION OF
TRADES, ETC., AS REQUIRED.

COPIES TO
ROICC (2)
LANTDIV (1)
A-E (1)

DATE

4/21/86

REVIEWER _____ DATE _____

★ U.S. GOP: 1983 - 739-003/2122 Region 3-11

FOR OFFICER IN CHARGE OF CONSTRUCTION

<u>TIME</u>	<u>PUMP SETTING</u> 84'	<u>STATIC</u> 16'8"
	<u>PUMPING LEVEL</u>	<u>DRAWDOWN</u>
10:00		
10:01	36'9"	20"
10:02	37'6"	9"
10:03	38'1"	7"
10:04	38'10"	9"
10:05	39'4"	6"
10:06	39'11"	7"
10:07	40'9"	10"
10:08	41'2"	5"
10:09	41'11"	9"
10:10	42'8"	9"
10:15	42'10"	2"
10:20	43'1"	2"
10:25	43'4"	3"
10:30	43'11"	7"
10:35	44'5"	6"
10:40	45'2"	9"
10:45	45'10"	8"
10:50	46'4"	6"
10:55	46'11"	7"
11:00	47'10"	11"
12:00	48'5"	7"
1:00	48'11"	6"
2:00	49'3"	4"
3:00	49'8"	5"
4:00	50'1"	5"
5:00	50'9"	8"
6:00	51'2"	5"
7:00	51'6"	4"
8:00	52'1"	7"
9:00	52'9"	8"
10:00	53'3"	6"
11:00	53'10"	7"
12:00	54'6"	8"
1:00	55'	6"
2:00	55'5"	5"
3:00	55'8"	3"
4:00	55'9"	1"
5:00	55'9"	-
6:00	55'10"	1"
7:00	55'10"	-
8:00	55'10"	-
9:00	55'10"	-
10:00	55'11"	1"

ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511

APPROVED _____
 APPROVED AS NOTED _____
 DISAPPROVED _____

**SUBJECT TO THE REQUIREMENTS OF
 CONTRACT NO. N62470-81-C-1644**
 APPROVAL OF A SUBMITTAL DOES NOT INCLUDE
 APPROVAL OF ANY DEVIATION FROM THE CON-
 TRACT REQUIREMENTS UNLESS THE CONTRAC-
 TOR CALLS ATTENTION TO AND SUPPORTS THE
 DEVIATION. THE CONTRACTOR SHALL BE RES-
 PONSIBLE FOR PROVIDING PROPER PHYSICAL
 DIMENSIONS & WEIGHTS, COORDINATION OF
 TRADES, ETC., AS REQUIRED.

REVIEWED [Signature] DATE 4/13/86

FOR OFFICER IN CHARGE OF CONSTRUCTION

I hereby certify that the material (equipment) shown and
 indicated in this submittal, shop drawings, catalog cut (s), etc., has
 been reviewed/proposed to be incorporated into Contract Number
 N62470-81-C-1644 is in compliance with the Contract Drawings
 and Specifications and can be installed in the allocated space,
 and is:

 Approved for use.

Submitted for Government approval.

 Approved for use subject to Government approval of
 specific deviation.

Authorized Reviewer _____ DATE _____
 Signature CQC Rep. [Signature] DATE 4-14-86

APPROVED AS NOTED
DISAPPROVED
SUBJECT TO THE REQUIREMENTS OF
CONTRACT NO. _____
APPROVAL OF A PHYSICIAN DOES NOT IMPLY
APPROVAL OF ANY DEVIATION FROM THE CON-
TRACT. THE CONTRACTOR SHALL BE FULLY
RESPONSIBLE FOR PROVIDING PROPER PHYSICAL
COORDINATION OF THE WORK.
DATE: _____

10:01	25'1"
10:02	19"6"
10:03	19'
10:04	18'1"
10:05	17'10"
10:06	17'2"
10:07	16'8"
10:08	"
10:09	"
10:10	"
10:15	"
10:20	"
10:25	"
10:30	"
10:35	"
10:40	"
10:45	"
10:50	"
10:55	"
11:00	"

ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511

APPROVED _____
APPROVED AS NOTED _____
DISAPPROVED _____

SUBJECT TO THE REQUIREMENTS OF
CONTRACT NO. _____
APPROVAL OF A SUBMITTAL DOES NOT INCLUDE
APPROVAL OF ANY DEVIATION FROM THE CON-
TRACT REQUIREMENTS UNLESS THE CONTRAC-
TOR CALLS ATTENTION TO AND SUPPORTS THE
DEVIATION --- THE CONTRACTOR SHALL BE RES-
PONSIBLE FOR PROVIDING PROPER PHYSICAL
DIMENSIONS WEIGHTS, COORDINATION OF
TRADES, ETC., AS REQUIRED.

REVIEWER _____ DATE _____
FOR OFFICER IN CHARGE OF CONSTRUCTION

NAVY FACILITY ENGINEERING DIVISION

ENGINEERING WORK ORDER

APPROVED BY _____
APPROVED AS NOTED

DISAPPROVED

SUBJECT TO THE REQUIREMENTS OF

CONTRACT NO. _____
APPROVAL OF CONTRACTOR DOES NOT INCLUDE

APPROVAL OF CONTRACTOR FROM THE GOV-
ERNMENT OR THE CONTRACTOR'S CONTRACTUAL

RELATIONSHIP TO AND SUPPORT THE
CONTRACTOR SHALL BE RES-

PECTED TO BE THE CONTRACTOR'S RESPONSIBILITY
AND SHALL BE THE CONTRACTOR'S

RESPONSIBILITY. APPROVAL AS NOTED
IS NOT A REQUIREMENT FOR THE CONTRACTOR

DATE _____ REVIEWED BY _____

APPROVED BY _____

Hunt

CONTRACTOR'S SUBMITTAL TRANSMITTAL
LANTDIV NORFOLK 4-4355/3 (Rev. 11-80)

CONTRACT NO 81-C-1644	TRANSMITTAL NO 219	DATE 5-30-86
--------------------------	-----------------------	-----------------

FROM CONTRACTOR
Harry Pepper & associates, Inc.

TO
Henry Von Oesen & Associates, Inc.

PROJECT TITLE AND LOCATION
Holcomb Blvd Water Treatment Plant

MCB, Cp Lajeune, North Carolina

<p align="center">CONTRACTOR USE ONLY</p> <p align="center"><i>*List only one specification division per form.</i></p> <p align="center"><i>List only one of the following categories on each transmittal form, and indicate which is being submitted</i></p> <p><input type="checkbox"/> Contractor Approved <input checked="" type="checkbox"/> OICC Approval <input type="checkbox"/> Deviation/Substitution For OICC Approval</p>	<p align="center">REVIEWER USE ONLY</p> <p align="center">**ACTION CODES</p> <p>A-Approved D-Disapproved AN-Approved as noted RA-Receipt acknowledged. C-Comments R-Resubmit</p>
--	--

ITEM NO	PROJ. SPEC. SECT. & PARA. and/or PROJ. DWG. NO. *	ITEM IDENTIFICATION (Type, size, model no., Mfg. name, dwg. or brochure number)	NO. OF COPIES	ACTION CODES **	REVIEWER'S INITIALS CODE AND DATE
	02734	ROTARY DRILLED WATER WELLS WELL # 12			
1	1.2.1	Shop Drawings	7	A	JRB

CONTRACTOR'S COMMENTS

An additional twenty (20) feet of screen was added.

This Shop Drawing replaces Shop Drawing Previously submitted. See Transmittal # 151, dated 1-16-86.

COPY OF TRANSMITTAL AND SUBMITTALS TO ROICC ONE COPY TO ROICC	CONTRACTOR REPRESENTATIVE (Signature) Phil Reese <i>Phil Reese</i>
DATE RECEIVED BY REVIEWER 6/3/86	FROM (Reviewer) HENRY VON OESSEN & ASSOC., INC.
	TO

- Submittals are returned with action indicated. Approval of an item does not include approval of any deviation from the contract requirements unless the contractor calls attention to and supports the deviation.
- Submittals are forwarded to LANTDIV with A-E recommendations indicated in REVIEWER USE ONLY Section and in comments below on **ONE COPY** of the transmittal form.

REVIEWER'S COMMENTS

PH 11-5-13-05 P.S.M.

COPIES TO ROICC (2) LANTDIV (1) A-E (1)	DATE 6/13/86	SIGNATURE <i>[Signature]</i>
--	------------------------	---------------------------------

FCR

R. L. MAGETTE COMPANY

Item # 1

WATER SUPPLY CONTRACTORS

DOMESTIC : INDUSTRIAL : MUNICIPAL

Wells, Pumps and Community Water Systems

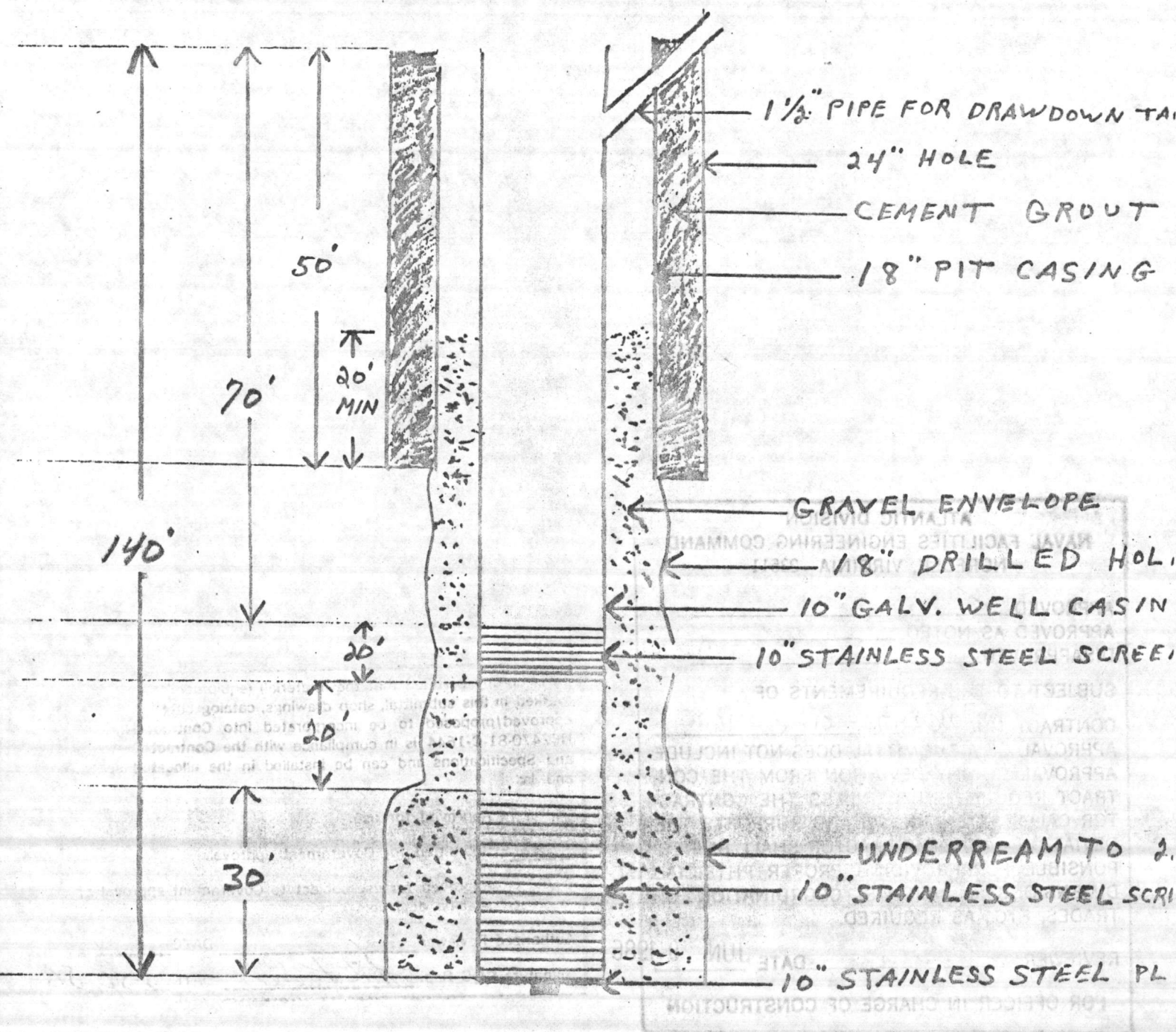


Serving Tidewater, Virginia and Eastern North Carolina

P. O. Box 908 Phone - 804 - 357-4105

Smithfield, Virginia 23430

WELL #12



**ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511**

APPROVED _____
APPROVED AS NOTED _____
DISAPPROVED _____

SUBJECT TO THE REQUIREMENTS OF

CONTRACT NO. NG2470-81-C-1644
APPROVAL OF A SUBMITTAL DOES NOT INCLUDE
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DIMENSIONS & WEIGHTS, COORDINATION OF
TRADES, ETC., AS REQUIRED.

REVIEWER *M. Brown* DATE JUN 9 1986

FOR OFFICER IN CHARGE OF CONSTRUCTION

"It is hereby certified that the (material) (equipment) shown and marked in this submittal, shop drawings, catalog cut (s), etc., and approved/proposed to be incorporated into Contract Number N62470-81-C-1644 is in compliance with the Contract Drawings and Specifications and can be installed in the allocated space, and is:

- _____ Approved for use.
 Submitted for Government approval.
_____ Approved for use subject to Government approval of specific deviation.

Authorized Reviewer _____ DATE _____
Signature CQC Rep. *Phil Pease* DATE 5-30-86

R. L. MAGETTE COMPANY

WATER SUPPLY CONTRACTORS
DOMESTIC : INDUSTRIAL : MUNICIPAL

Wells, Pumps and Community Water Systems

Item # 1

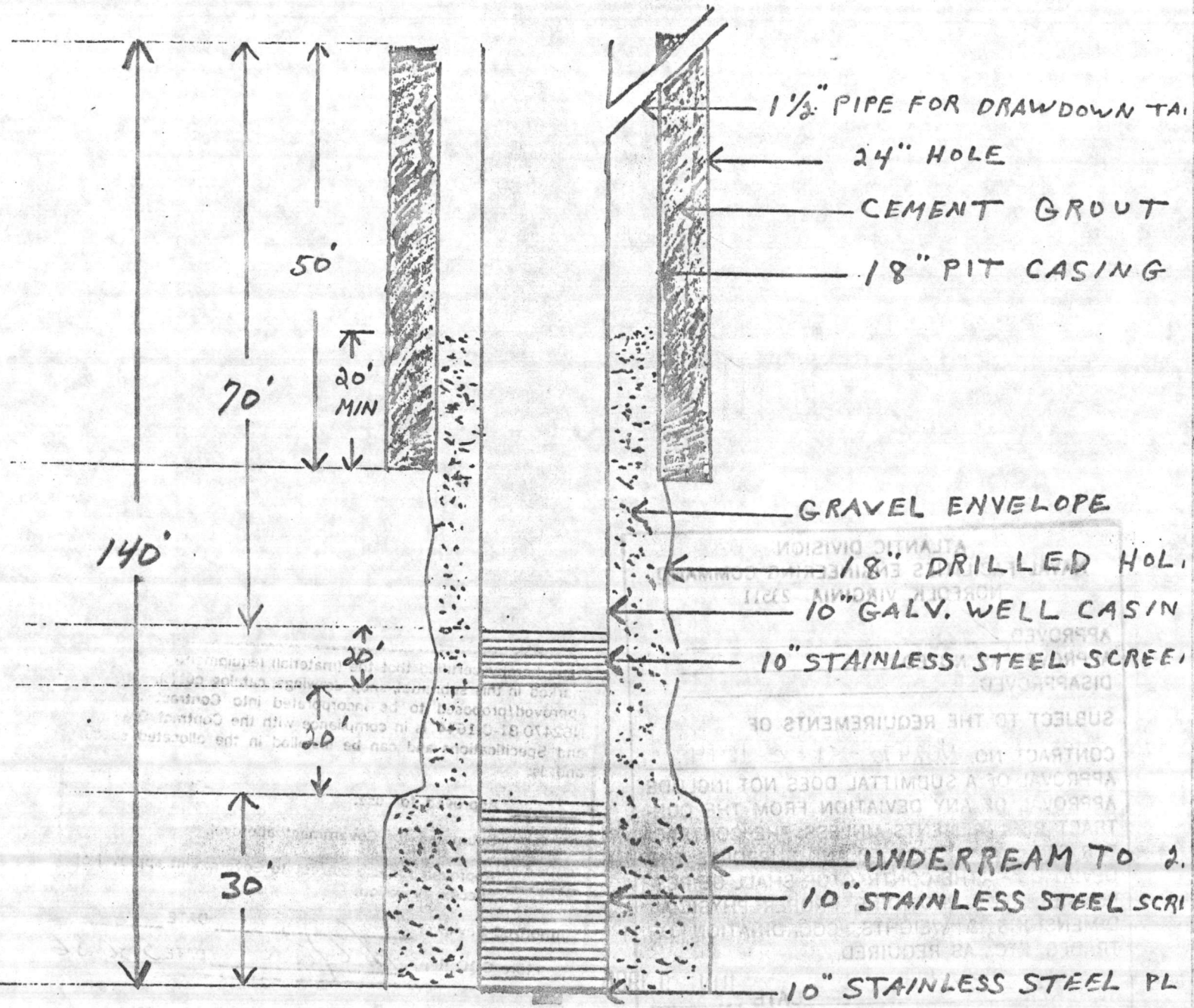


Serving Tidewater Virginia and Eastern North Carolina

P. O. Box 908 Phone - 804 - 357-4103

Smithfield, Virginia 23430

WELL #12



ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511

APPROVED ✓ _____
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DISAPPROVED _____

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CONTRACT NO. N62470-81-C-1644

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REVIEWER *[Signature]* DATE JUN 9 1986

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____ Approved for use subject to Government approval of
specific deviation.

Authorized Reviewer _____ DATE _____
Signature CQC Rep. *Phil Fene* DATE 5-30-86

FILE FOLDER

DESCRIPTION ON TAB:

Well # 711

Outside/inside of actual folder did not contain hand written information

Outside/inside of actual folder did contain hand written information

***Scanned as next image**

DATE 7-25-00

PWSID 04-67-041

WELL # HP 711

WELL NAME HADNOT POINT HP-20

BLDG. HP 711

CODE G.

AVAILABILITY P.

LOCATION D-LINE ROAD.

LATITUDE 34.70561

LONGITUDE 77.30563

WELL DIAMETER 10"

WELL DEPTH 150'

SCREEN INTERVAL _____

YIELD 108

STATIC LEVEL 24'

PUMPING LEVEL 58'

PUMP TYPE VERTICAL TURBINE

MOTOR HP 15

INTAKE DEPTH 85

DESIGN CAPACITY 150

ACTUAL GPM 150

SIZE OF CONCRETE SLAB 10x10

HEIGHT OF CASING 18"



SOURCE INFORMATION GROUND WATER

Date Form Completed

M M D D Y Y
0 1 2 5 9 5

PWSID
0467041

Owner Assigned Source Code

Well Name (If purchase, name of system)

Code

G=Ground
W=Purchase/G
Y=G w/direct influence
Z=W w/direct influence

7111 HADNOT POINT 711

G

If Purchase, seller ID#

Source Begin Date

Source exempt— SWTR?

Direct Influence Date

Availability

P=Permanent
E=Emergency
S=Seasonal
I=Interim
O=Other

Source Begin Date: M M Y Y
Source exempt— SWTR? Y N
Direct Influence Date: M M D D Y Y

Location of well within the system (If purchase, location of master meter)

D-LINE ROAD

Latitude (N)

Longitude (W)

How Determined

GPS Data

No. of Sats. Locked on

34422

07718217

G=GPS
M=Map
S=Surveyed

Q# or DOP #
Q2

5

(If purchase, use seller's primary source lat/long)

Vulnerable (VOCs) Y N

Assessment Date: M M D D Y Y

ENTRY POINT INFORMATION

Use Code

Availability

C=Ground/Permanent
D=Ground/non-permanent

P=Year-round
E=Emergency
S=Seasonal
I=Interim
O=Other

Owner Assigned Entry Point Code

Entry Point Name

100

HADNOT PT WTP

Location:

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius)? Y (Y,N) If no, explain:

Sources of pollution/distance: None - woods

Surface water within 200'? Y N If yes, actual distance feet If yes, bact. samples collected? (Y,N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: OK

Well House: Free of stored materials? N (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N)

Condition of house: OK Type of freeze protection: Electric

Well: Diameter: 10" Type: SCREENED Yield (gpm): 100/150 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing depth 50 ft. (If unknown, put 'UNK') Well depth: 150' Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Size: 10x11

Size of blow-off: 4" (Y) Sample tap: Before treatment? Y (Y,N) After treatment? (Y,N)

Pumps: Capacity: GPM: 150/100 HP: 15 Pump intake depth: 85 Auxiliary Power? N (Y,N)

Type pump: VERTICAL TURBINE Height above floor (pump/casing): 18

Storage at well site: Elev: Hydro: Ground:

If hydroautomatic, air volume control? (Y,N) Safety valves? (Y,N) Coded? (Y,N)

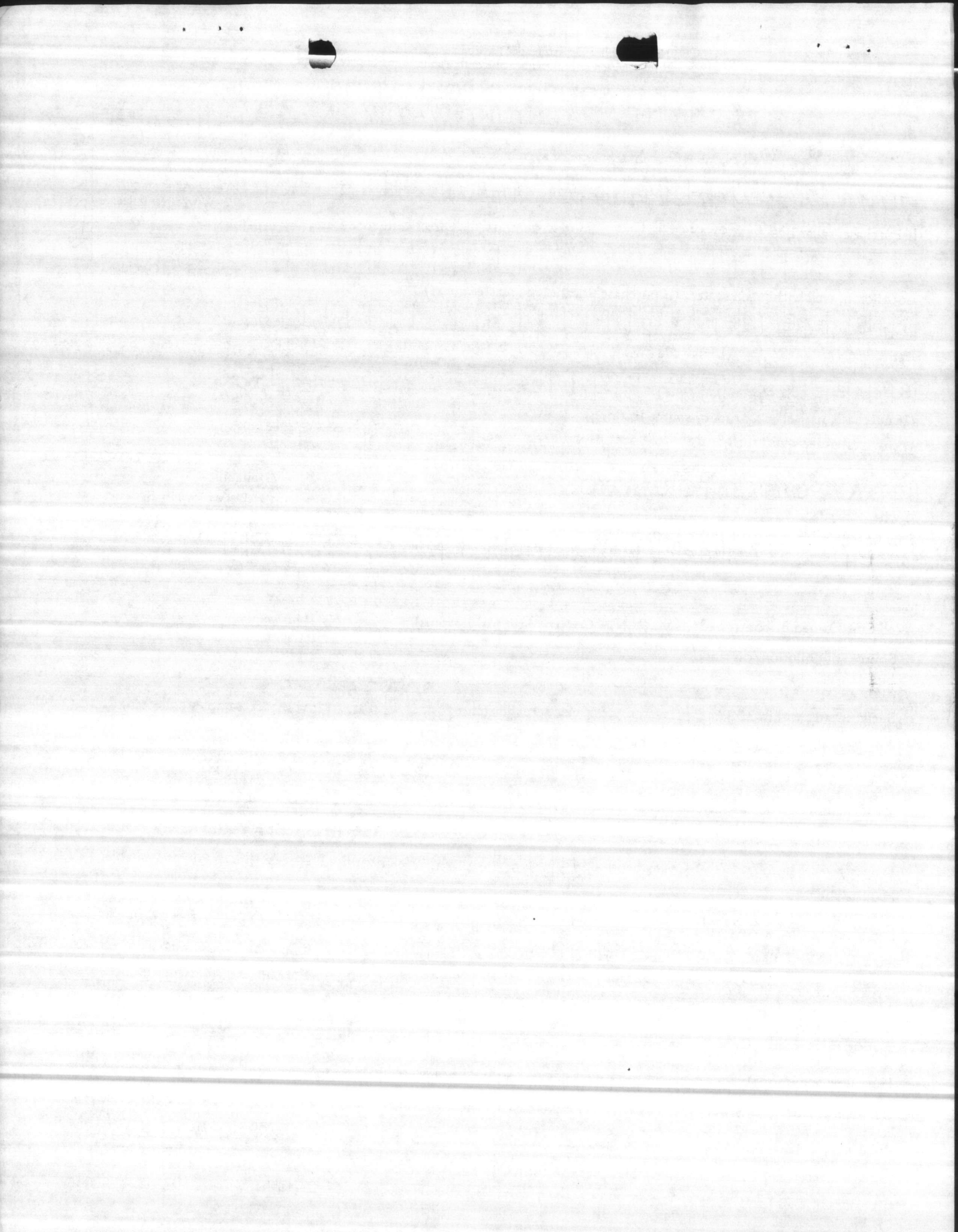
High service pumps: 1. gpm hp 2. gpm hp 3. gpm hp Auxiliary Power? (Y,N)

Is the water treated at this well? Y N If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? HP-20 PLANT

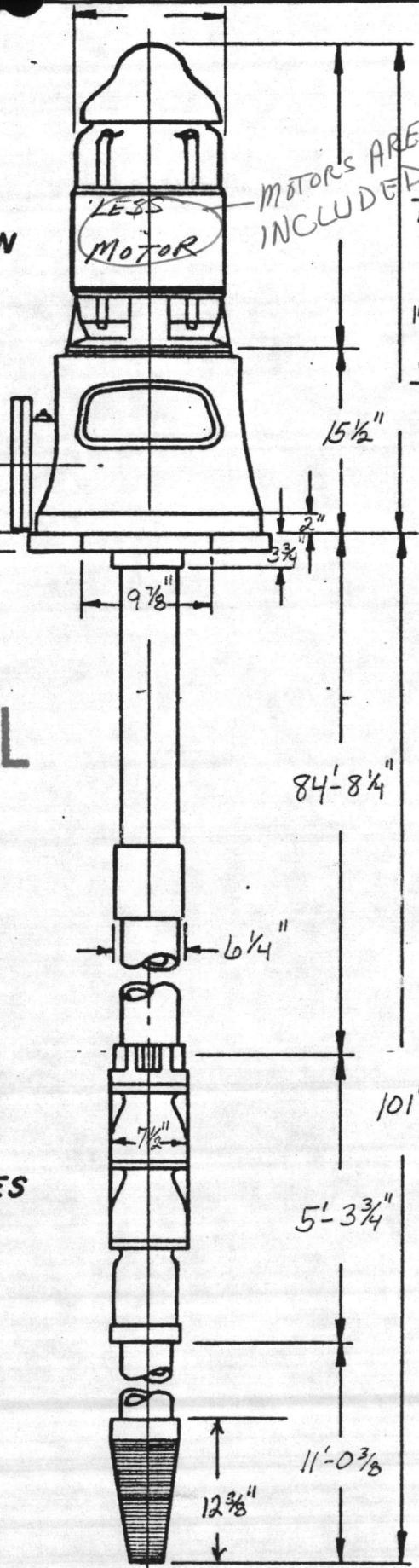
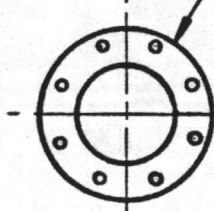
If purchase, retreat? Y N If yes, complete back of form.

Deposit pump pedestal
Repair vent



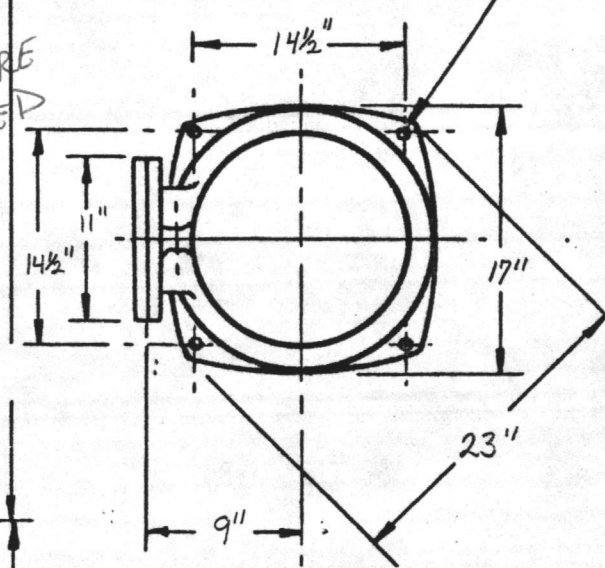
_____ H.P.
 _____ R.P.M.
 _____ MOTOR
 _____ FRAME

6" DISCHARGE
 8 - 3/4" CAPSCREWS ON
 9 1/2" BOLT CIRCLE



MOTORS ARE INCLUDED

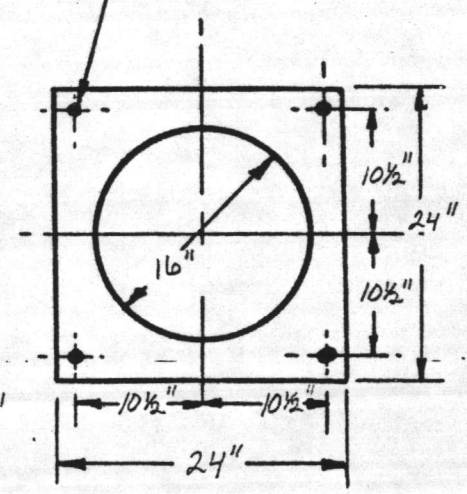
4 - 7/8" DRILLED HOLES



PLAN VIEW

FOR APPROVAL
 FABRICATION PENDING

4 - 7/8" FOUNDATION HOLES



PLAN VIEW FOR SUPPORT PLATE

7 STAGES

5 SUCTION PIPE
5 STRAINER

CAMP LEJEUNE
 NO. 13 WELL

T-82525-

HARRY PEPPER & ASSOC. Inc. S.O. 16135-20 P.O. 0642-0001

DATE OF ISSUE	
2/25/85	
DESTROY ALL PREVIOUS PRINTS	
FIG. 4700	SIZE M8
DRAWING NO. 115-027	

THE DEMING CO. SALEM, OHIO	TITLE DIMENSION SHEET
HB	DATE 5-28-58
	SCALE -

FOR APPROVAL
FABRICATION PENDING

CAMP LEJEUNE No. 13 WELL

DEMING PUMP CO.

SALEM, OHIO, U.S.A.

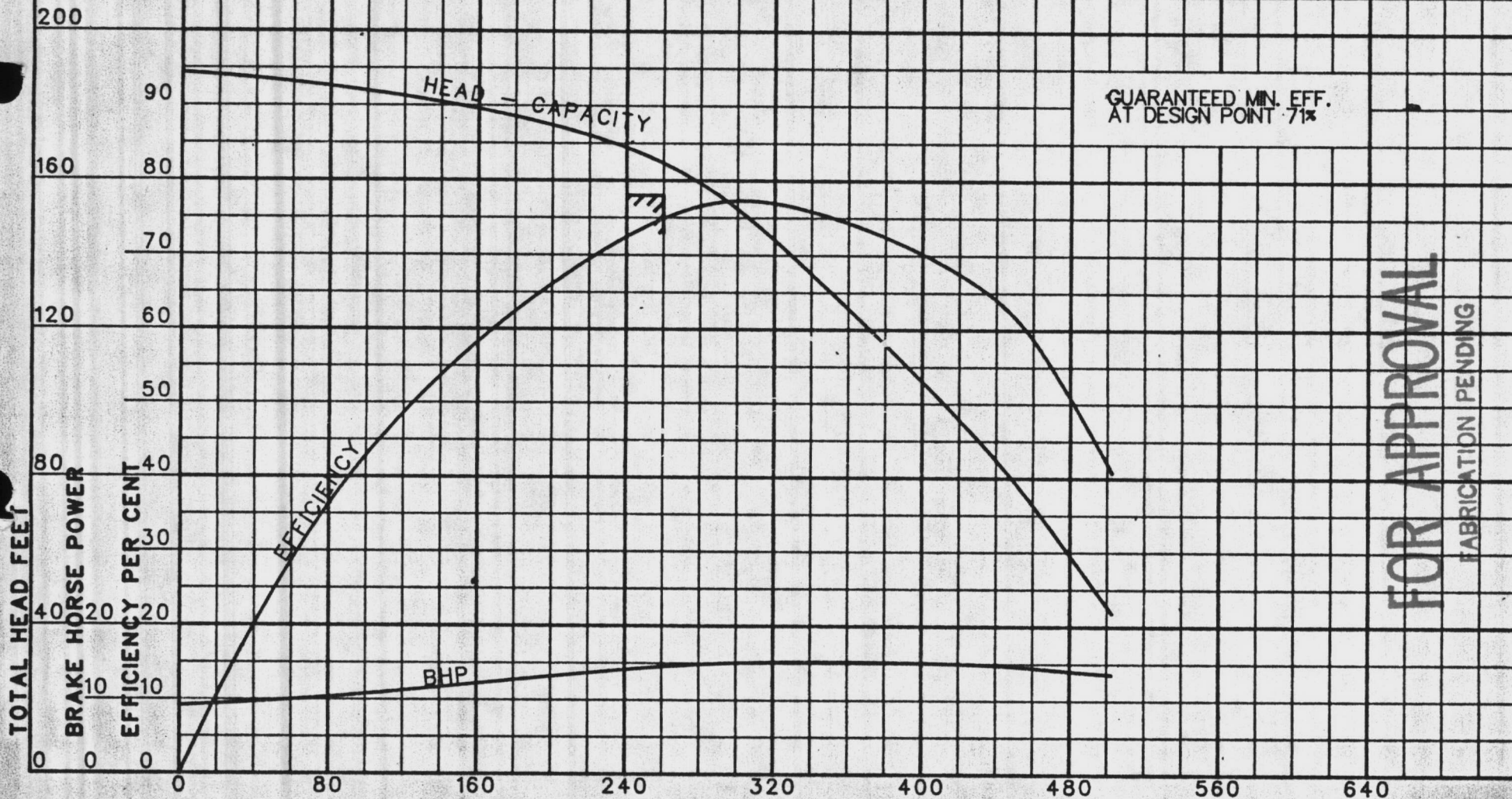
240 HARRY PEPPER & Assoc. Inc. S.O. 11635-20 P.O. C642-0001

CHARACTERISTIC CURVES

FIG. 4700 SIZE M 8 STAGES 7 IMPELLER 22665

DESIGNED RATING: G.P.M. 260 HEAD 156 R.P.M. 1770

OTHER CURVE POINTS AND GENERAL SHAPE OF CURVES ARE APPROXIMATE



GUARANTEED MIN. EFF. AT DESIGN POINT 71%

FOR APPROVAL
FABRICATION PENDING

SERIAL NO. ****

U. S. GALLONS PER MINUTE

DATE 2-25-85

IMP. DIA. 5 1/2"

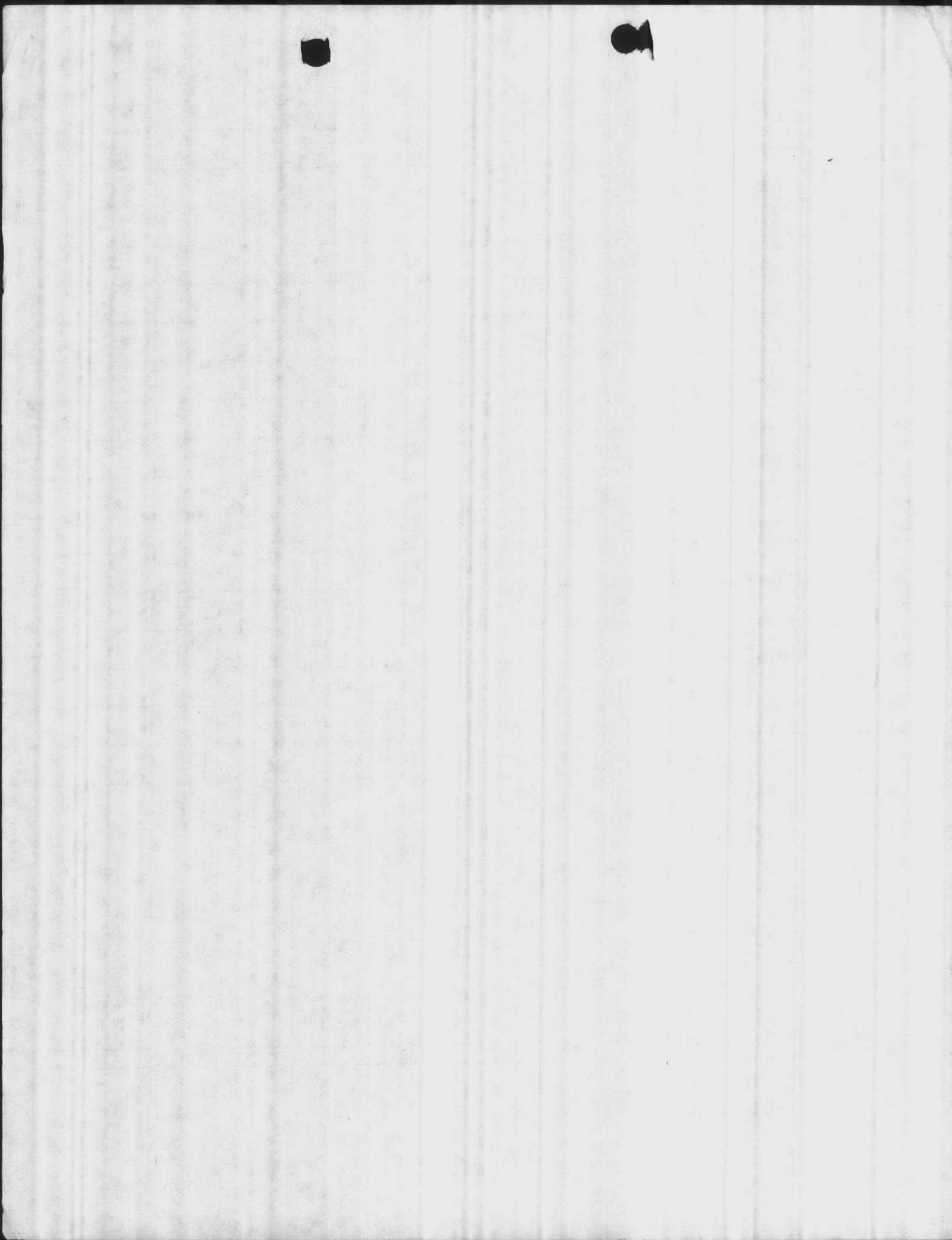
NO. Q23632

FABRICATION PENDING

FOR APPROVAL



10
11
12
13
14





WELL NUMBER

74

THOMAS + BROWN

DATE

3-19-90

AIR LINE

STATIC LEVEL

PUMPING LEVEL

DRAIN DOWN

DISCHARGE PRESSURE

GPM

START TIME

85'

19'

41

22

50

104

05

47

28

40

167

15

65

46

35

195

30

71

62

26

214

40

75

66

21

235

50

REMARKS

Dead Head PSI 65

Set @ 21

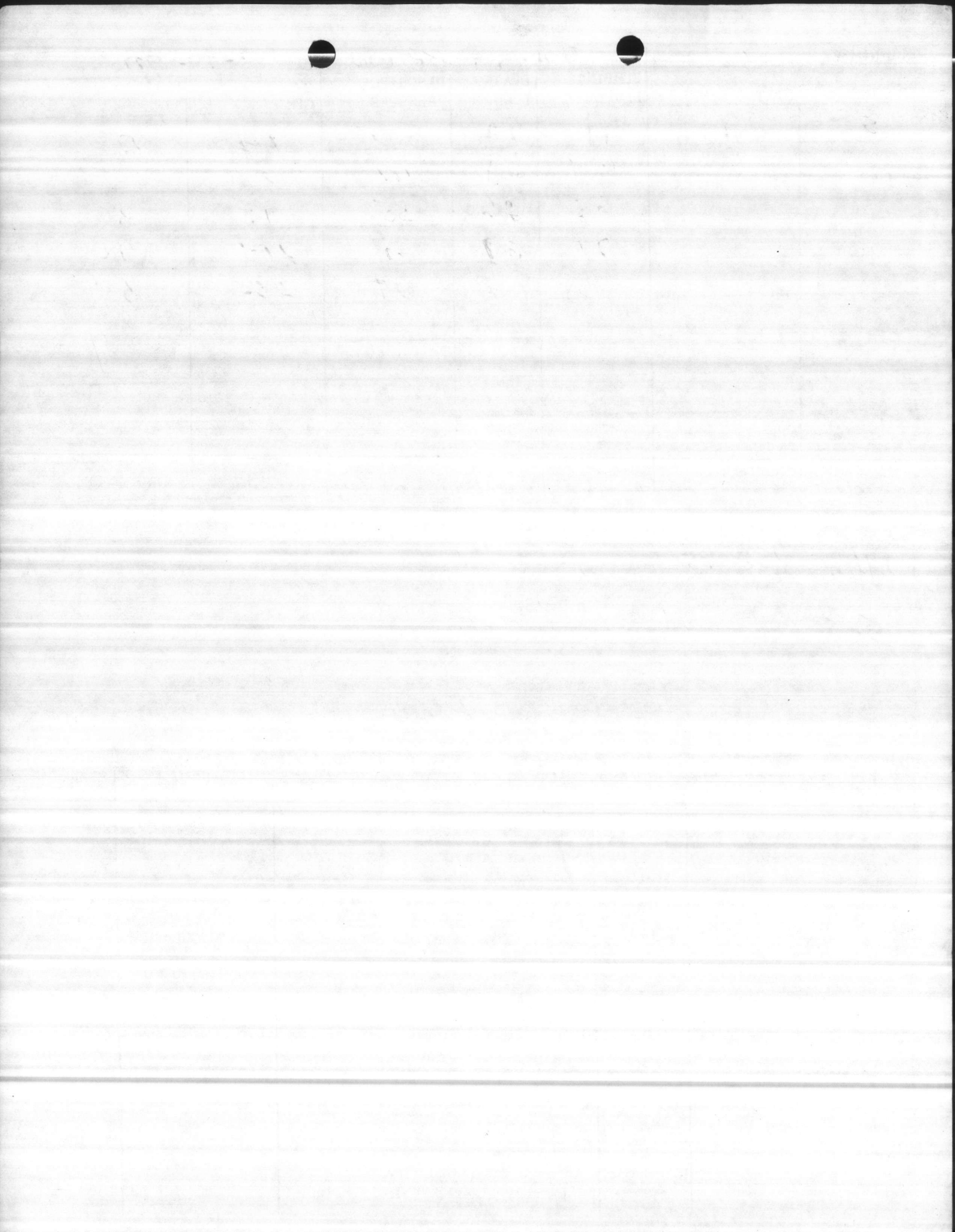
MANUFACTURER

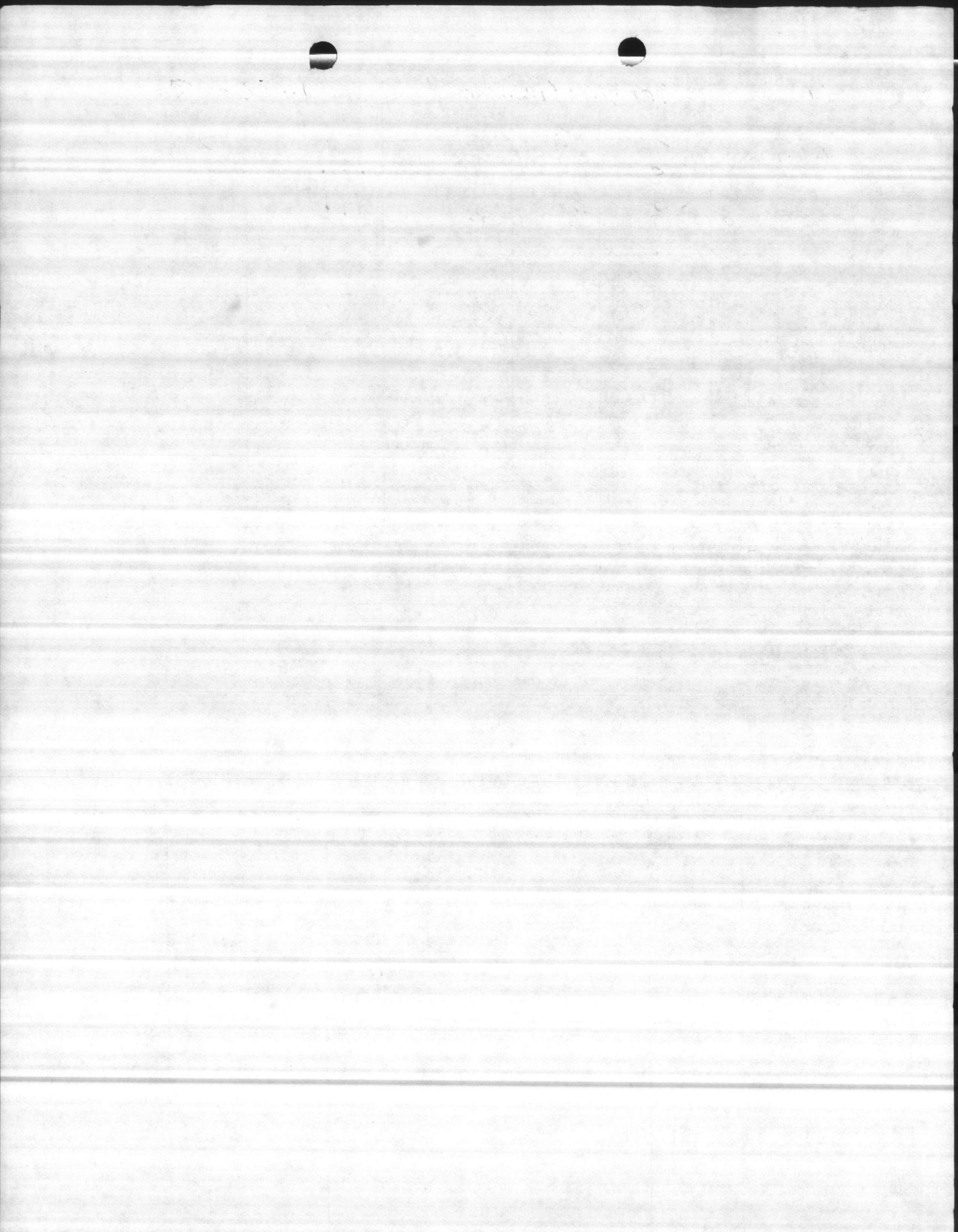
STAGE

S.N.

TOTAL HEAD

SIZE





Hunt

CONTRACTOR'S SUBMITTAL TRANSMITTAL
LANTDIV NORFOLK 4-4355/3 (Rev. 11-80)

FROM CONTRACTOR Harry Pepper & Associates, Inc.		CONTRACT NO 81-C-1644	TRANSMITTAL NO 154-A	DATE 3-14-86
TO Henry Von Oesen & Associates, Inc.		PROJECT TITLE AND LOCATION Holcomb Blvd Water Treatment Plant		
		MCB, Cp Lejeune, North Carolina		

<p align="center">CONTRACTOR USE ONLY</p> <p align="center">*List only one specification division per form.</p> <p align="center">List only one of the following categories on each transmittal form, and indicate which is being submitted</p> <p><input type="checkbox"/> Contractor Approved <input checked="" type="checkbox"/> OICC Approval <input type="checkbox"/> Deviation/Substitution For OICC Approval</p>	<p align="center">REVIEWER USE ONLY</p> <p align="center">**ACTION CODES</p> <p>A-Approved D-Disapproved AN-Approved as noted RA-Receipt acknowledged. C-Comments R-Resubmit</p>
--	---

ITEM NO.	PROJ. SPEC. SECT. & PARA. and/or PROJ. DWG. NO.	ITEM IDENTIFICATION (Type, size, model no., Mfg. name, dwg. or brochure number)	NO. OF COPIES	ACTION CODES	REVIEWER'S INITIALS CODE AND DATE
	02734	ROTARY DRILLED WATER WELLS ----- Well # 13			
1	2.2.4	Recommendation and Data Submittal	7	A	MPB
2	2.2	Driller's Log	7	A	MPB
3	2.2.3	Electric Log and Gamma Log	7	A	MPB
4	2.2.2	Water Analysis	7	A	MPB
5	2.2.2	Sieve Analysis	7	A	MPB
6	1.2.1	Shop Drawings	7	A	MPB

CONTRACTOR'S COMMENTS

Water Sample for 135 ' is included.

COPY OF TRANSMITTAL AND SUBMITTALS TO ROICC ONE COPY TO ROICC	CONTRACTOR REPRESENTATIVE (Signature) Phil Reese <i>Phil Reese</i>
---	--

DATE RECEIVED BY REVIEWER 3/17/86	FROM (Reviewer) Henry von Oesen & Assoc., Inc.	TO
---	--	----

- Submittals are returned with action indicated. Approval of an item does not include approval of any deviation from the contract requirements unless the contractor calls attention to and supports the deviation.
- Submittals are forwarded to LANTDIV with A-E recommendations indicated in REVIEWER USE ONLY Section and in comments below on **ONE COPY** of the transmittal form.

REVIEWER'S COMMENTS

COPIES TO: ROICC (2) LANTDIV (1) A-E (1)	DATE 3/26/86	SIGNATURE <i>[Signature]</i>
---	------------------------	---------------------------------



HARRY PEPPER & ASSOCIATES, INC.

Item #1

ENGINEERING CONTRACTORS

March 14, 1986

Henry Von Oesen and Associates, Inc.
611 Princess Street
Wilmington, NC 28402

RE: N62470-81-C-1644
Expansion of Holcomb Blvd
Water Treatment Plant
Camp Lejeune, NC 28542
Well # 13

Gentlemen:

We are enclosing seven (7) copies of the Driller's Log, Electric Log, Gamma Log, Water Analysis and Sieve Analysis for your review. The Test Well was drilled at 250 ft. Water samples were taken at 90' and at 135'.

We recommend a .030 slot stainless steel screen set at 84'-104' and at 125'-145' depth for a total of 40 VF of screen. The gravel pack recommended is 8-12. It is our best estimate that this well may yield 260 GPM.

Please review this data and advise if we are to proceed with developing a permanent well at this site.

Very truly yours,
HARRY PEPPER & ASSOCIATES, INC.

Phil Reese
Phil Reese
CQC Officer

ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511

APPROVED _____
APPROVED AS NOTED _____
DISAPPROVED _____

SUBJECT TO THE REQUIREMENTS OF

CONTRACT NO. N6470-81-c-1644

APPROVAL OF A SUBMITTAL DOES NOT INCLUDE APPROVAL OF ANY DEVIATION FROM THE CONTRACT REQUIREMENTS UNLESS THE CONTRACTOR CALLS ATTENTION TO AND SUPPORTS THE DEVIATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING PROPER PHYSICAL DIMENSIONS & WEIGHTS, COORDINATION OF TRADES, ETC., AS REQUIRED.

REVIEW *[Signature]* 91-100C
119 WEST EIGHTH STREET P.O. BOX 3007 JACKSONVILLE, FL. 32208

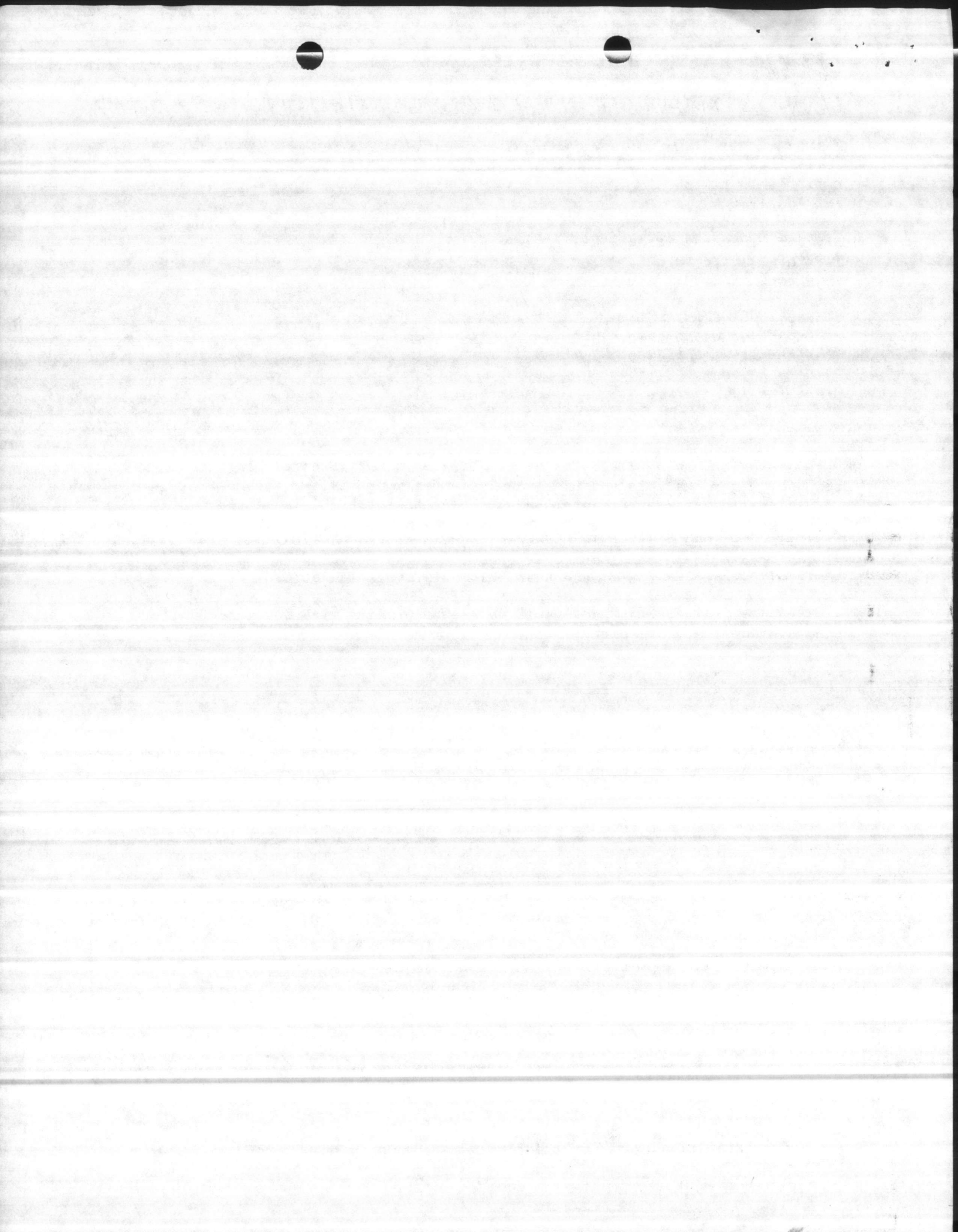
FOR OFFICER IN CHARGE OF CONSTRUCTION

I hereby certified that the (material) (equipment) shown and marked in this submittal, shop drawings, catalog cut (s), etc., and approved/proposed to be incorporated into Contract Number N62470-81-C-1644 is in compliance with the Contract Drawings and Specifications and can be installed in the allocated space, and is:

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- Submitted for Government approval.
- _____ Approved for use subject to Government approval of specific deviation.

Authorized Reviewer _____ DATE _____
Signature CQC Rep. *Phil Reese* DATE 3-14-86

904/356-3954





HARRY PEPPER & ASSOCIATES, INC.

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611 Princess Street
Wilmington, NC 28402

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Water Treatment Plant
Camp Lejeune, NC 28542
Well # 13

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HARRY PEPPER & ASSOCIATES, INC.

Phil Reese
Phil Reese
CQC Officer

Enclosures

ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511

APPROVED _____
APPROVED AS NOTED _____
DISAPPROVED _____

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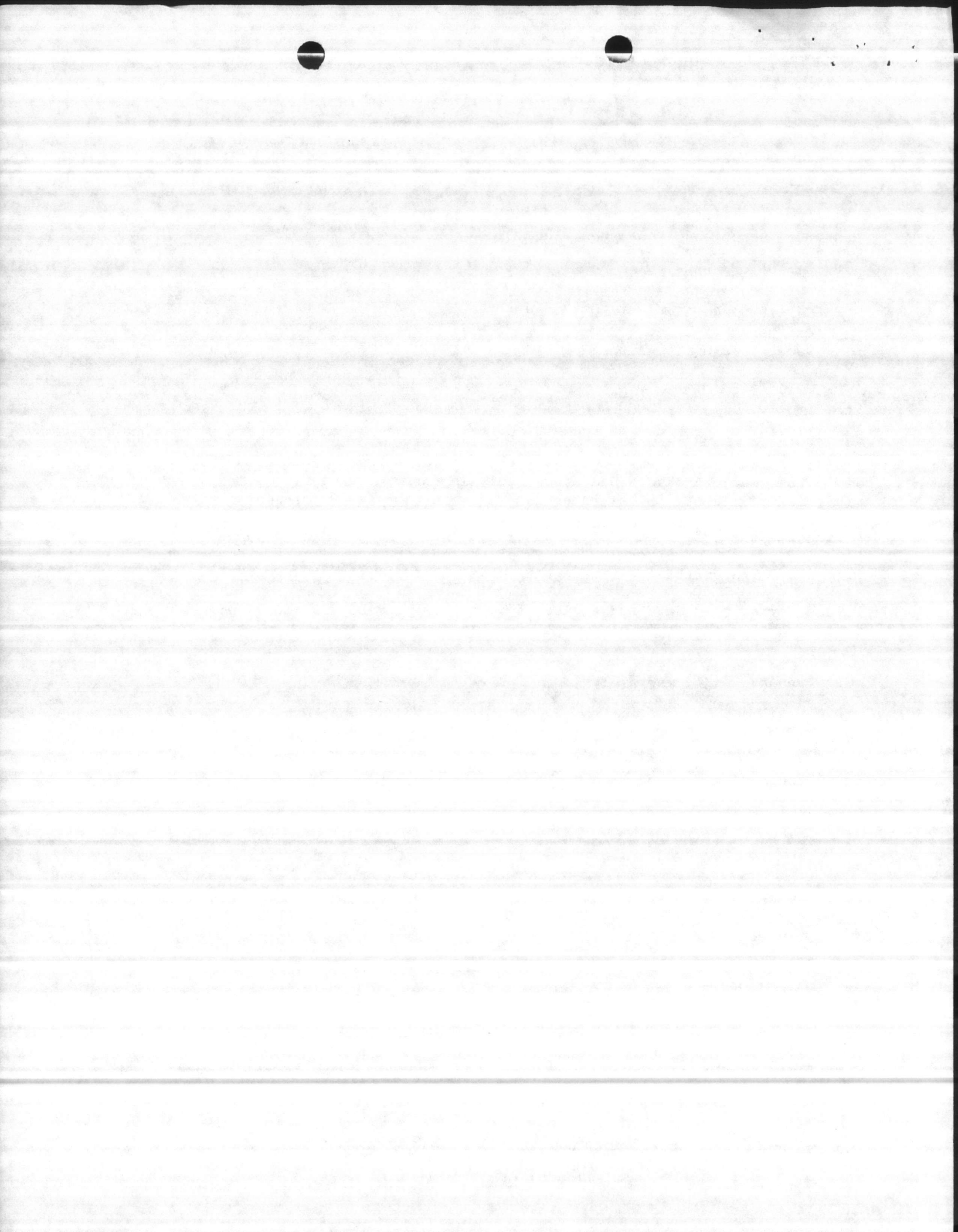
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and is:

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 Submitted for Government approval.
_____ Approved for use subject to Government approval of
specific deviation.

Authorized Reviewer _____ DATE _____
Signature CQC Rep. *Phil Reese* DATE 3-14-86

REVIEWER _____ DATE **MAR 21 1986**

FOR OFFICER IN CHARGE OF CONSTRUCTION



Item #2

DRILLERS LOG CAMP LEJEUNE WELL #13

DEPTH OF SAMPLE

0	-	10 FT.	TOPSOIL, WHITE SAND AND WHITE CLAY
10	-	50 FT.	GRAY CLAY
50	-	65 FT.	GRAY CLAY AND FINE SAND
65	-	80 FT.	GRAY CLAY AND LIMESTONE
80	-	105 FT.	LIMESTONE
105	-	170 FT.	LIMESTONE AND WHITE CLAY
170	-	205 FT.	LIMESTONE AND GREEN CLAY
205	-	250 FT.	GREEN CLAY AND FINE SAND

screen

→

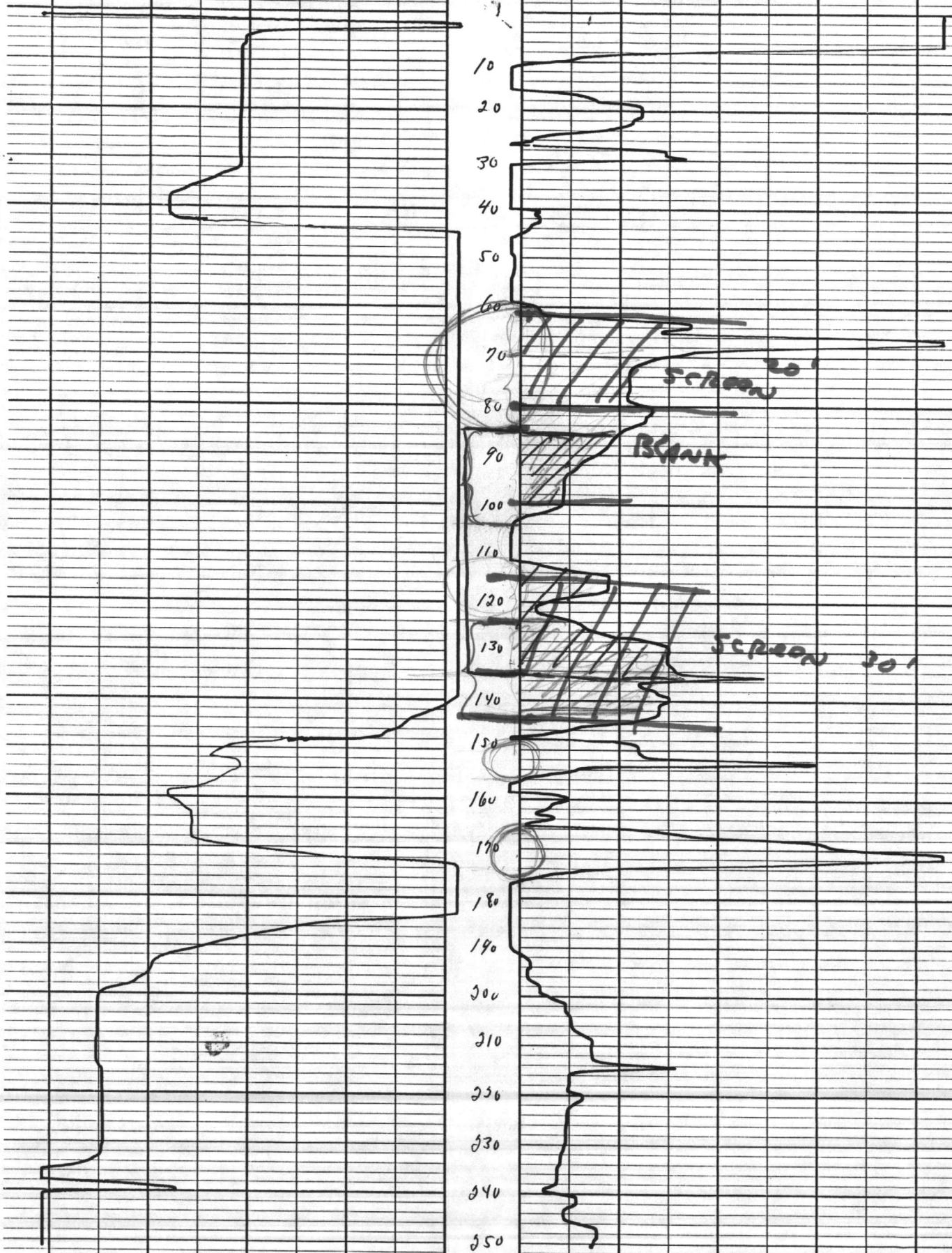
screen

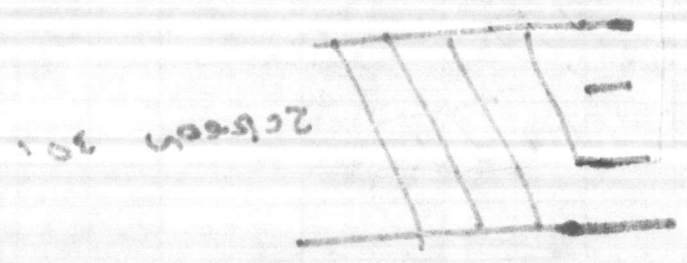
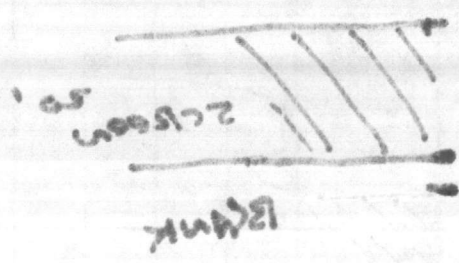
→

14111

WELL #3

Item #3





LAW & COMPANY
Consulting and Analytical Chemists
ESTABLISHED 1903

Item # 4

Main Office
1711 Castle Street
P.O. Box 629
Wilmington, N.C. 28402

RICHARD SPIVEY, President
919 762-7082 919 762-8956
TWX 510-937-0280

REPORT DATE: 11-12-85

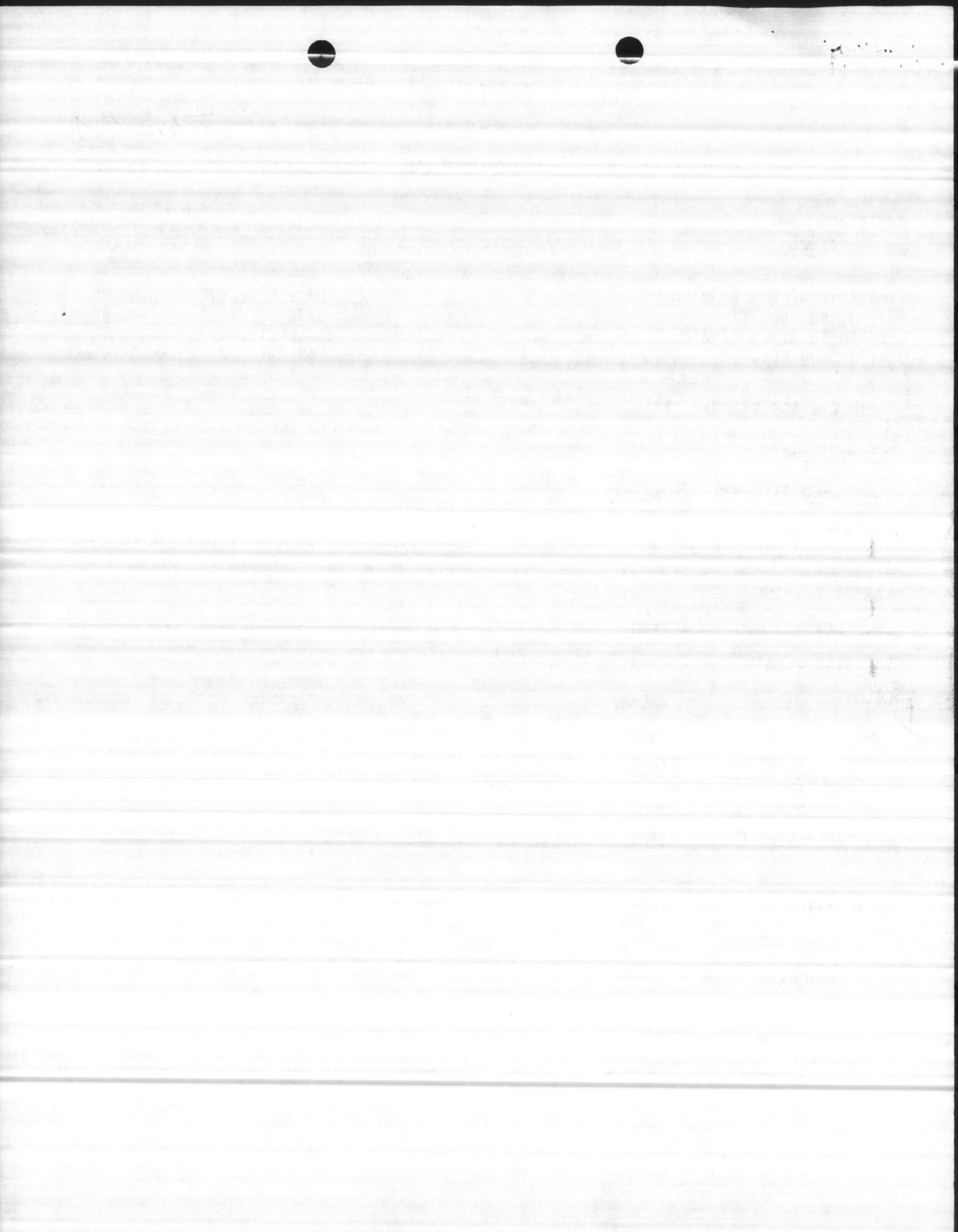
MAJETTE WELL & PUMP CO
P. O. BOX 908
SMITHFIELD, VA 23430
ATTN: BUD KELLOG

DATE COLLECTED: 10-02-85
DATE RECEIVED: 10-03-85
COLLECTED BY: CUSTOMER
LAB ID# EW 9688

SAMPLE DESCRIPTION: WELL #13 80'-90'

<u>TESTS/UNITS</u>		<u>RESULTS</u>
DISSOLVED OXYGEN	(MG/L)	6
TEMPERATURE		19.5°C
pH		8.0
CARBON DIOXIDE	(PPM)	0
SULFIDES	(PPM)	0
CHLORINE DEMAND	(PPM)	.8
COLOR	(APHA)	85
TURBIDITY	(NTU)	.75
TOTAL ALKALINITY	(PPM)	190
HYDROXIDE	(PPM)	0
BICARBONATE	(PPM)	168
CARBONATE	(PPM)	22
TOTAL HARDNESS	(PPM)	135
NON-CARBONATE	(PPM)	0
CARBONATE	(PPM)	135
TOTAL DISSOLVED SOLIDS	(PPM)	190

CONTINUED.....



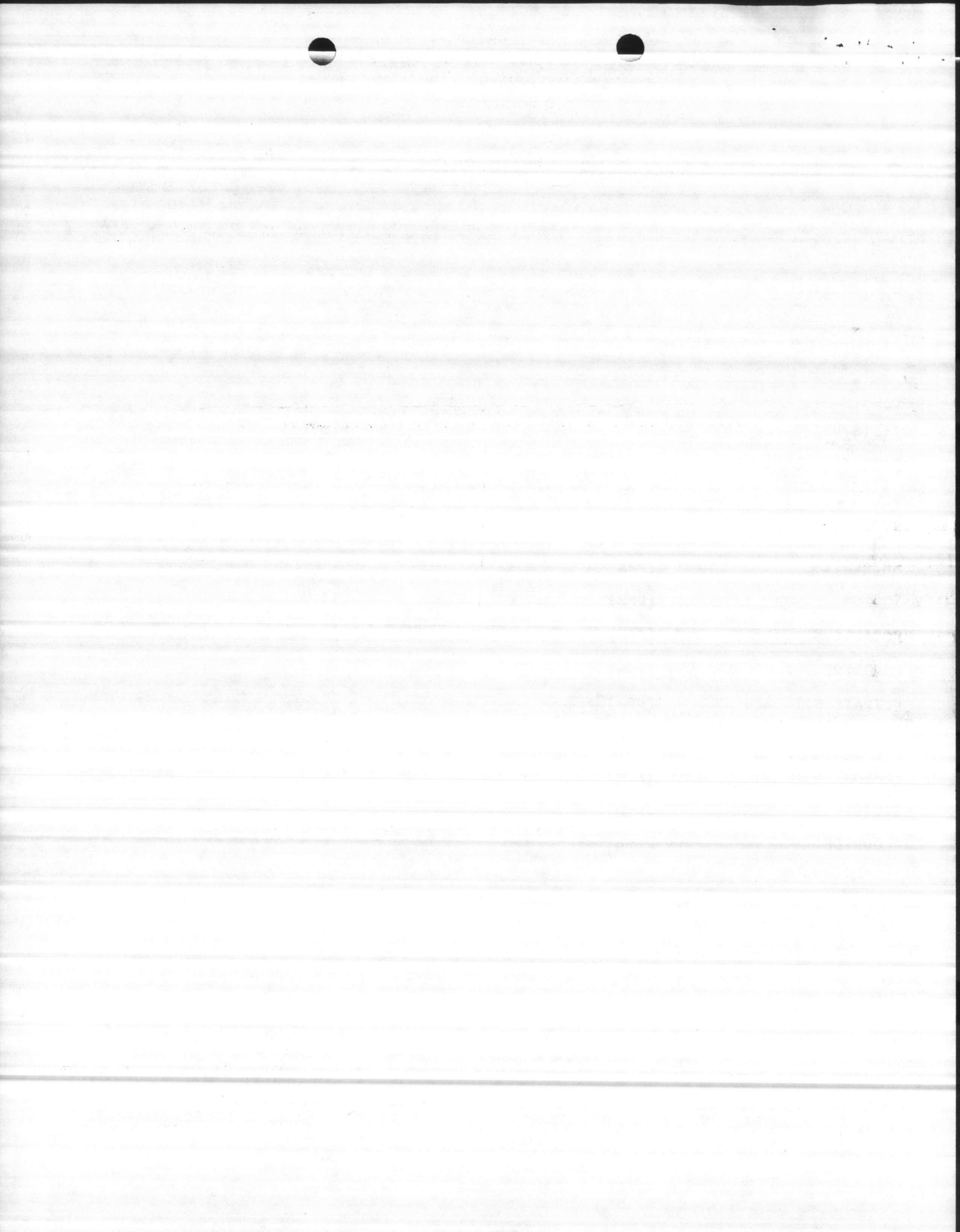
LAW & COMPANY
Consulting and Analytical Chemists
ESTABLISHED 1903

Main Office
111 Castle Street
P.O. Box 629
Wilmington, N.C. 28402

RICHARD SPIVEY President
919 762 7082 919 762 8950
TWX 510 937 0280

<u>TESTS/UNITS</u>		<u>RESULTS</u>
SPECIFIC CONDUCTANCE	(UMHOS)	420
SULFATES	(PPM)	.16
CALCIUM	(PPM)	43
MAGNESIUM	(PPM)	1.8
SODIUM	(PPM)	14.0
POTASSIUM	(PPM)	.8
CHLORIDE	(PPM)	96
NITRATE NITROGEN	(PPM)	<.2
IRON	(PPM)	.18
MANGANESE	(PPM)	<.015
SILICON	(PPM)	5.9
FLOURIDE	(PPM)	<.2

CHEMIST *Dolly Bidwan*
TOTAL CHARGES: \$180.00



Consulting and Analytical Chemists

ESTABLISHED 1903

Main Office
1711 Castle Street
P.O. Box 629
Wilmington, N.C. 28402

REPORT DATE: 3-11-86

RICHARD SPIVEY, President
919-762-7082 919-762-8956
TWX 510-937-0280

MAJETTE WELL & PUMP COMPANY
POST OFFICE BOX 908
SMITHFIELD, VA. 23430
ATTN: BUD KELLOG

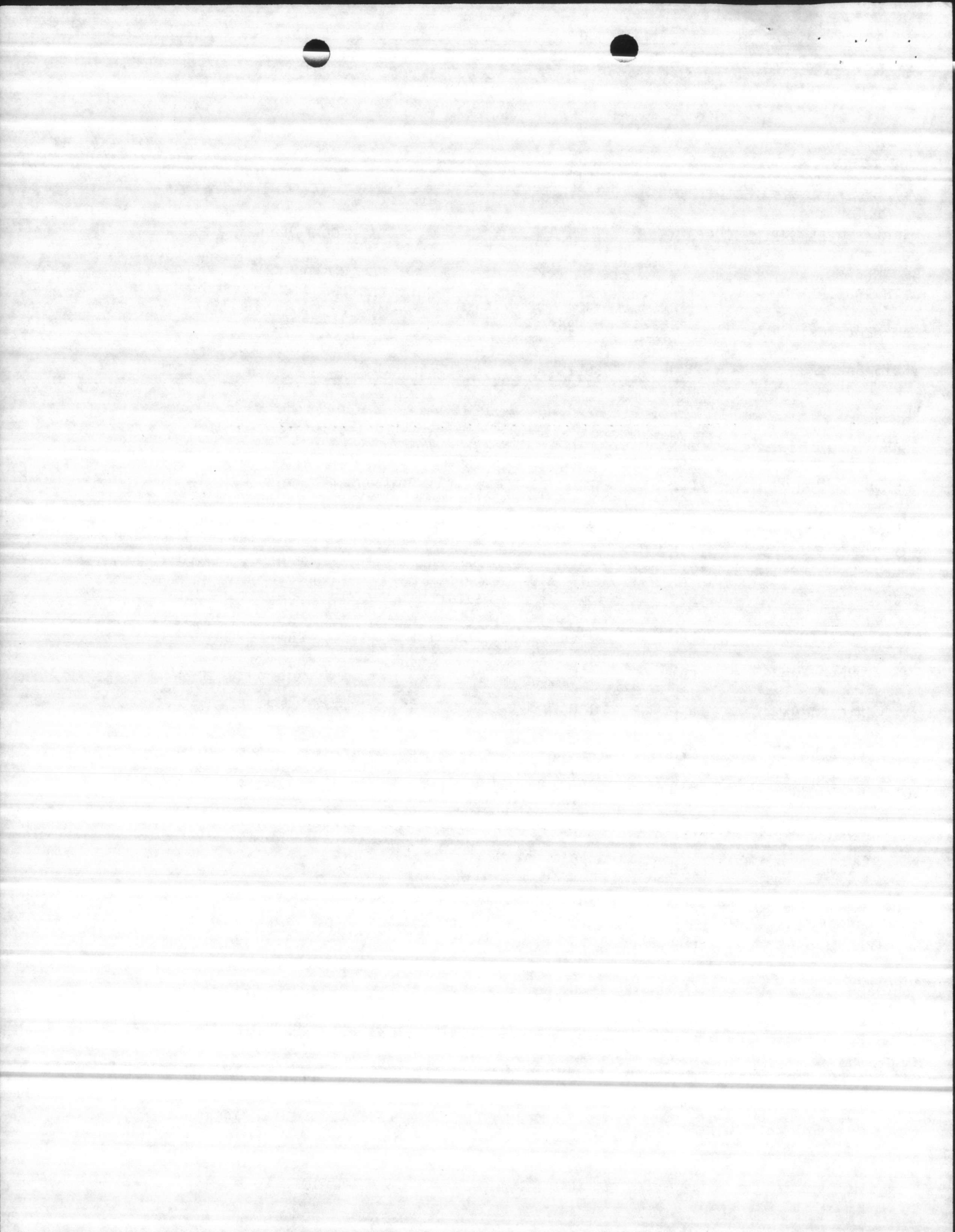
DATE COLLECTED: 2-26-86
DATE RECEIVED: 2-26-86
COLLECTED BY: CUSTOMER
LAB I.D.# EW 3507

SAMPLE DESCRIPTION: WELL# 13 @ 135feet

TESTS/SAMPLES	RESULTS	TESTS/SAMPLES	RESULTS
pH	7.8	POTASSIUM	PPM 1.6
CARBON DIOXIDE	PPM 0	CHLORIDE	PPM 34
SULFIDES	PPM 10	NITRATE NITROGEN	PPM <.2
CHLORINE DEMAND	PPM 1.8	IRON	PPM <.00025
COLOR	APHA 10	MANGANESE	PPM 0.03
TURBIDITY	NTU 5.7	SILICON	PPM 2.1
TOTAL ALKALINITY	PPM 144	FLOURIDE	PPM <.2
HYDROXIDE	PPM 0		
BICARBONATE	PPM 130		
CARBONATE	PPM 14		
TOTAL HARDNESS	PPM 88		
NON-CARBONATE	PPM 0		
CARBONATE	PPM 88		
TOTAL DISSOLVED SOLIDS	PPM 207		
SPECIFIC CONDUCTANCE	UMHOS 255		
SULFATES	PPM 4		
CALCIUM	PPM 41		
MAGNESIUM	PPM 1.5		
SODIUM	PPM 7.2		

CHEMIST: Jolly Bidwan

TOTAL CHARGES: 180.00



Item # 5

HSSC

HOWARD SMITH
SCREEN COMPANY

A Halliburton Company
P.O. Box 666 • Houston, Texas 77001
713-869-5771 • Telex: 77-4667

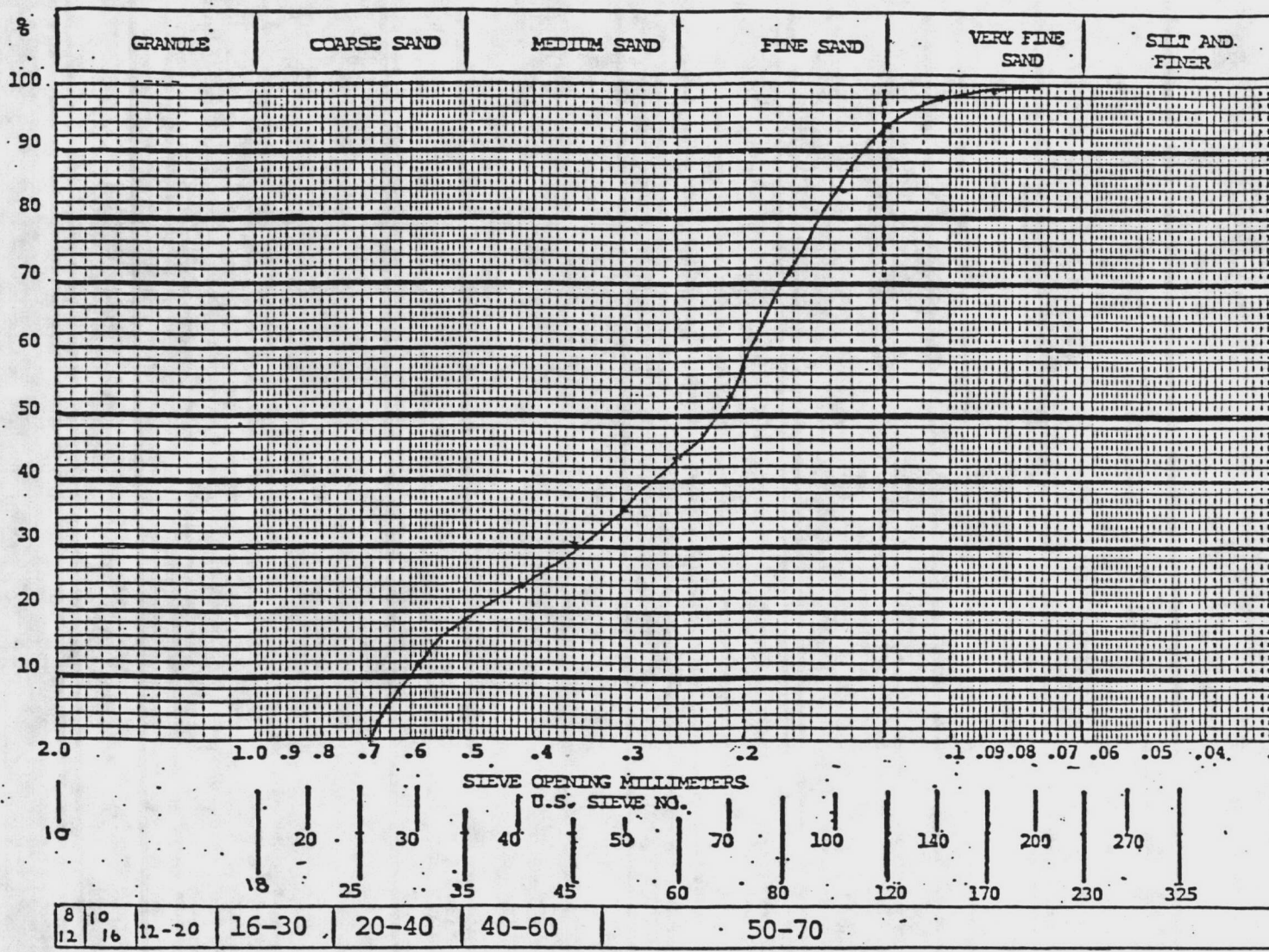
Item # 5

CONTACT...-
TELEPHONE...-
REMARKS...-
RECOMMENDATIONS:
GRAVEL SIZE-----
SCREEN SIZE-----

COMPANY...R.L.MAGETTE COMPANY
WELL.....13
DEPTH.....65-85
FIELD.....-
COUNTY.....-
STATE.....VA

SIEVE ANALYSIS REPORT

US SIEVE	IN	MM	WT RET	CUM WT	CUM %
● 18	.0787	2.000	--	--	--
18	.0394	1.000	--	--	--
20	.0331	0.840	--	--	--
25	.0280	0.710	--	--	--
30	.0234	0.589	1.3	1.3	12.6
35	.0197	0.500	0.6	1.9	18.4
40	.0165	0.420	0.6	2.5	24.3
45	.0139	0.351	0.6	3.1	30.1
50	.0117	0.297	0.6	3.7	35.9
60	.0098	0.250	0.8	4.5	43.7
70	.0083	0.210	0.9	5.4	52.4
80	.0070	0.177	2.0	7.4	71.8
100	.0059	0.149	1.3	8.7	84.5
120	.0049	0.124	1.0	9.7	94.2
140	.0041	0.104	0.4	10.1	98.1
170	.0035	0.088	0.1	10.2	99.0
200	.0029	0.074	0.1	10.3	100.0
230	.0024	0.062	--	--	--
270	.0021	0.053	--	--	--
325	.0017	0.044	--	--	--
<325			--	--	--



JAMES E JACKSON
10-22-85



Item #5

HSSC

HOWARD SMITH
SCREEN COMPANY

A Halliburton Company
P.O. Box 666 • Houston, Texas 77001
713-869-5771 • Telex: 77-4667

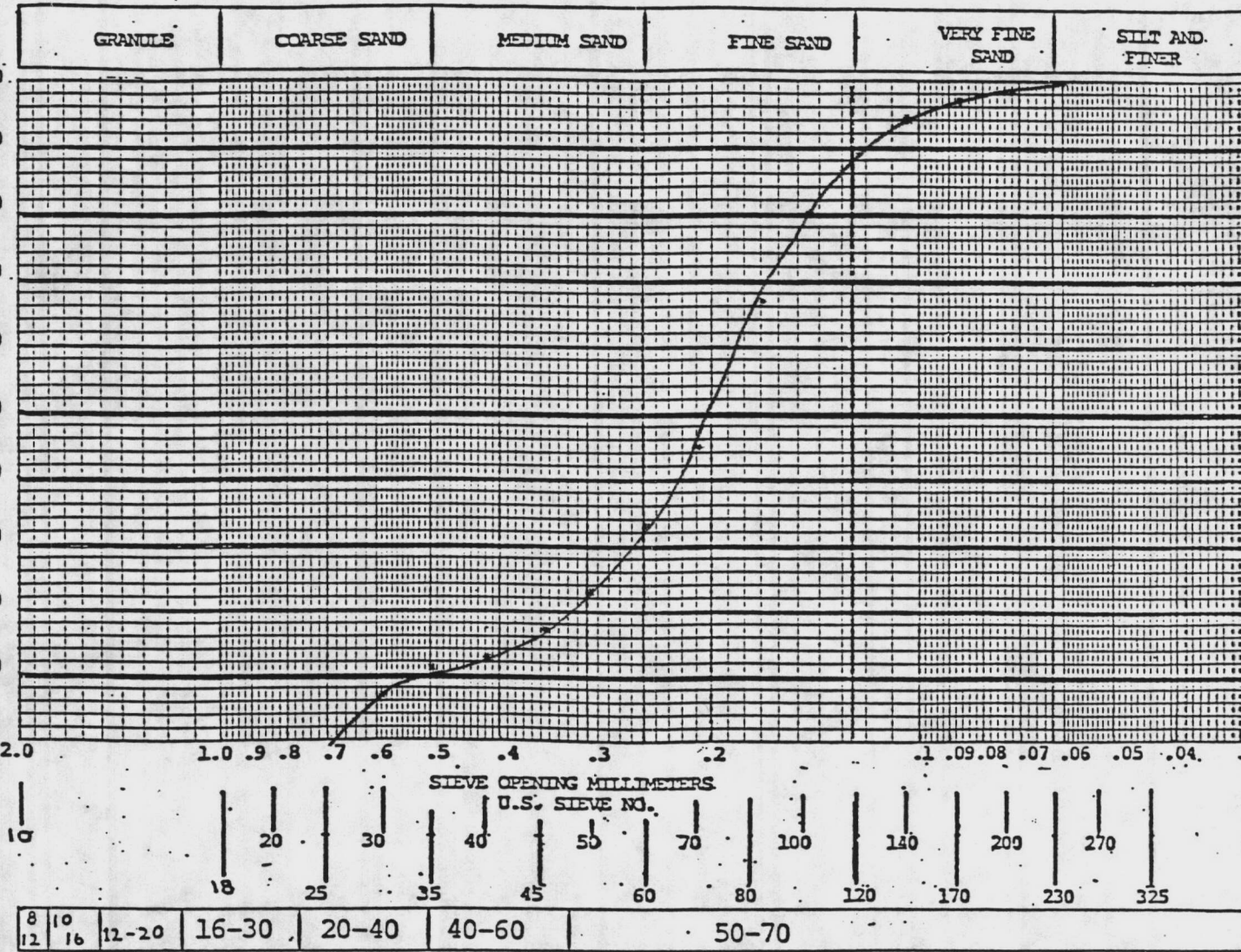
Item #5

CONTACT...-
TELEPHONE...-
REMARKS...-
RECOMMENDATIONS:
GRAVEL SIZE-----
SCREEN SIZE-----

COMPANY...R.L.MAGETTE COMPANY
WELL.....13
DEPTH.....115-145
FIELD.....-
COUNTY.....-
STATE.....VA

SIEVE ANALYSIS REPORT

US. SIEVE	IN	MM	WT RET	CUM WT	CUM %	%
●	.0787	2.000	--	--	--	100
18	.0394	1.000	--	--	--	90
20	.0331	0.840	--	--	--	80
25	.0280	0.710	--	--	--	70
30	.0234	0.589	0.6	0.6	7.0	60
35	.0197	0.500	0.3	0.9	10.5	50
40	.0165	0.420	0.2	1.1	12.8	40
45	.0139	0.351	0.4	1.5	17.4	30
50	.0117	0.297	0.5	2.0	23.3	20
60	.0098	0.250	0.9	2.9	33.7	10
70	.0083	0.210	1.0	3.9	45.3	5
80	.0070	0.177	1.9	5.8	67.4	2
100	.0059	0.149	1.1	6.9	80.2	1
120	.0049	0.124	0.8	7.7	89.5	0.5
140	.0041	0.104	0.4	8.1	94.2	0.2
170	.0035	0.088	0.3	8.4	97.7	0.1
●	.0029	0.074	0.1	8.5	98.8	0.05
230	.0024	0.062	0.1	8.6	100.0	0.02
270	.0021	0.053	--	--	--	0.01
325	.0017	0.044	--	--	--	0.005
<325			--	--	--	0.002



JAMES E JACKSON
10-22-85



FCR

R. L. MAGETTE COMPANY

WATER SUPPLY CONTRACTORS

DOMESTIC : INDUSTRIAL : MUNICIPAL

Wells, Pumps and Community Water Systems

Item # 6

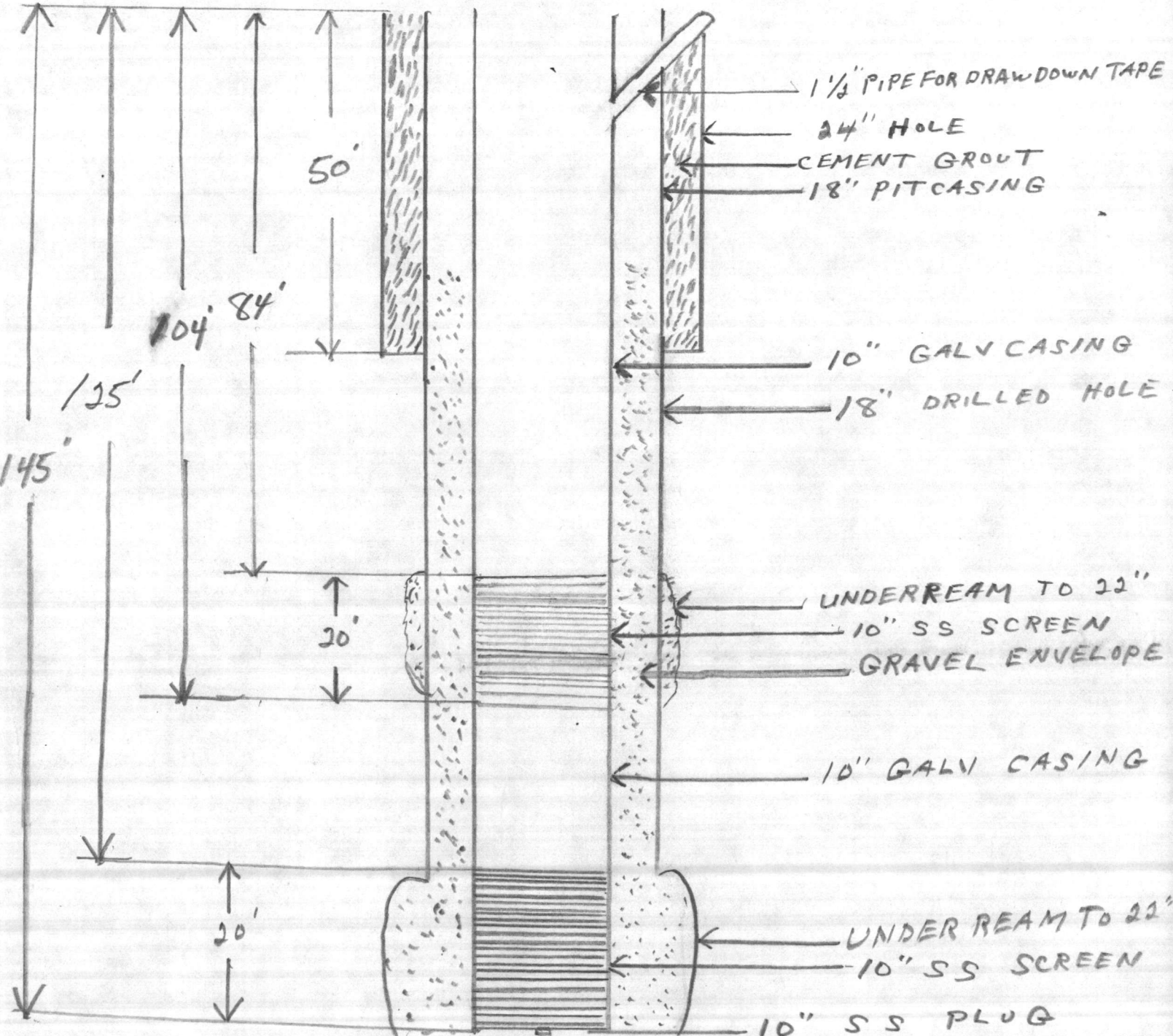


Serving Tidewater Virginia and Eastern North Carolina

P. O. Box 908 Phone - 804 - 357-4105

Smithfield, Virginia 23430

WELL #13





11-11-11



Hunt

CONTRACTOR'S SUBMITTAL TRANSMITTAL
LANTDIV NORFOLK 4-4355/3 (Rev. 11-80)

CONTRACT NO 81-C-1644	TRANSMITTAL NO 154-B	DATE 5-19-86
--------------------------	-------------------------	-----------------

FROM CONTRACTOR
Harry Pepper & Associates, Inc.

TO
Henry Von Oesen & Associates, Inc.

PROJECT TITLE AND LOCATION
Holcomb Blvd Water Treatment Plant

MCB, Cp Lejeune, North Carolina

CONTRACTOR USE ONLY

REVIEWER USE ONLY

*List only one specification division per form.

**ACTION CODES

List only one of the following categories on each transmittal form, and indicate which is being submitted

- A-Approved
- D-Disapproved
- AN-Approved as noted
- RA-Receipt acknowledged.
- C-Comments
- R-Resubmit

- Contractor Approved OICC Approval Deviation/Substitution For OICC Approval

ITEM NO	PROJ. SPEC. SECT. & PARA. and/or PROJ. DWG. NO. *	ITEM IDENTIFICATION (Type, size, model no., Mfg. name, dwg. or brochure number)	NO. OF COPIES	ACTION CODES **	REVIEWER'S INITIALS CODE AND DATE
	02734	ROTARY DRILLED WATER WELLS WELL # 13			
1	1.2.1	Shop Drawings	7	A	JRB
2	3.1.6	Step Test	7	A	JRB
3	3.1.6	24 Hour Pump Test	7	A	JRB
4	3.1.6	2 Hour Recovery Test	7	A	JRB
5		Statement from Well Driller	7	A	JRB

CONTRACTOR'S COMMENTS Well casing and screens were pulled and replaced per shop drawings. A step test and 24 HOUR test were performed. Contractor was advised to pump test at 150 GPM. During the test the well began pumping muddy water and then cleared up. The last two hours of the test Contractor pumped at 250GPM. Contractor was instructed by CQC to do another step test. He was then instructed to do another 24 Hour Pump Test at 200 GPM. This Transmittal forms a part of Transmittal # 154-A, dated 3-14-86.

COPY OF TRANSMITTAL AND SUBMITTALS TO ROICC ONE COPY TO ROICC	CONTRACTOR REPRESENTATIVE (Signature) Phil Reese <i>Phil Reese</i>
DATE RECEIVED BY REVIEWER 5/21/86	FROM (Reviewer) Henry von Oesen & Assoc., Inc.
	TO

- Submittals are returned with action indicated. Approval of an item does not include approval of any deviation from the contract requirements unless the contractor calls attention to and supports the deviation.
- Submittals are forwarded to LANTDIV with A-E recommendations indicated in REVIEWER USE ONLY Section and in comments below on **ONE COPY** of the transmittal form.

REVIEWER'S COMMENTS

COPIES TO ROICC (2) LANTDIV (1) A-E (1)	DATE 5/23/86	SIGNATURE <i>[Signature]</i>
--	------------------------	---------------------------------

FCR

Item #1

R. L. MAGETTE COMPANY

WATER SUPPLY CONTRACTORS
DOMESTIC : INDUSTRIAL : MUNICIPAL

Wells, Pumps and Community Water Systems

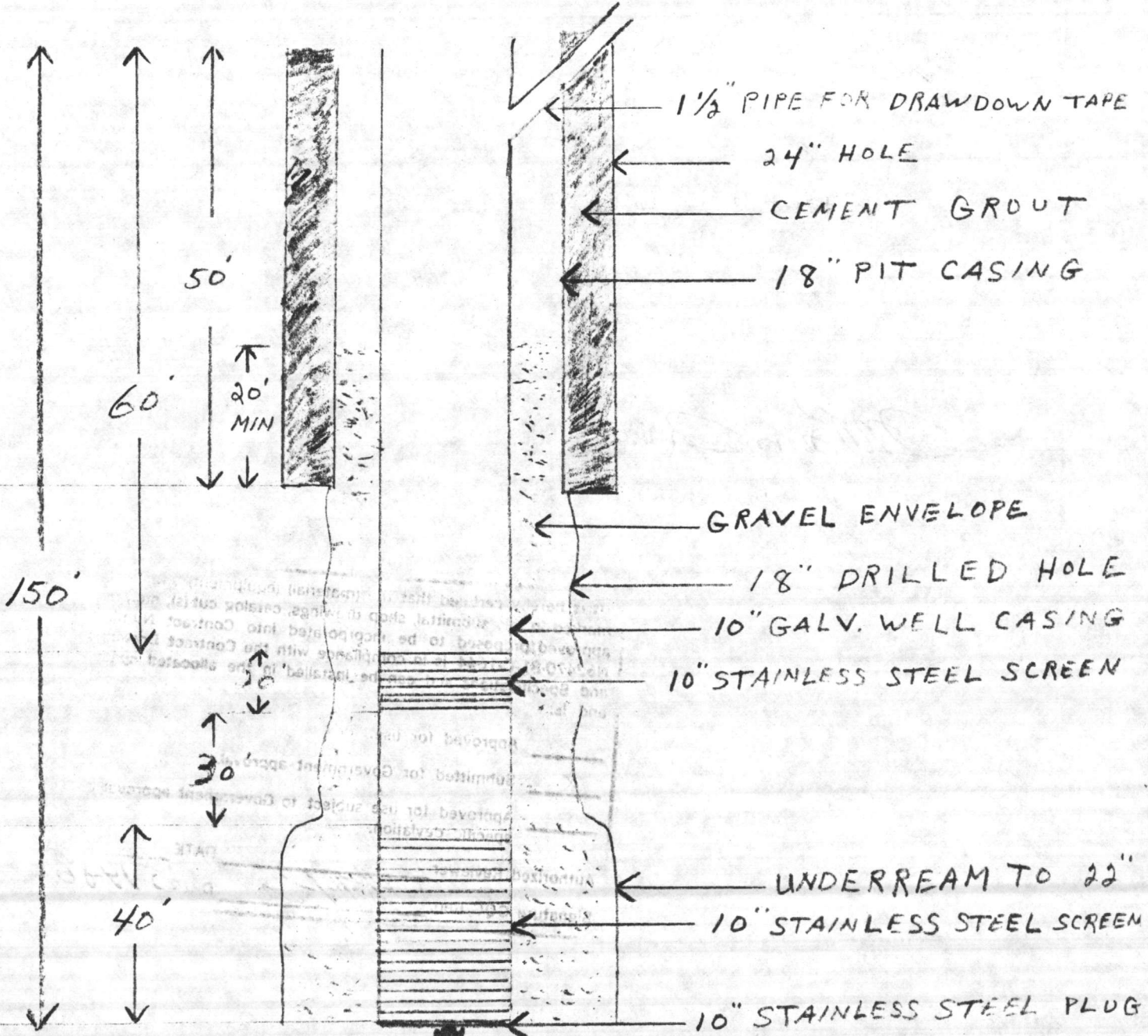


Serving Tidewater Virginia and Eastern North Carolina

P. O. Box 908 Phone - 804 - 357-4105

Smithfield, Virginia 23430

WELL #13



ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING CENTER AND
NORFOLK, VIRGINIA

APPROVED ✓
APPROVED AS NOTED _____
DISAPPROVED _____

SUBJECT TO THE REQUIREMENTS OF
CONTRACT NO. N62470-81-C-1644
APPROVAL OF A SUBMITTAL DOES NOT INCLUDE
APPROVAL OF ANY DEVIATION FROM CONTRACT
REQUIREMENTS UNLESS THE CONTRACTOR
CALLS ATTENTION TO THE DEVIATION. THE
CONTRACTOR SHALL BE RESPONSIBLE FOR
PROVIDING PROPER PHYSICAL DIMENSIONS &
WEIGHTS, COORDINATION OF TRADES, ETC.,
AS REQUIRED.

REVIEWER [Signature] DATE MAY 22 1986

FOR OFFICER IN CHARGE OF CONSTRUCTION

It is hereby certified that the (material) (equipment) shown and marked in this submittal, shop drawings, catalog cut(s), etc., and approved/proposed to be incorporated into Contract Number N62470-81-C-1644 is in compliance with the Contract Drawings and Specifications and can be installed in the allocated space, and is:

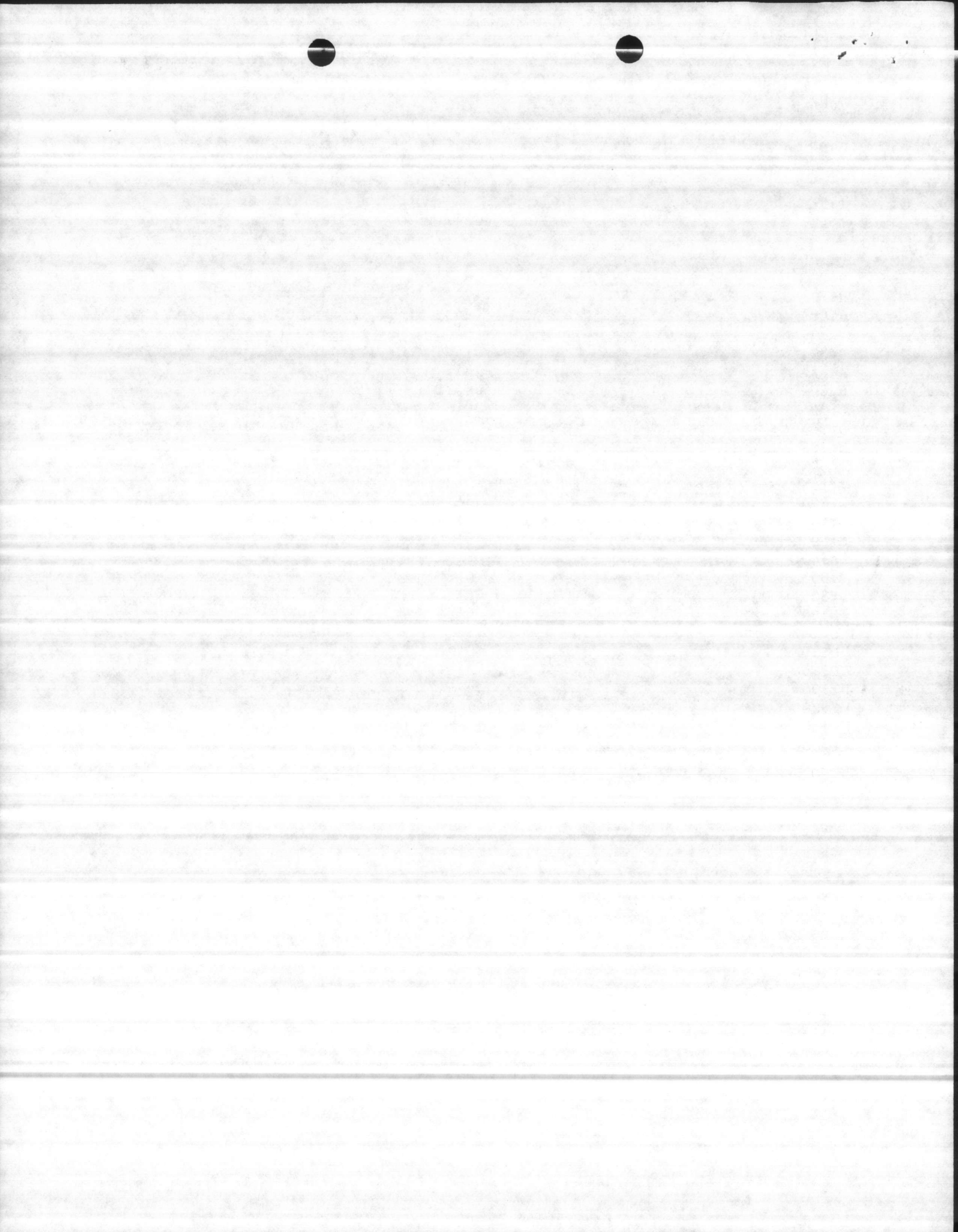
- Approved for use.
- Submitted for Government approval.
- Approved for use subject to Government approval of specific deviation.

Authorized Reviewer _____ DATE _____
Signature CQC Rep. [Signature] DATE 5-19-86

STEP TEST
WELL # 13

ITEM # 2

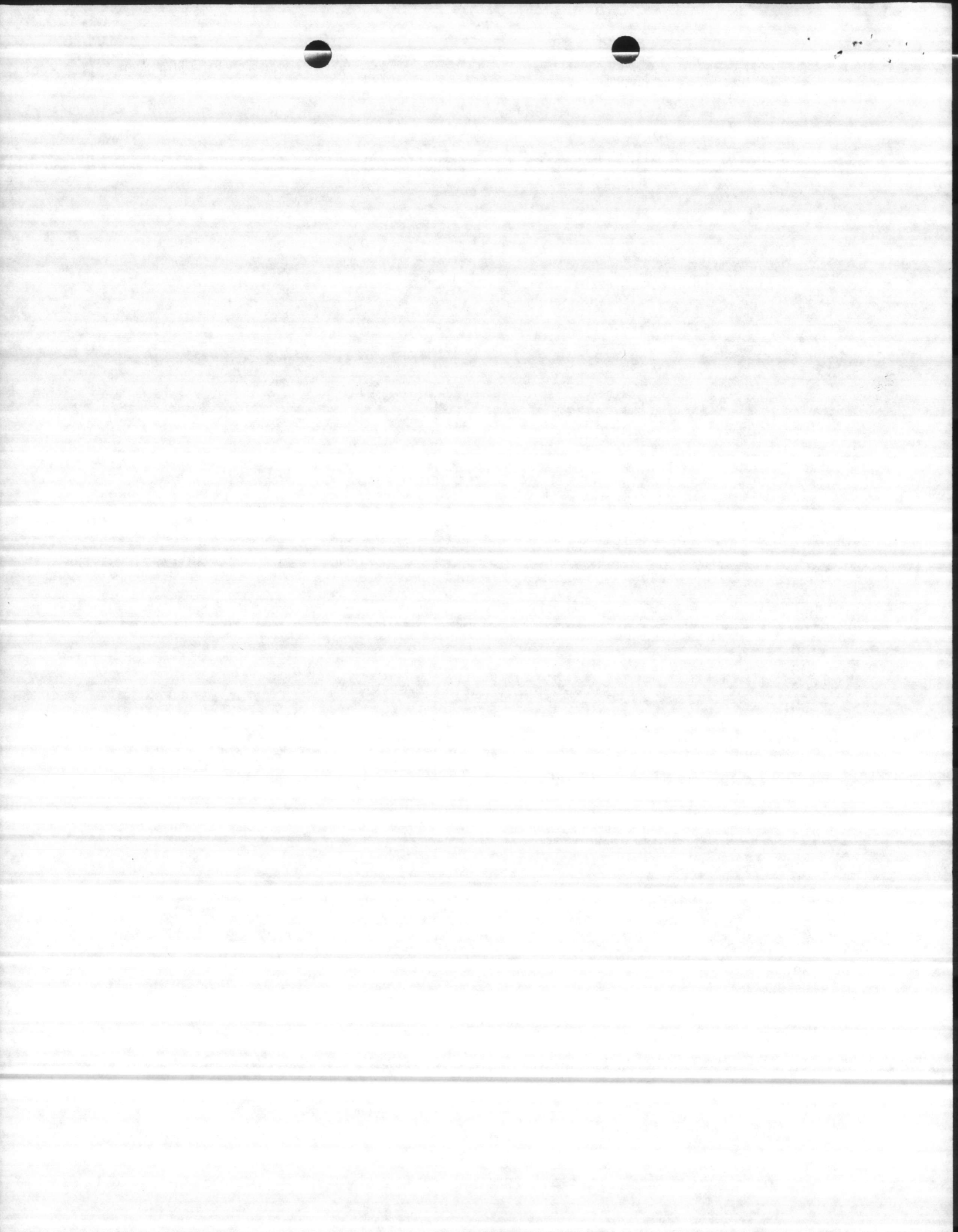
TIME	STATIC	PUMPING LEVEL	PUMPING RATE
1:15	17'10 1/2"	26'9	100 GPM
1:30		28'1	"
1:45		28'7	"
2:00		28'11	"
2:30		29'5	"
3:00		29'7	"
3:30		29'8	"
4:00		29'10	"
4:15		36'8	150 GPM
4:30		37'9	"
4:45		38'7	"
5:00		39'1	"
5:30		39'6	"
6:00		39'11	"
6:30		39'11	"
7:00		40'1	"
7:15		45'2	200 GPM
7:30		45'11	"
7:45		46'3	"
8:00		46'6	"
8:30		46'9	"
9:00		46'11	"
9:30		46'11	"
10:00		46'11	"
10:15		48'1	250 GPM
10:30		48'9	"
10:45		49'2	"
11:00		49'6	"
12:00		49'11	"
12:30		50'1	"
1:00		50'1	"



24 HOUR PUMP TEST

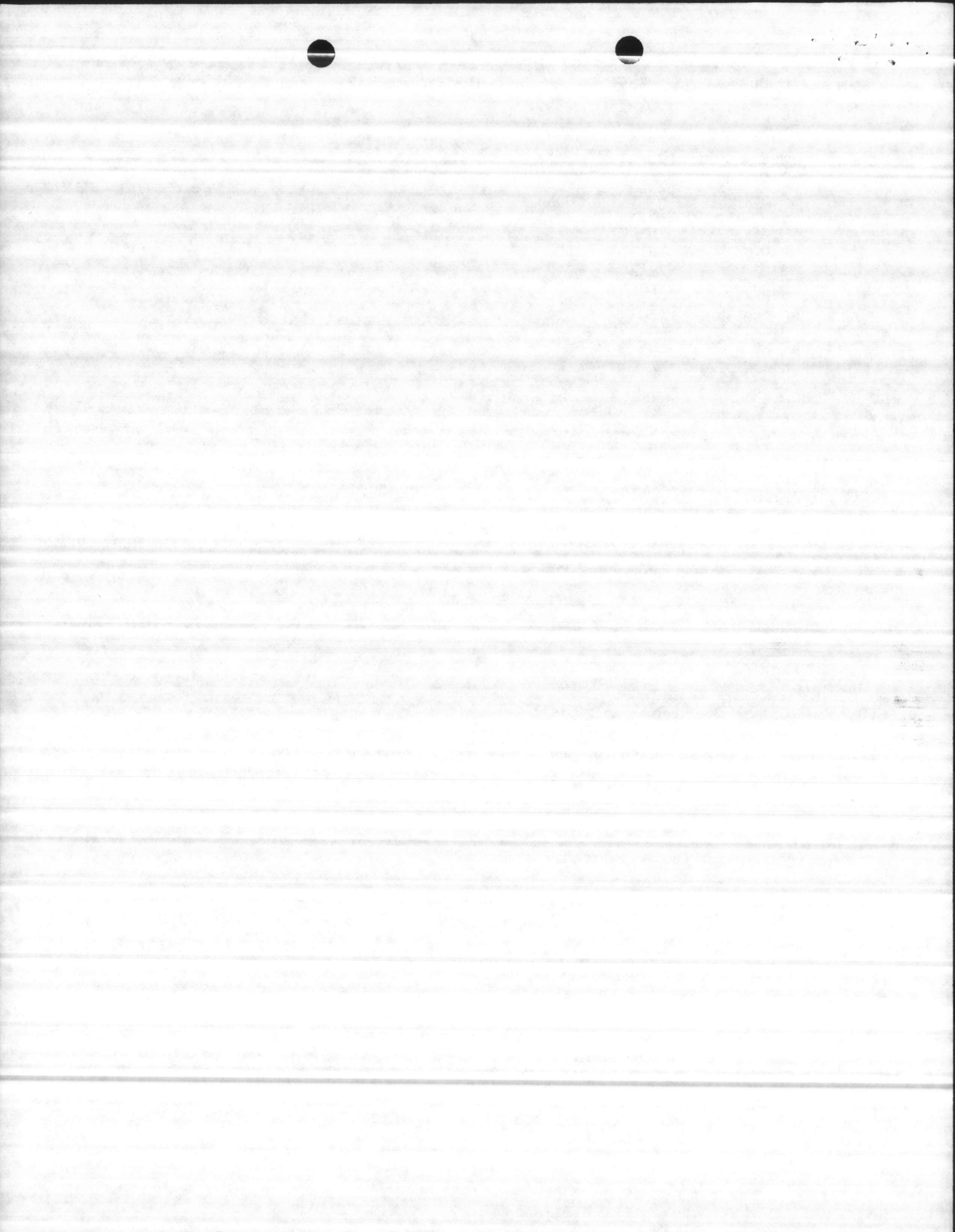
PUMPING RATE 200 GPM

WELL # 13	PUMP SETTING 84'	STATIC 17'10"
TIME	PUMPING LEVEL	DRAWDOWN
8:01	38'2	20'4
8:02	39'7	1'5
8:03	40'7	1'
8:04	41'3	8"
8:05	41'11	8"
8:06	42'7	8"
8:07	43'2	7"
8:08	43'9	7"
8:09	43'11	3"
8:10	44'9	6"
8:15	45'2	2"
8:20	45'4	2"
8:25	45'6	2"
8:30	45'7	1"
8:35	45'9	2"
8:40	45'10	1"
8:45	46'2	4"
8:50	46'4	2"
8:55	"	-
9:00	"	-
10:00	"	-
11:00	"	-
12:00	"	-
1:00	"	-
2:00	"	-
3:00	"	-
4:00	"	-
5:00	"	-
6:00	"	-
7:00	46'5	1"
8:00	"	-
9:00	"	-
10:00	"	-
11:00	"	-
12:00	"	-
1:00	46'6	1"
2:00	"	-
3:00	"	-
4:00	"	-
5:00	"	-
6:00	"	-
7:00	"	-
8:00	"	-



2 HOUR RECOVERY TEST
WELL # 13

8:01	25'6
8:02	23'2
8:03	21'11
8:04	20"
8:05	19'9
8:06	19'6
8:07	19'3
8:08	19'2
8:09	18'11
8:10	18'8
8:15	18'3
8:20	18'
8:25	17'10
8:30	"
8:35	"
8:40	"
8:45	"
8:50	"
8:55	"
9:00	"
10:00	"
11:00	"



FCR

MAGETTE WELL & PUMP COMPANY

Item #5



WATER SUPPLY CONTRACTORS
DOMESTIC : INDUSTRIAL : MUNICIPAL
Wells, Pumps and Community Water Systems

Serving Tidewater Virginia and Eastern North Carolina

P. O. Box 908 Phone - 804 - 357-4105

Smithfield, Virginia 23430

May 5, 1986

Lieutenant Kreug
Contracting Office
Camp Lejeune, North Carolina

Re: Well #13

Dear Sir:

The capacity of this well increased while we were performing the pumping test.

This is not uncommon in wells with shallow stratas, as the pressure is low in these stratas and it is sometimes difficult to fully develop the well with air pressure.

We feel that the test pumping is actually a part of developing the well, because sometimes this process will break loose particles of sand and clay that did not come out while developing with air, which was true in this case.

If we can be of further assistance please do not hesitate to contact us.

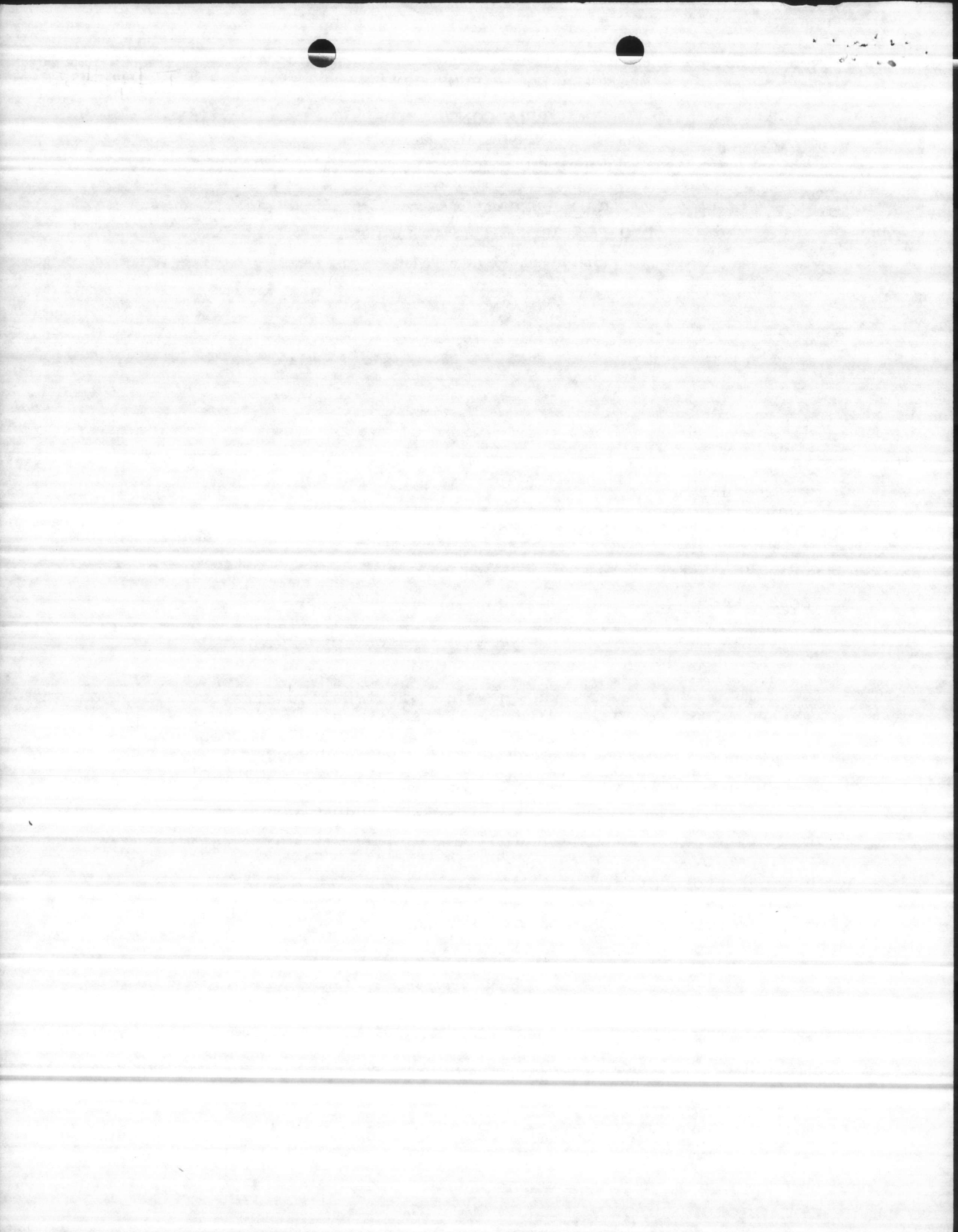
Sincerely,

FCR Magette Well & Pump Company

A handwritten signature in cursive script that reads "Boyd O. Kellogg".

Boyd O. Kellogg

BOK:br



CONTRACTOR'S SUBMITTAL TRANSMITTAL
 LANTDIV NORFOLK 4-4355/3 (Rev. 11-80)

S/6/86
 102

Hunt

CONTRACT NO 81-C-164	TRANSMITTAL NO 1511	DATE 5-10-86
FROM CONTRACTOR Harry Pepper & Associates, Inc.		PROJECT TITLE AND LOCATION Holcomb Blvd Water Treatment Plant
TO Henry Von Oesen & Associates, Inc.		WCH, Co Lenoire, North Carolina

CONTRACTOR USE ONLY *List only one specification division per form. List only one of the following categories on each transmittal form, and indicate which is being submitted <input type="checkbox"/> Contractor Approved <input checked="" type="checkbox"/> OICC Approval <input type="checkbox"/> Deviation/Substitution For OICC Approval	REVIEWER USE ONLY **ACTION CODES A-Approved D-Disapproved AN-Approved as noted RA-Receipt acknowledged C-Comments R-Resubmit
--	--

ITEM NO.	PROJ. SPEC. SECT. & PARA. and/or PROJ. DWG. NO. *	ITEM IDENTIFICATION (Type, size, model no., Mfg. name, dwg. or brochure number)	NO. OF COPIES	ACTION CODES **	REVIEWER'S INITIALS CODE AND DATE
	02734	ROTARY DRILLED WATER WELLS			
1	1.2.1	Shop Drawings	7	A	JRS
2	3.1.6	Step Test	7	A	JRS
3	3.1.6	24 Hour Pump Test	7	A	JRS
4	3.1.6	2 Hour Recovery Test	7	A	JRS
5		Specimen from Well Driller	7	A	JRS

CONTRACTOR'S COMMENTS
 Well casing and screens were pulled and replaced per shop drawings. A step test and 24 Hour test were performed. Contractor was advised to pump test at 150 GPM. During the test the well began pumping muddy water and then cleared up. The last two hours of the test Contractor pumped at 250 GPM. Contractor was instructed by OICC to do another step test. He was then instructed to do another 24 Hour Pump Test at 100 GPM. This Transmittal forms a part of Transmittal # 154-A, dated 3-14-86.

COPY OF TRANSMITTAL AND SUBMITTALS TO ROICC ONE COPY TO ROICC	CONTRACTOR REPRESENTATIVE (Signature) Phil Raese <i>Phil Raese</i>
---	---

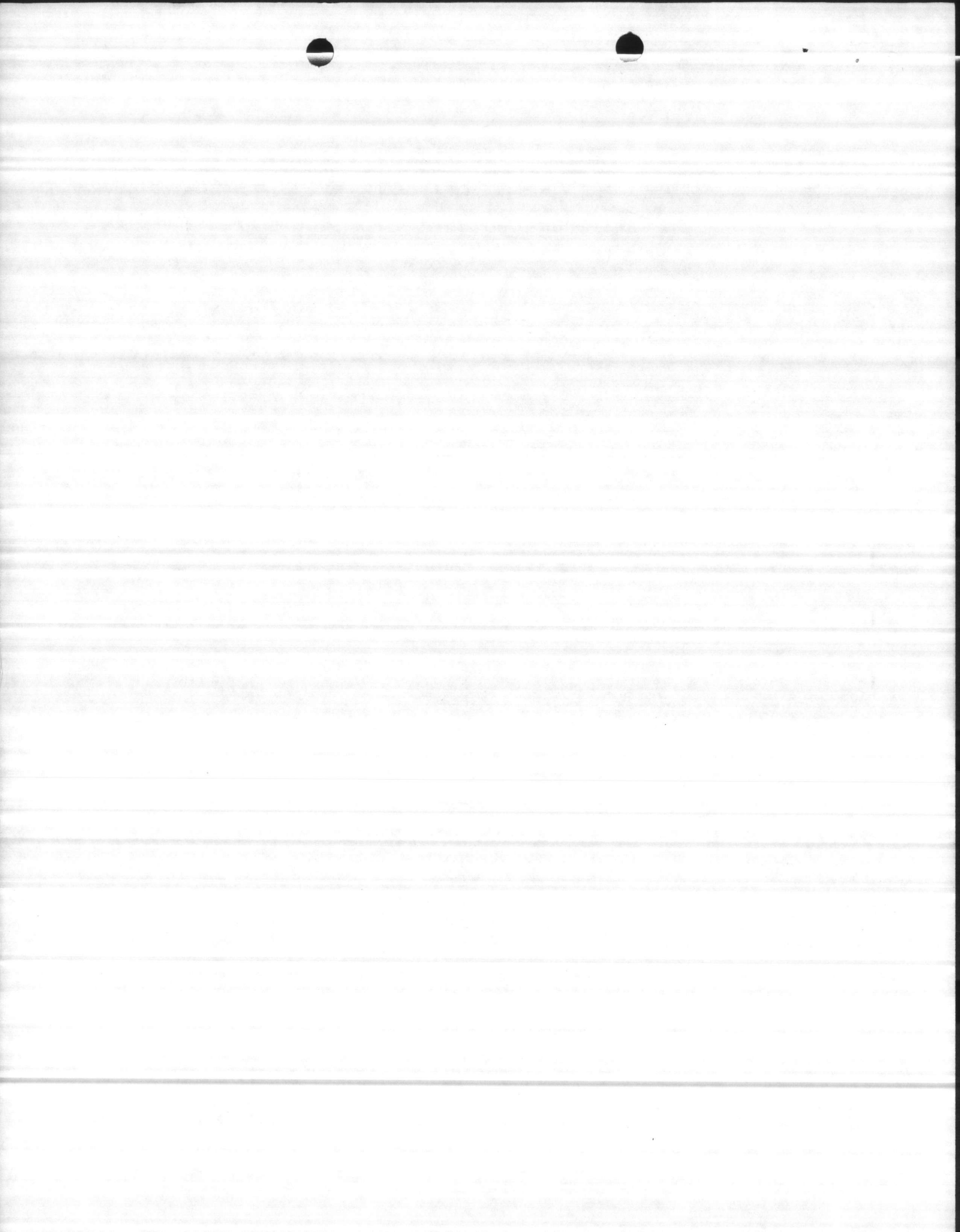
DATE RECEIVED BY REVIEWER 5/23/86	FROM (Reviewer) Henry Von Oesen & Associates, Inc.	TO
--------------------------------------	---	----

- Submittals are returned with action indicated. Approval of an item does not include approval of any deviation from the contract requirements unless the contractor calls attention to and supports the deviation.
- Submittals are forwarded to LANTDIV with A-E recommendations indicated in REVIEWER USE ONLY Section and in comments below on **ONE COPY** of the transmittal form.

REVIEWER'S COMMENTS

[Handwritten Signature]

COPIES TO ROICC (2) LANTDIV (1) A-E (1)	DATE 5/23/86	SIGNATURE
--	-----------------	-----------



FCR

Item # 1

R. L. MAGETTE COMPANY

WATER SUPPLY CONTRACTORS

DOMESTIC : INDUSTRIAL : MUNICIPAL

Wells, Pumps and Community Water Systems

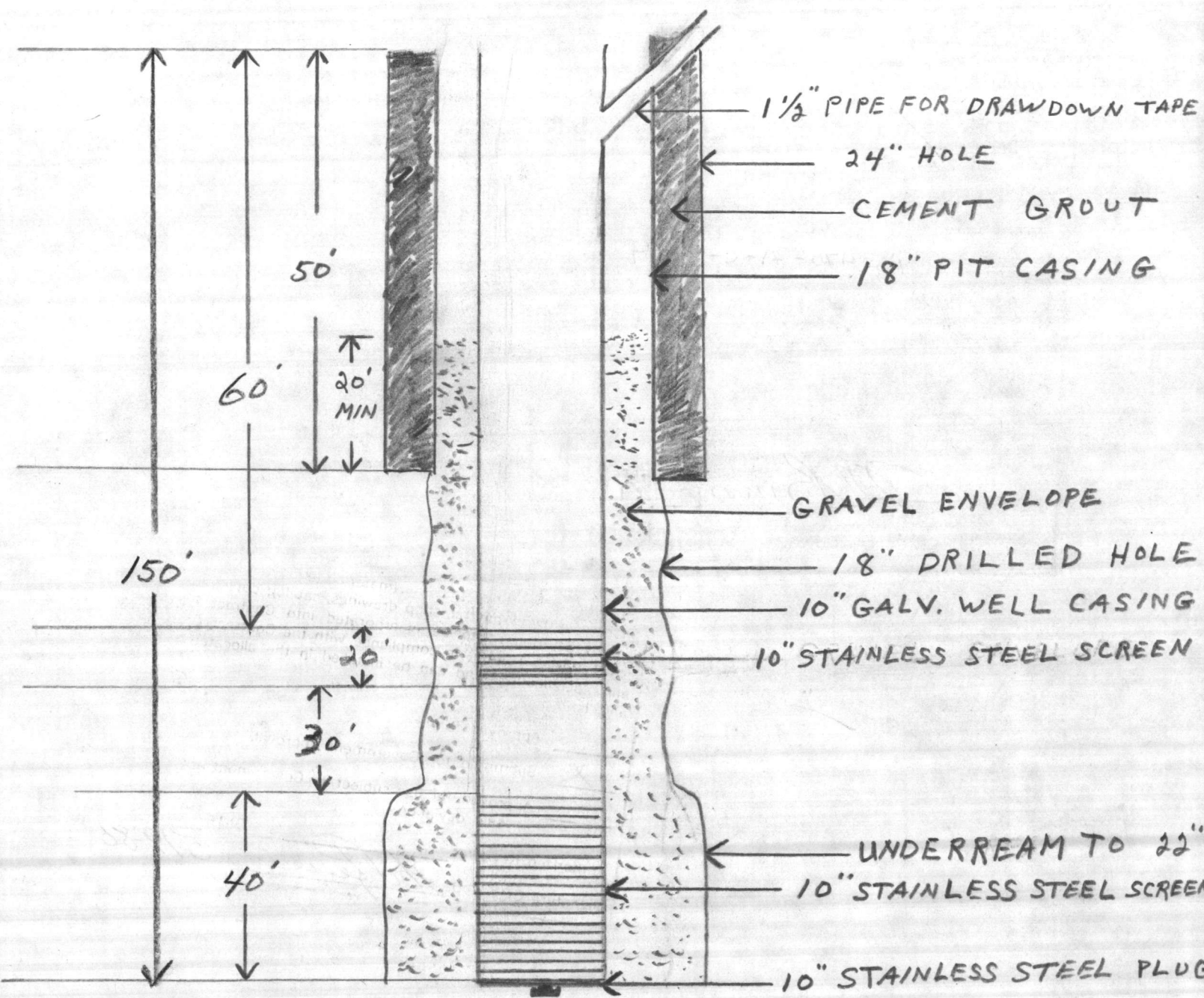


Serving Tidewater Virginia and Eastern North Carolina

P. O. Box 908 Phone - 804 - 357-4105

Smithfield, Virginia 23430

WELL #13



ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511

APPROVED _____
APPROVED AS NOTED _____
DISAPPROVED _____

SUBJECT TO THE REQUIREMENTS OF

CONTRACT NO. N62470-81-C-1644

APPROVAL OF A SUBMITTAL DOES NOT INCLUDE
APPROVAL OF ANY DEVIATION FROM THE CON-
TRACT REQUIREMENTS UNLESS THE CONTRAC-
TOR CALLS ATTENTION TO AND SUPPORTS THE
DEVIATION --- THE CONTRACTOR SHALL BE RES-
PONSIBLE FOR PROVIDING PROPER PHYSICAL
DIMENSIONS & WEIGHTS, COORDINATION OF
TRADES, ETC., AS REQUIRED.

REVIEWER

M. Brown MAY 22 1986

FOR OFFICER IN CHARGE OF CONSTRUCTION

It is hereby certified that the (material) (equipment) shown and
marked in this submittal, shop drawings, catalog cut (s), etc., and
approved/proposed to be incorporated into Contract Number
N62470-81-C-1644 is in compliance with the Contract Drawings
and Specifications and can be installed in the allocated space,
and is:

- Approved for use.
 Submitted for Government approval.
 Approved for use subject to Government approval of
specific deviation.

Authorized Reviewer

Signature CQE Rep. Mike Pease

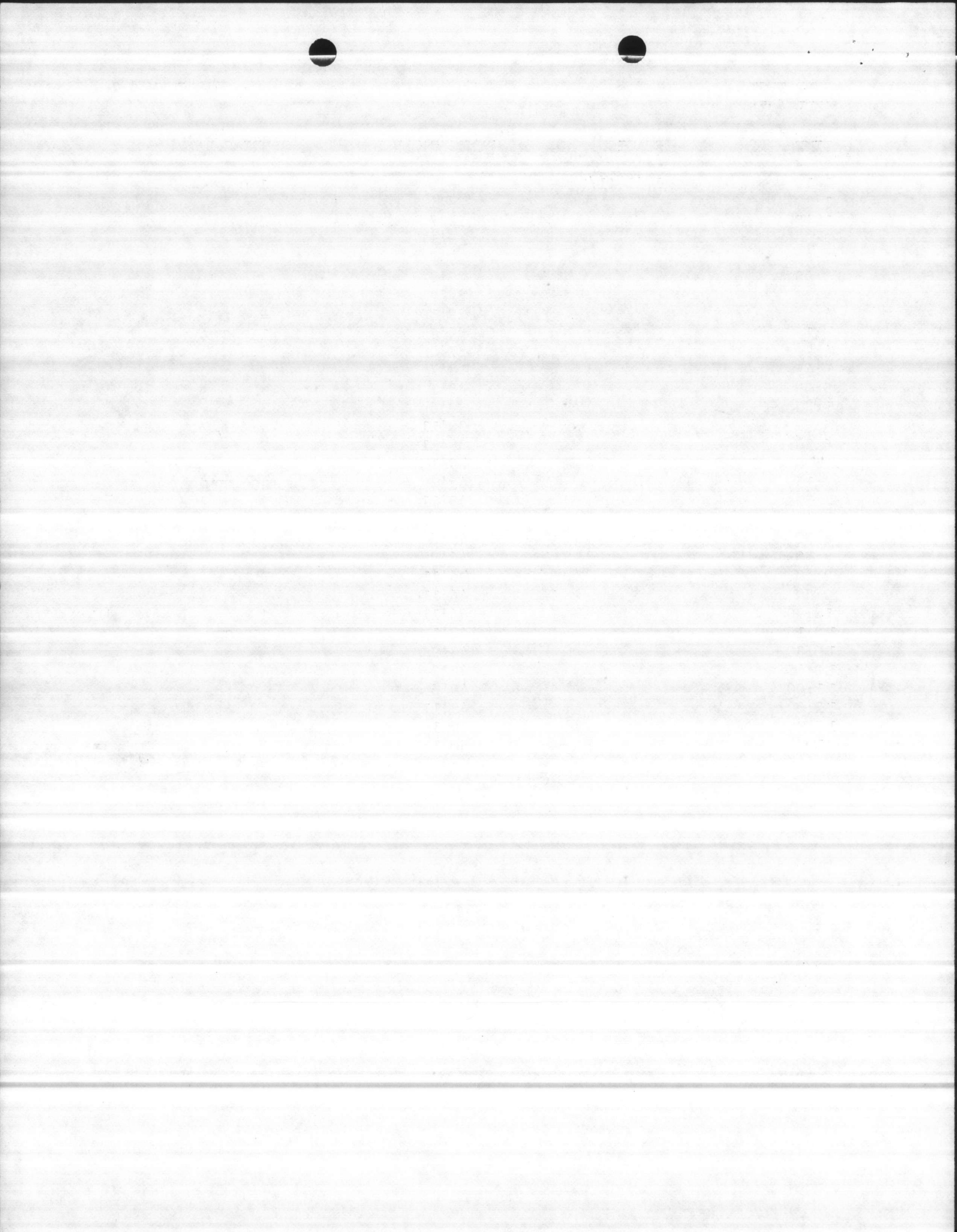
DATE

DATE 5-19-86

STEP TEST
WELL # 13

ITEM # 2

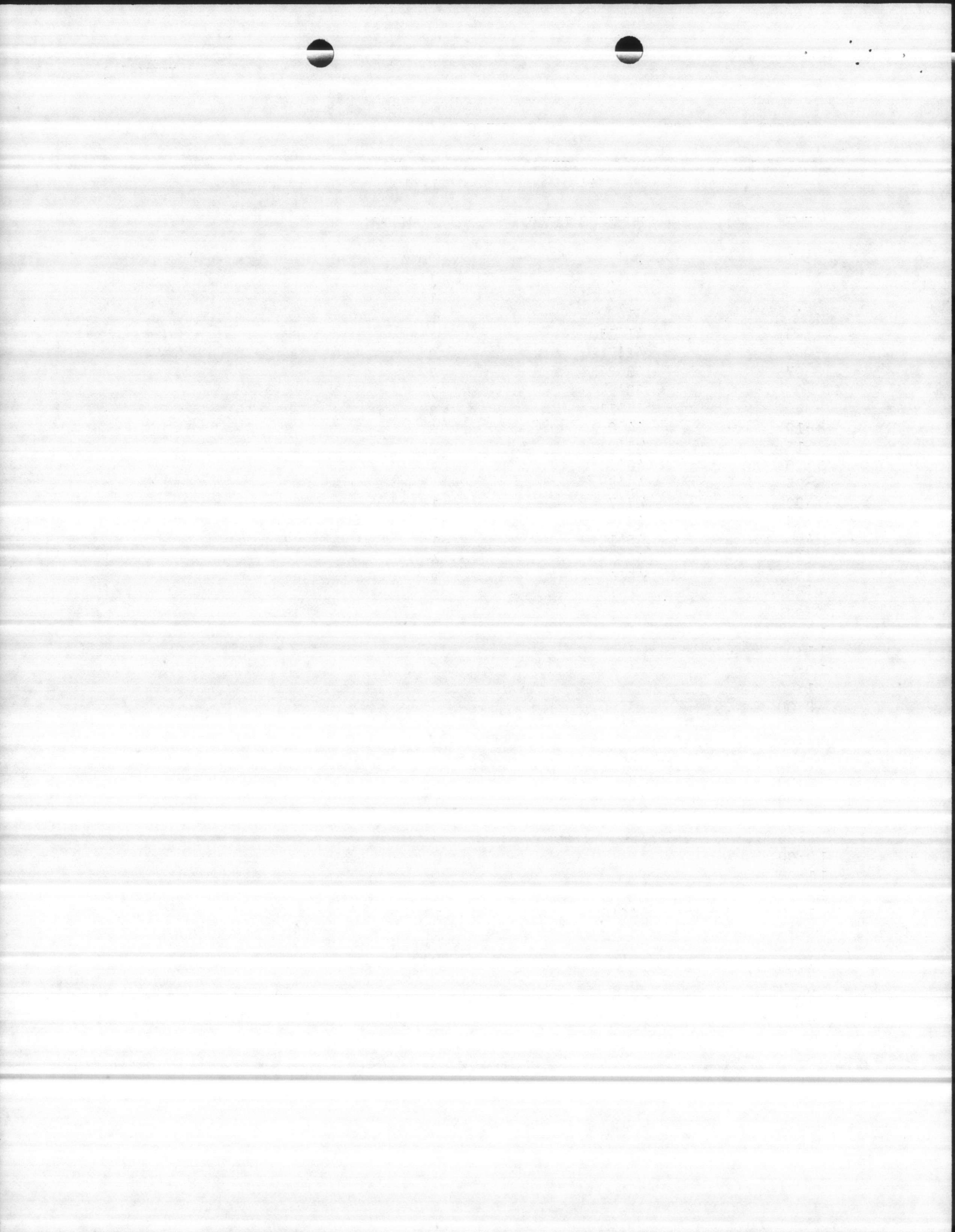
TIME	STATIC	PUMPING LEVEL	PUMPING RATE
1:15	17'10 1/2"	26'9	100 GPM
1:30		28'1	"
1:45		28'7	"
2:00		28'11	"
2:30		29'5	"
3:00		29'7	"
3:30		29'8	"
4:00		29'10	"
4:15		36'8	150 GPM
4:30		37'9	"
4:45		38'7	"
5:00		39'1	"
5:30		39'6	"
6:00		39'11	"
6:30		39'11	"
7:00		40'1	"
7:15		45'2	200 GPM
7:30		45'11	"
7:45		46'3	"
8:00		46'6	"
8:30		46'9	"
9:00		46'11	"
9:30		46'11	"
10:00		46'11	"
10:15		48'1	250 GPM
10:30		48'9	"
10:45		49'2	"
11:00		49'6	"
12:00		49'11	"
12:30		50'1	"
1:00		50'1	"



24 HOUR PUMP TEST

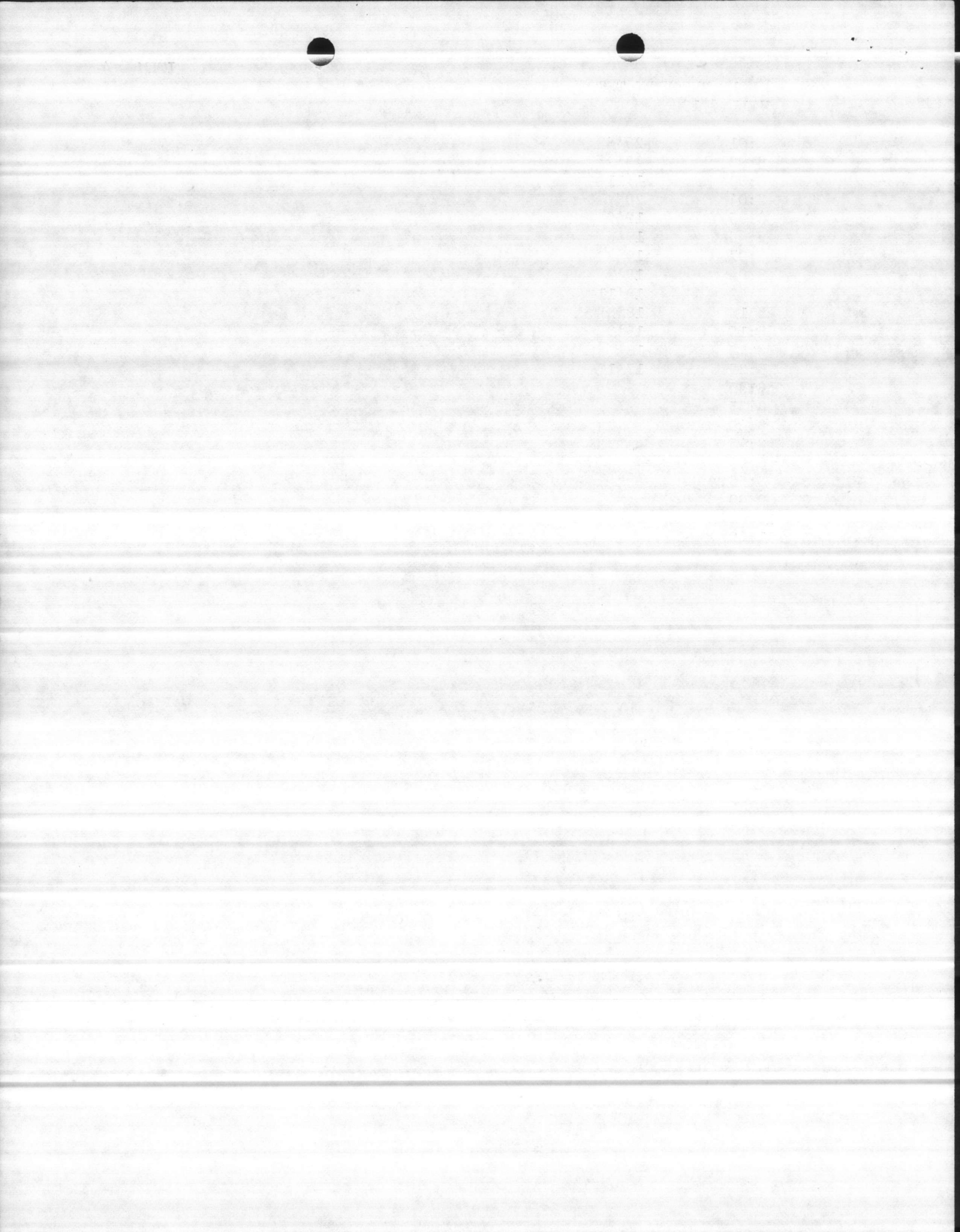
PUMPING RATE 200 GPM

WELL # 13	PUMP SETTING 84'	STATIC 17'10"
TIME	PUMPING LEVEL	DRAWDOWN
8:01	38'2	20'4
8:02	39'7	1'5
8:03	40'7	1'
8:04	41'3	8"
8:05	41'11	8"
8:06	42'7	8"
8:07	43'2	7"
8:08	43'9	7"
8:09	43'11	3"
8:10	44'9	6"
8:15	45'2	2"
8:20	45'4	2"
8:25	45'6	2"
8:30	45'7	1"
8:35	45'9	2"
8:40	45'10	1"
8:45	46'2	4"
8:50	46'4	2"
8:55	"	-
9:00	"	-
10:00	"	-
11:00	"	-
12:00	"	-
1:00	"	-
2:00	"	-
3:00	"	-
4:00	"	-
5:00	"	-
6:00	"	-
7:00	46'5	1"
8:00	"	-
9:00	"	-
10:00	"	-
11:00	"	-
12:00	"	-
1:00	46'6	1"
2:00	"	-
3:00	"	-
4:00	"	-
5:00	"	-
6:00	"	-
7:00	"	-
8:00	"	-



2 HOUR RECOVERY TEST
WELL # 13

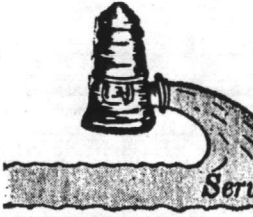
8:01	25'6
8:02	23'2
8:03	21'11
8:04	20"
8:05	19'9
8:06	19'6
8:07	19'3
8:08	19'2
8:09	18'11
8:10	18'8
8:15	18'3
8:20	18'
8:25	17'10
8:30	"
8:35	"
8:40	"
8:45	"
8:50	"
8:55	"
9:00	"
10:00	"
11:00	"



FCR

Item # 5

MAGETTE WELL & PUMP COMPANY



WATER SUPPLY CONTRACTORS
DOMESTIC : INDUSTRIAL : MUNICIPAL
Wells, Pumps and Community Water Systems

Serving Tidewater Virginia and Eastern North Carolina

P. O. Box 908 Phone - 804 - 357-4105

Smithfield, Virginia 23430

May 5, 1986

Lieutenant Kreug
Contracting Office
Camp Lejeune, North Carolina

Re: Well #13

Dear Sir:

The capacity of this well increased while we were performing the pumping test.

This is not uncommon in wells with shallow stratas, as the pressure is low in these stratas and it is sometimes difficult to fully develop the well with air pressure.

We feel that the test pumping is actually a part of developing the well, because sometimes this process will break loose particles of sand and clay that did not come out while developing with air, which was true in this case.

If we can be of further assistance please do not hesitate to contact us.

Sincerely,

FCR Magette Well & Pump Company

A handwritten signature in cursive script that reads "Boyd O. Kellogg".

Boyd O. Kellogg

BOK:br

Handwritten text at the top left of the page, possibly a date or page number.

CONTRACTOR'S SUBMITTAL TRANSMITTAL
 LANTDIV NORFOLK 4-4355/3 (Rev. 11-80)

X/RF
102

Hunt

CONTRACT NO SI-C-1644		TRANSMITTAL NO 154-A	DATE 3-14-86
FROM CONTRACTOR Harry Pepper & Associates, Inc.		PROJECT TITLE AND LOCATION Holcomb Blvd Water Treatment Plant	
TO Henry Von Oesen & Associates, Inc.		MCB, Cp Lejeune, North Carolina	

<p align="center">CONTRACTOR USE ONLY</p> <p align="center">*List only one specification division per form.</p> <p align="center">List only one of the following categories on each transmittal form, and indicate which is being submitted</p> <p><input type="checkbox"/> Contractor Approved <input checked="" type="checkbox"/> OICC Approval <input type="checkbox"/> Deviation/Substitution For OICC Approval</p>	<p align="center">REVIEWER USE ONLY</p> <p align="center">**ACTION CODES</p> <p>A-Approved D-Disapproved AN-Approved as noted RA-Receipt acknowledged. C-Comments R-Resubmit</p>
--	---

ITEM NO	PROJ. SPEC. SECT. & PARA. and/or PROJ. DWG. NO.	ITEM IDENTIFICATION (Type, size, model no., Mfg. name, dwg. or brochure number)	NO. OF COPIES	ACTION CODES	REVIEWER'S INITIALS CODE AND DATE
	02734	ROTARY DRILLED WATER WELLS ----- Wall # 13			
1	2.2.4	Recommendation and Data Submittal	7	A	MPB
2	2.2	Driller's Log	7	A	MPB
3	2.2.3	Electric Log and Gamma Log	7	A	MPB
4	2.2.2	Water Analysis	7	A	MPB
5	2.2.2	Sieve Analysis	7	A	MPB
6	1.2.1	Shop Drawings	7	A	MPB

CONTRACTOR'S COMMENTS

Water Sample for 135' is included.

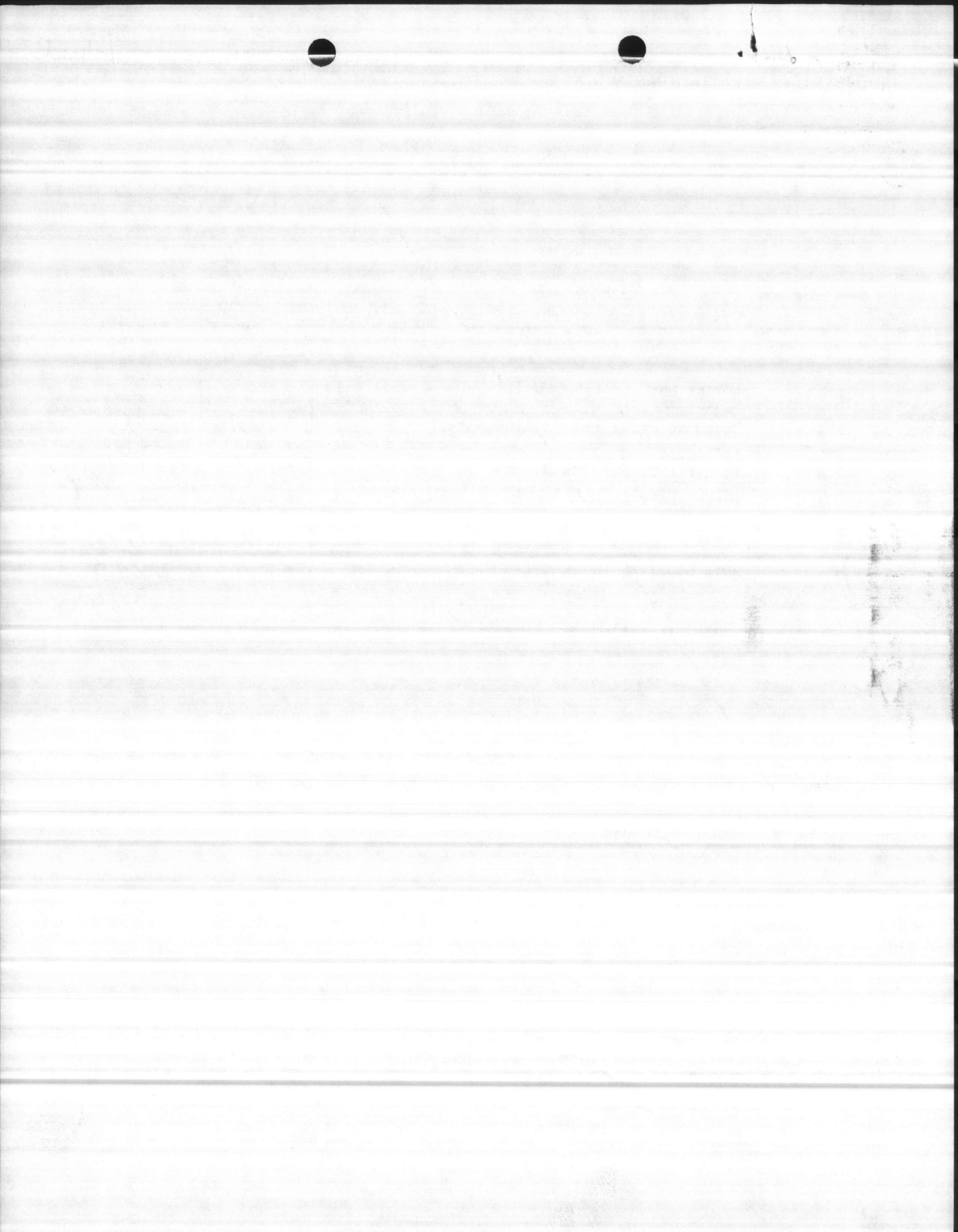
COPY OF TRANSMITTAL AND SUBMITTALS TO ROICC ONE COPY TO ROICC	CONTRACTOR REPRESENTATIVE (Signature) Phil Reesa <i>Phil Reesa</i>
---	--

DATE RECEIVED BY REVIEWER 3/17/86	FROM (Reviewer) Henry von Oesen & Assoc., Inc.	TO
---	--	----

- Submittals are returned with action indicated. Approval of an item does not include approval of any deviation from the contract requirements unless the contractor calls attention to and supports the deviation.
- Submittals are forwarded to LANTDIV with A-E recommendations indicated in REVIEWER USE ONLY Section and in comments below on ONE COPY of the transmittal form.

REVIEWER'S COMMENTS

COPIES TO ROICC (2) LANTDIV (1) A-E (1)	DATE 3/26/86	SIGNATURE <i>[Signature]</i>
--	------------------------	---------------------------------



CONTRACTOR'S SUBMITTAL TRANSMITTAL

LANTDIV NORFOLK 4-4355/3 (Rev. 11-80)

FROM CONTRACTOR Henry Von Oesen & Associates, Inc.

TO Henry Von Oesen & Associates, Inc.

CONTRACT NO. 81 C 1644 TRANSMITTAL NO. 754 DATE 1 28 86

PROJECT TITLE AND LOCATION Holcomb Blvd Water Treatment Plant

MCB, Cp Lejeune, North Carolina

CONTRACTOR USE ONLY

REVIEWER USE ONLY

*List only one specification division per form.

**ACTION CODES

List only one of the following categories on each transmittal form, and indicate which is being submitted.

- A-Approved
- D-Disapproved
- AN-Approved as noted
- RA-Receipt acknowledged
- C-Comments
- R-Resubmit

- Contractor Approved OICC Approval Deviation/Substitution For OICC Approval

ITEM NO	PROJ. SPEC. SECT. & PARA. and/or PROJ. DWG. NO.	ITEM IDENTIFICATION (Type, size, model no., Mfg. name, dwg. or brochure number)	NO. OF COPIES	ACTION CODES	REVIEWER'S INITIALS CODE AND DATE
1	2.2.4	Recommendation and Data Submittal	7	D	<i>[Signature]</i> 1/28/86
2	2.2	Driller's Log	7		
3	2.2.3	Electric Log and Gamma Log	7		
4	2.2.2	Water Analysis	7		
5	2.2.2	Sieve Analysis	7		
6	1.2.1	Shop Drawings	7		

CONTRACTOR'S COMMENTS

ONE COPY TO ROICC
COPY OF TRANSMITTAL AND SUBMITTALS TO ROICC

CONTRACTOR REPRESENTATIVE (Signature) *[Signature]*

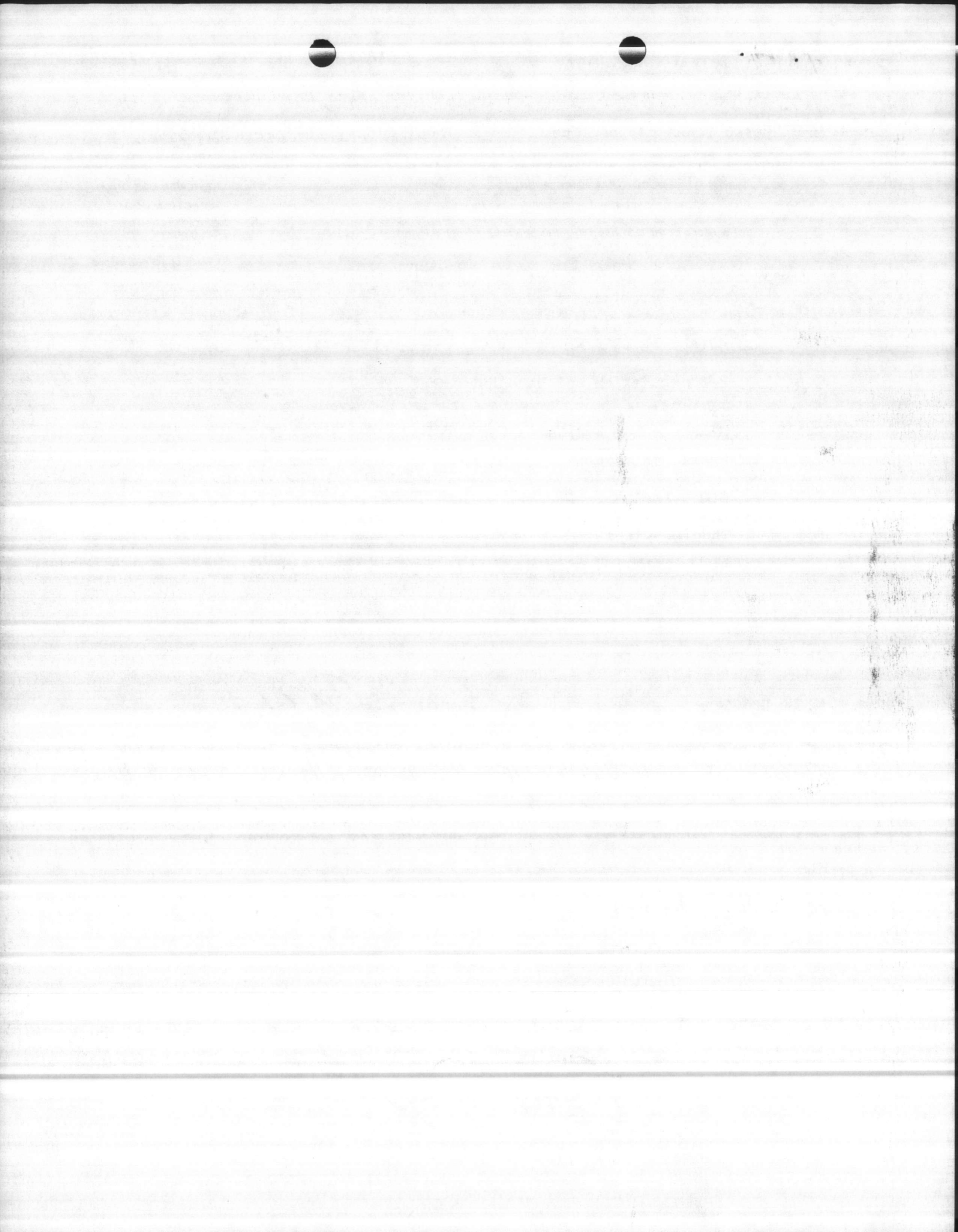
DATE RECEIVED BY REVIEWER 1/27/86 FROM (Reviewer) HENRY VON OESSEN & ASSOC TO HENRY VON OESSEN & ASSOC

- Submittals are returned with action indicated. Approval of an item does not include approval of any deviation from the contract requirements unless the contractor calls attention to and supports the deviation.
- Submittals are forwarded to LANTDIV with A-E recommendations indicated in REVIEWER USE ONLY Section and in comments below on ONE COPY of the transmittal form.

REVIEWER'S COMMENTS

NEED SAMPLE AT 135±

COPIES TO ROICC (2) LANTDIV (1) A-E (1) DATE 1/28/86 SIGNATURE *[Signature]*





HARRY PEPPER & ASSOCIATES, INC.

Item # 1

ENGINEERING CONTRACTORS

January 23, 1986

Henry Von Oesen
611 Princess Street
Wilmington, NC 28402

RE: N62470-81-C-1644
Expansion of Holcomb Blvd
Water Treatment Plant
Camp Lejeune, NC 28542
Well # 13

Gentlemen:

We are enclosing seven (7) copies of the Driller's Log, Electric Log, Gamma Log, Water Analysis and Sieve Analysis for your review. The Test Well was drilled at 250 ft. Water samples were taken at 90 Ft.

We recommend a .030 slot stainless steel screen set at 84' - 104' and at 125' - 145' depth for a total of 40 VF of screen. The gravel pack recommended is 8-12. It is our best estimate that this well may yield 260 GPM.

Please review the data and advise if we are to proceed with developing a permanent well at this site.

Very truly yours,
HARRY PEPPER & ASSOCIATES, INC.

Phil Keese
CQC Officer

Enclosures

I am hereby certified that the (material) (equipment) shown and marked in this submittal, shop drawings, catalog cut(s), etc., and approved/proposed to be incorporated into Contract Number N62470-81-C-1644 is in compliance with the Contract Drawings and Specifications and can be installed in the allocated space, and is:

- Approved for use.
- Submitted for Government approval.
- Approved for use subject to Government approval of specific deviation.

Authorized Reviewer _____ DATE _____
Signature CQC Rep. DATE 1-23-86

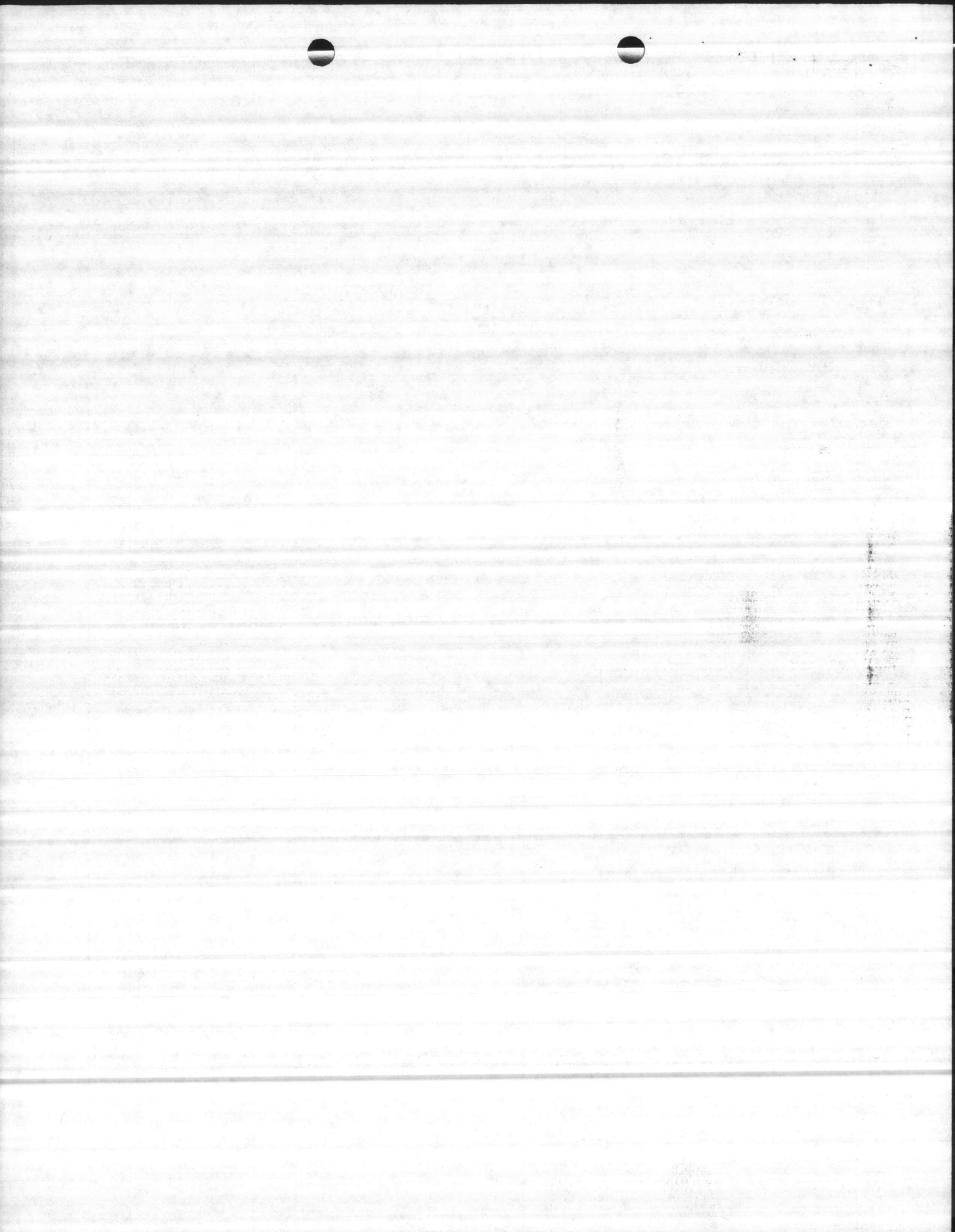


Item #2

DRILLERS LOG CAMP LEJEUNE WELL #13

DEPTH OF SAMPLE

0	-	10 FT.	TOPSOIL, WHITE SAND AND WHITE CLAY
10	-	50 FT.	GRAY CLAY
50	-	65 FT.	GRAY CLAY AND FINE SAND
65	-	80 FT.	GRAY CLAY AND LIMESTONE
80	-	105 FT.	LIMESTONE
105	-	170 FT.	LIMESTONE AND WHITE CLAY
170	-	205 FT.	LIMESTONE AND GREEN CLAY
205	-	250 FT.	GREEN CLAY AND FINE SAND



well

Item #3

10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
210
220
230
240
250

|||||

screen

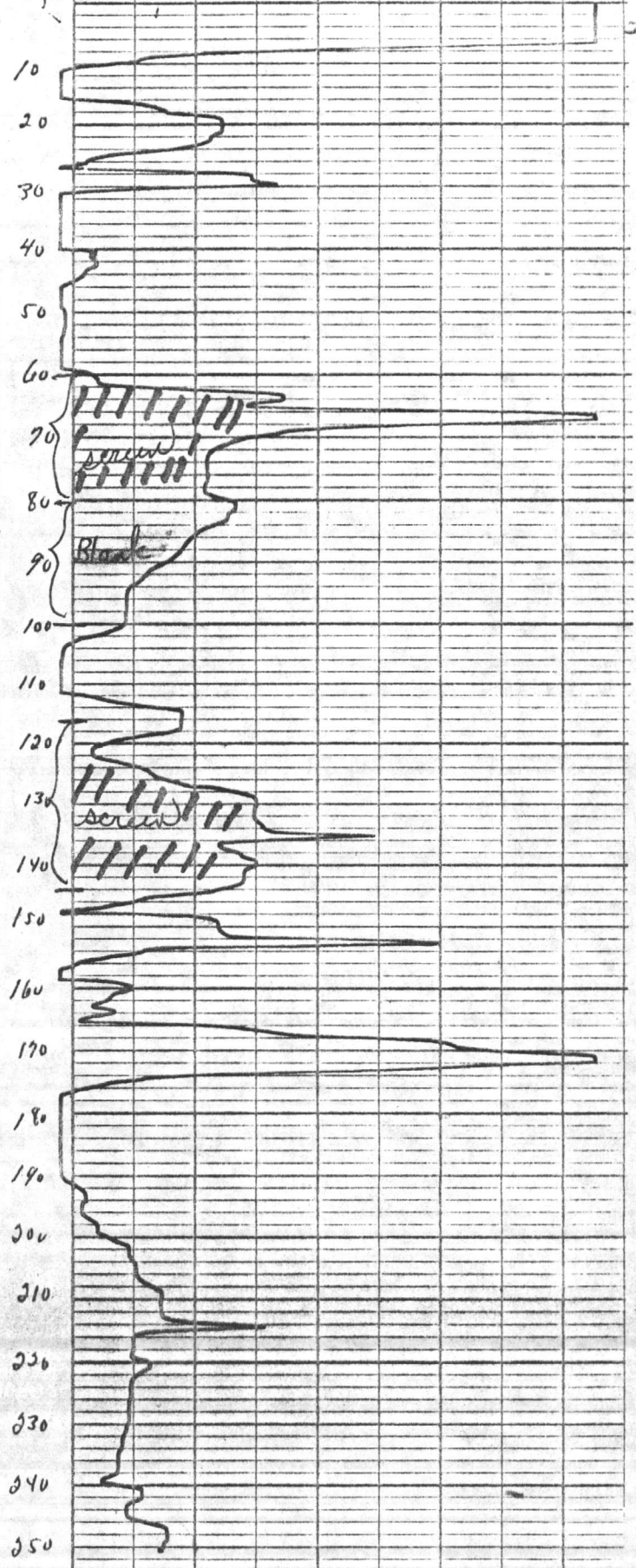
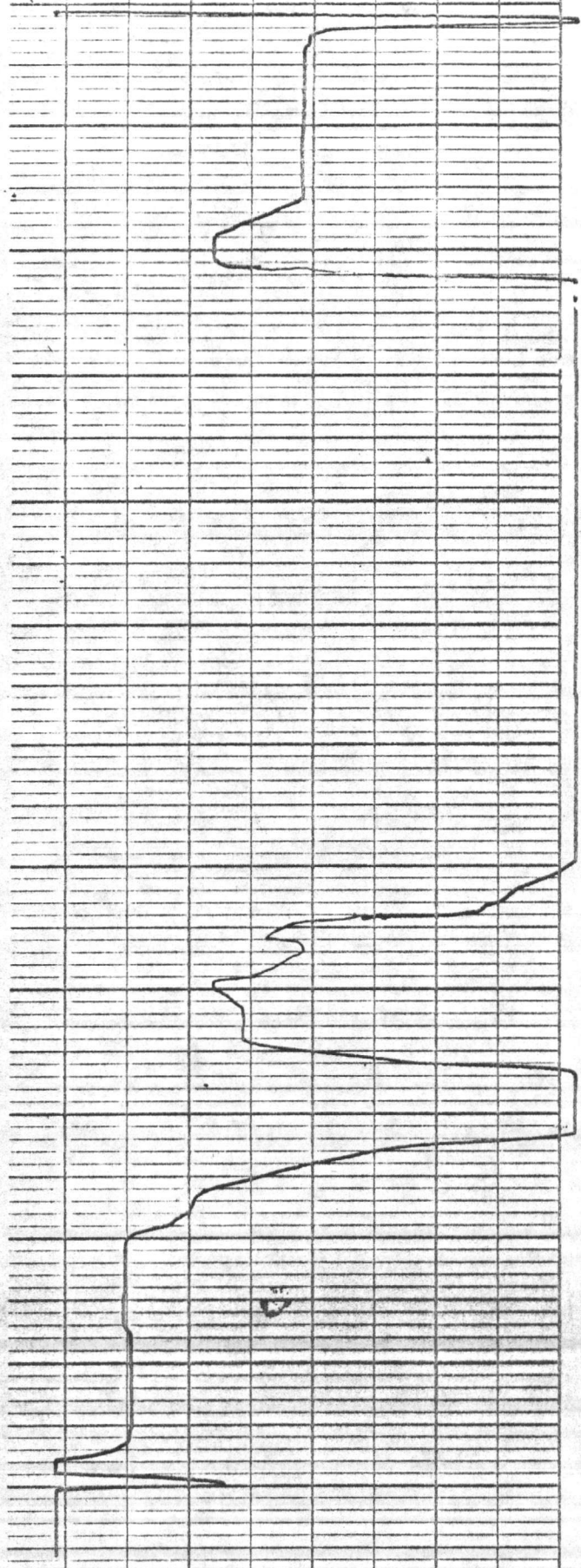
|||||

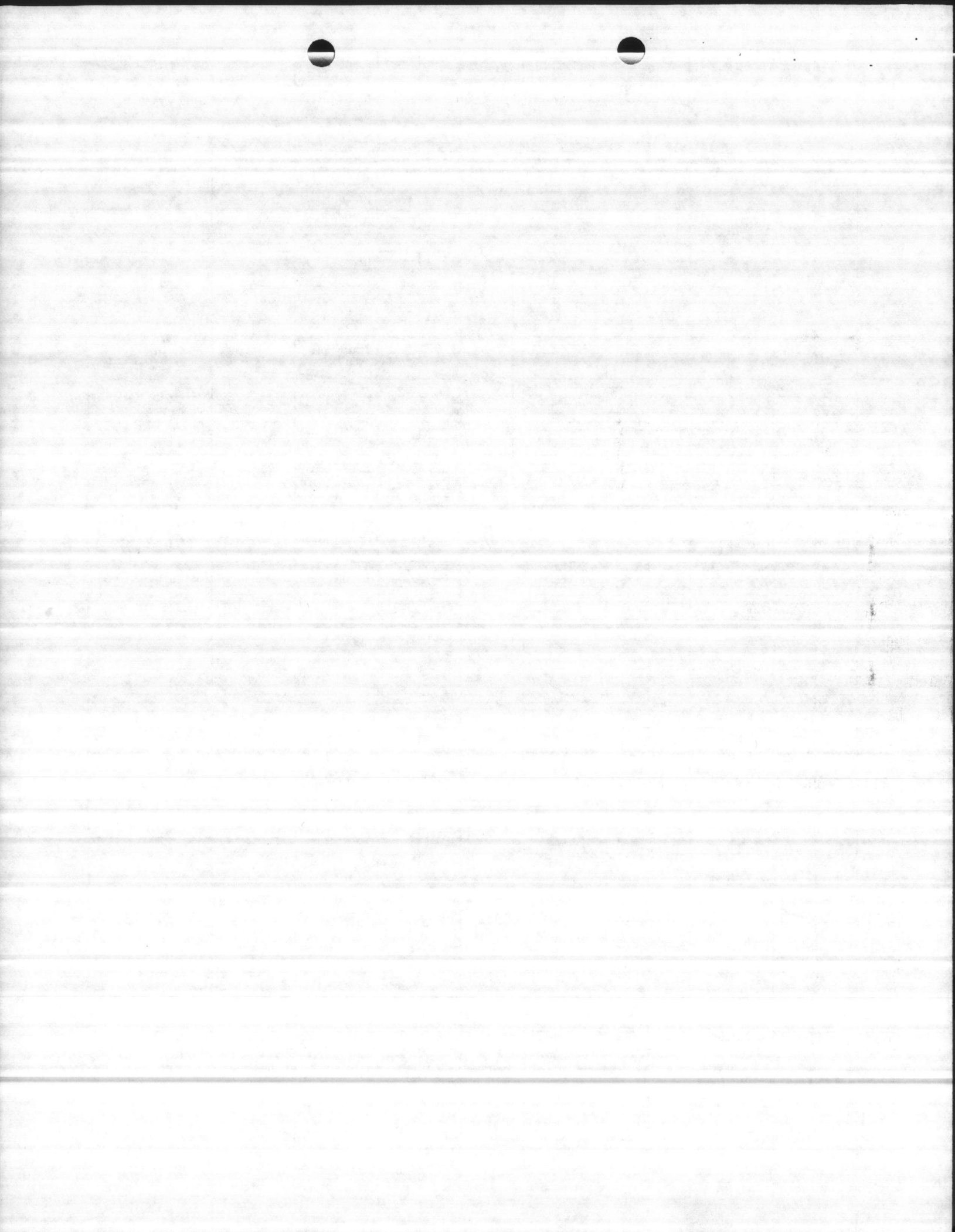
Blade

|||||

screen

|||||





DEAN & COMPANY
Consulting and Analytical Chemists
 ESTABLISHED 1903

Item # 4

Main Office
 1711 Castle Street
 P.O. Box 629
 Wilmington, N.C. 28402

RICHARD SPIVEY, President
 919 762 7082 919 762 8956
 TWX 510-937 0280

REPORT DATE: 11-12-85

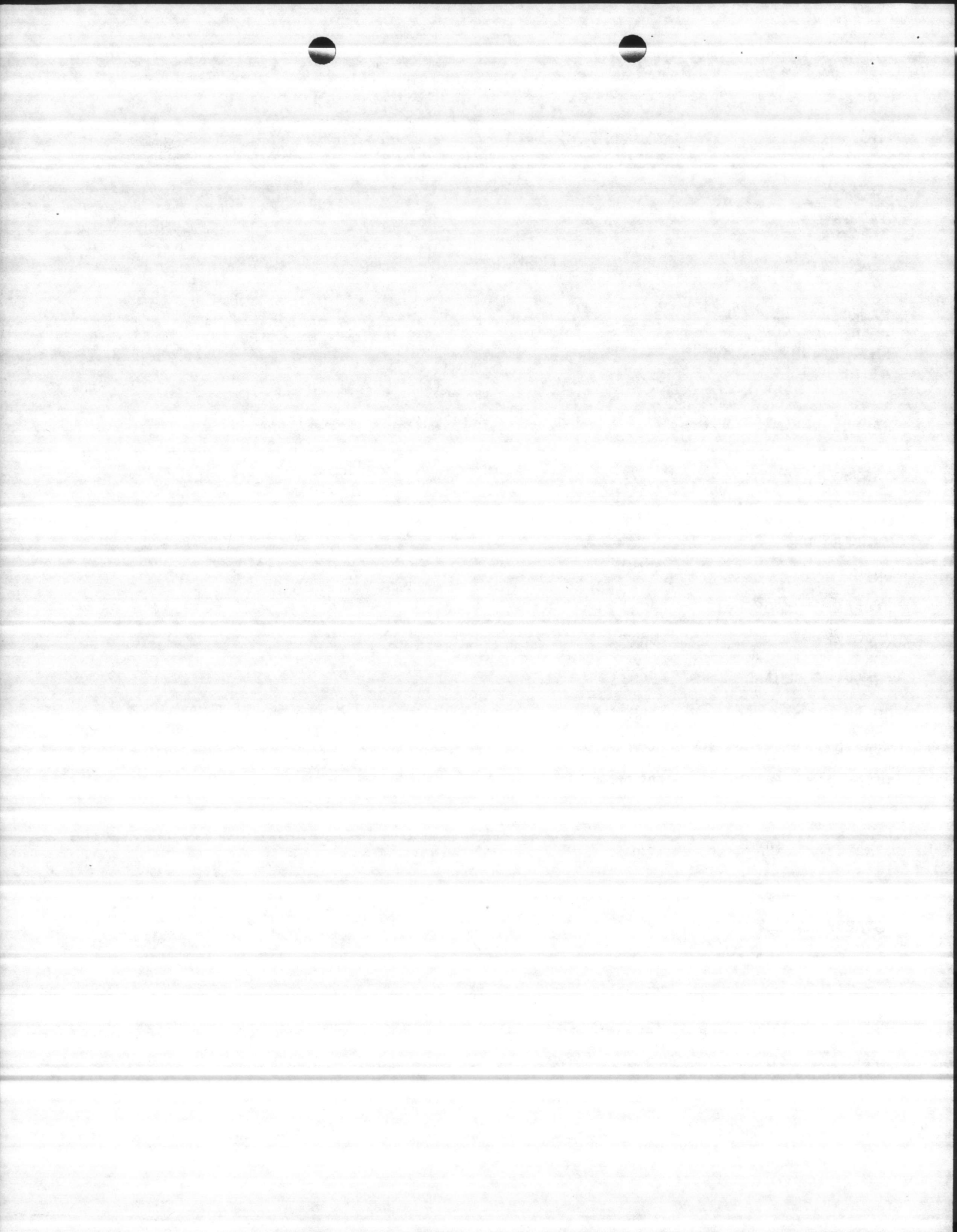
MAJETTE WELL & PUMP CO
 P. O. BOX 908
 SMITHFIELD, VA 23430
 ATTN: BUD KELLOG

DATE COLLECTED: 10-02-85
 DATE RECEIVED: 10-03-85
 COLLECTED BY: CUSTOMER
 LAB ID# EW 9688

SAMPLE DESCRIPTION: WELL #13 80'-90'

<u>TESTS/UNITS</u>	<u>RESULTS</u>
DISSOLVED OXYGEN (MG/L)	6
TEMPERATURE	19.5°C
pH	8.0
CARBON DIOXIDE (PPM)	0
SULFIDES (PPM)	0
CHLORINE DEMAND (PPM)	.8
COLOR (APHA)	85
TURBIDITY (NTU)	.75
TOTAL ALKALINITY (PPM)	190
HYDROXIDE (PPM)	0
BICARBONATE (PPM)	168
CARBONATE (PPM)	22
TOTAL HARDNESS (PPM)	135
NON-CARBONATE (PPM)	0
CARBONATE (PPM)	135
TOTAL DISSOLVED SOLIDS (PPM)	190

CONTINUED.....



LAW & COMPANY
Consulting and Analytical Chemists

ESTABLISHED 1901

Main Office
111 Castle Street
P.O. Box 629
Wilmington, N.C. 28402

RICHARD SPIVEY President
919 762 7062 919 762 5950
TWA 910 937 0250

<u>TESTS/UNITS</u>		<u>RESULTS</u>
SPECIFIC CONDUCTANCE	(UMHOS)	420
SULFATES	(PPM)	.16
CALCIUM	(PPM)	43
MAGNESIUM	(PPM)	1.8
SODIUM	(PPM)	14.0
POTASSIUM	(PPM)	.8
CHLORIDE	(PPM)	96
NITRATE NITROGEN	(PPM)	<.2
IRON	(PPM)	.18
MANGANESE	(PPM)	<.015
SILICON	(PPM)	5.9
FLOURIDE	(PPM)	<.2

CHEMIST

Dolly Bidman

TOTAL CHARGES: \$180.00



100-100000

100-100000

HSSC

HOWARD SMITH
SCREEN COMPANY

A Halliburton Company
P.O. Box 666 • Houston, Texas 77001
713-869-5771 • Telex: 77-4667

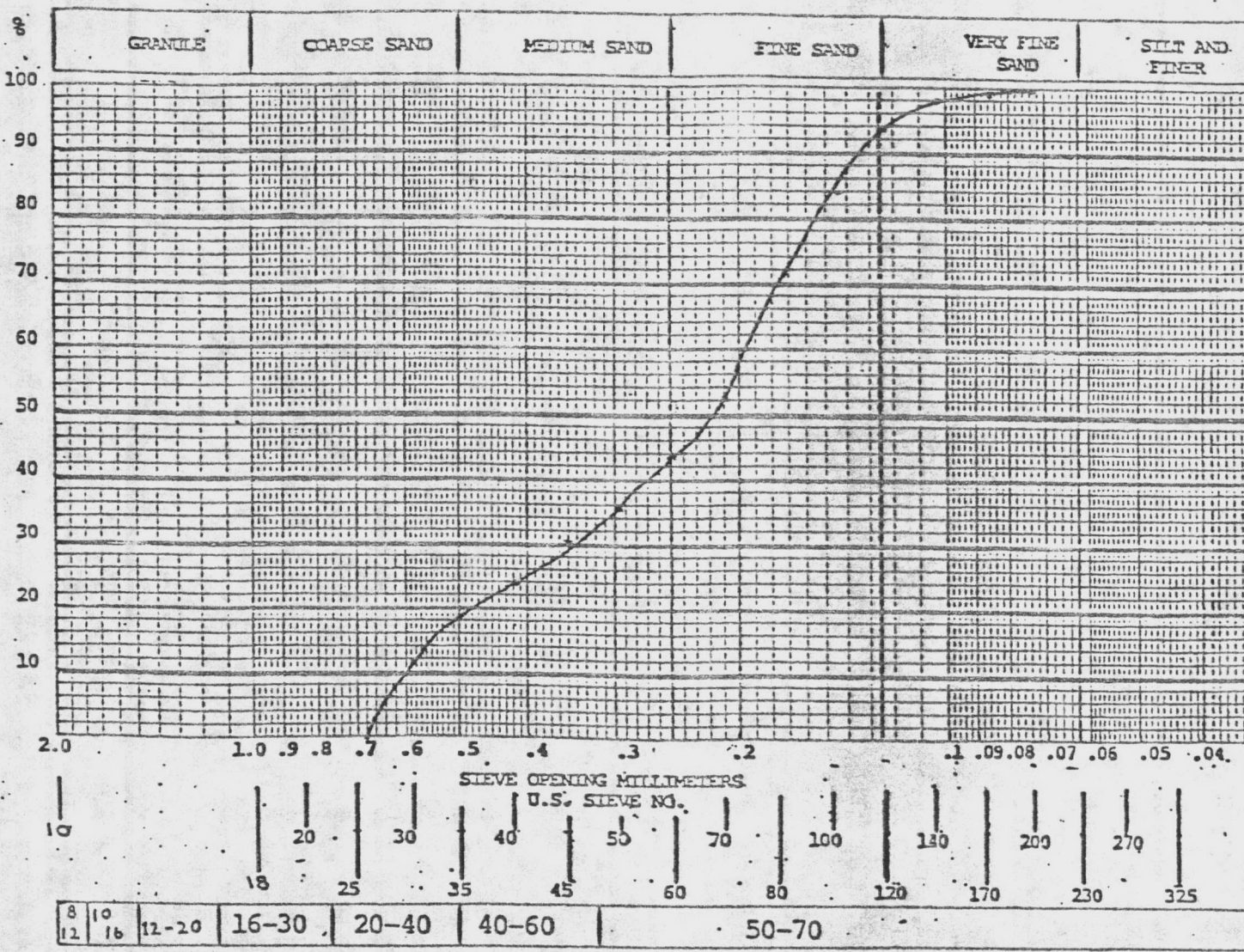
Item # 5

ACT...-
PHONE...-
RKS...-
RECOMMENDATIONS:
SIEVE SIZE...-
SCREEN SIZE...-

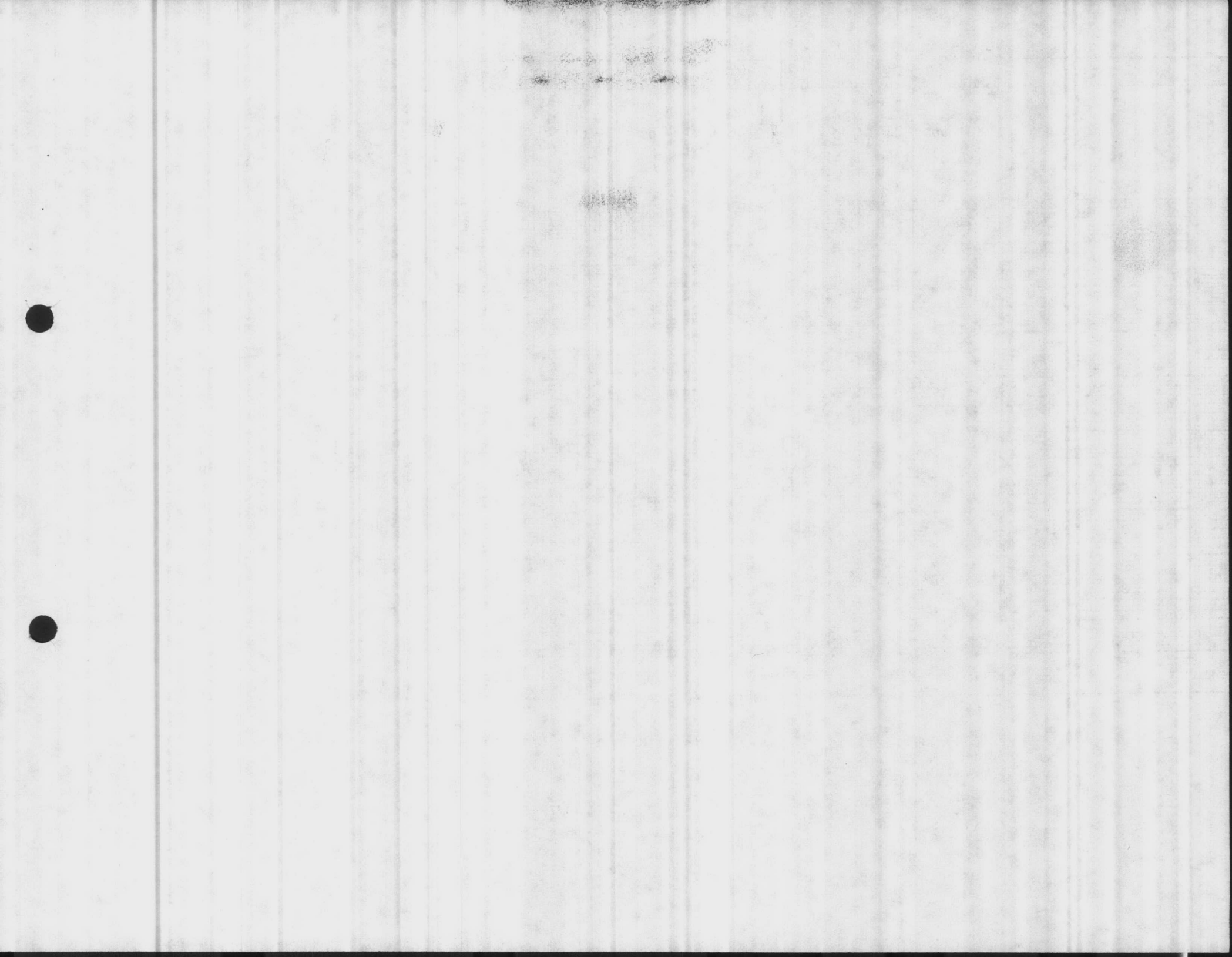
COMPANY...R.L.MAGETTE COMPANY
WELL.....13
DEPTH.....65-85
FIELD.....-
COUNTY.....-
STATE.....VA

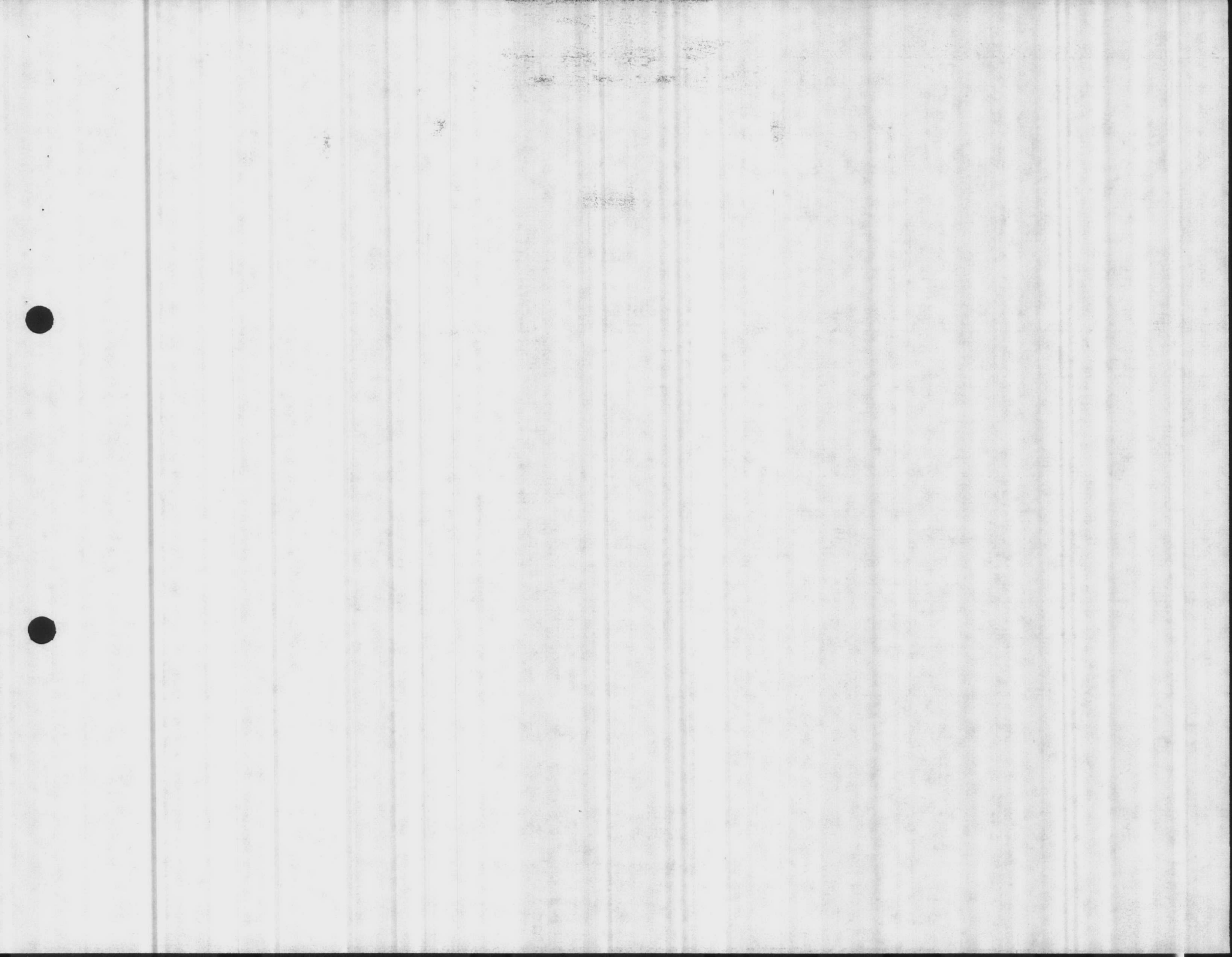
SIEVE ANALYSIS REPORT

SIEVE	IN	MM	WT RET	CUM WT	CUM %
20	.0787	2.000	--	--	--
30	.0394	1.000	--	--	--
40	.0331	0.840	--	--	--
50	.0280	0.710	--	--	--
60	.0234	0.589	1.3	1.3	12.6
70	.0197	0.500	0.6	1.9	18.4
80	.0165	0.420	0.6	2.5	24.3
90	.0139	0.351	0.6	3.1	30.1
100	.0117	0.297	0.6	3.7	35.9
110	.0098	0.250	0.8	4.5	43.7
120	.0083	0.210	0.9	5.4	52.4
130	.0070	0.177	2.0	7.4	71.8
140	.0059	0.149	1.3	8.7	84.5
150	.0049	0.124	1.0	9.7	94.2
160	.0041	0.104	0.4	10.1	98.1
180	.0035	0.088	0.1	10.2	99.0
200	.0029	0.074	0.1	10.3	100.0
250	.0024	0.062	--	--	--
300	.0021	0.053	--	--	--
350	.0017	0.044	--	--	--
400			--	--	--



E JACKSON
-85





FCR

R. L. MAGETTE COMPANY

WATER SUPPLY CONTRACTORS

DOMESTIC : INDUSTRIAL : MUNICIPAL

Wells, Pumps and Community Water Systems

Item # 6

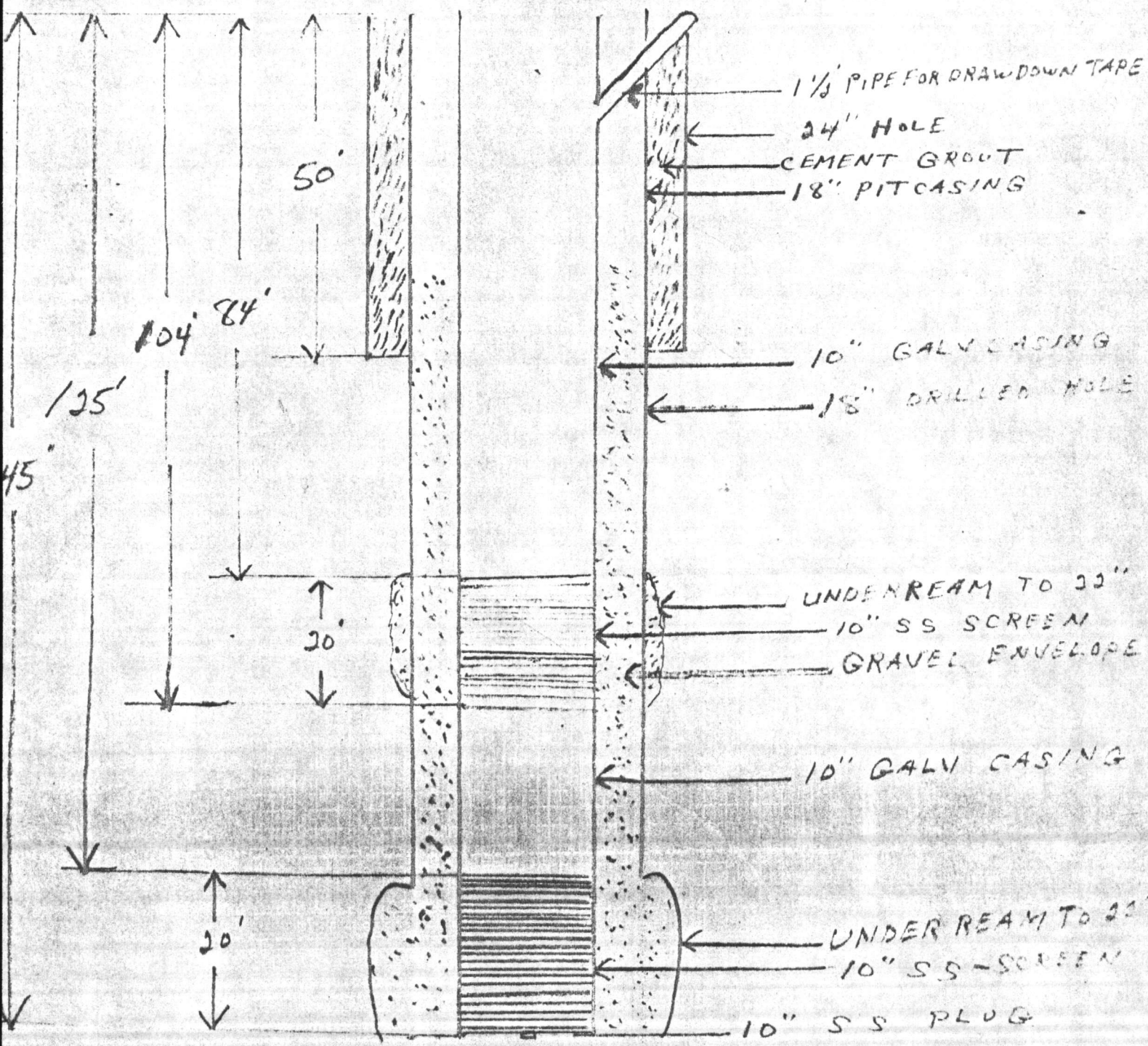


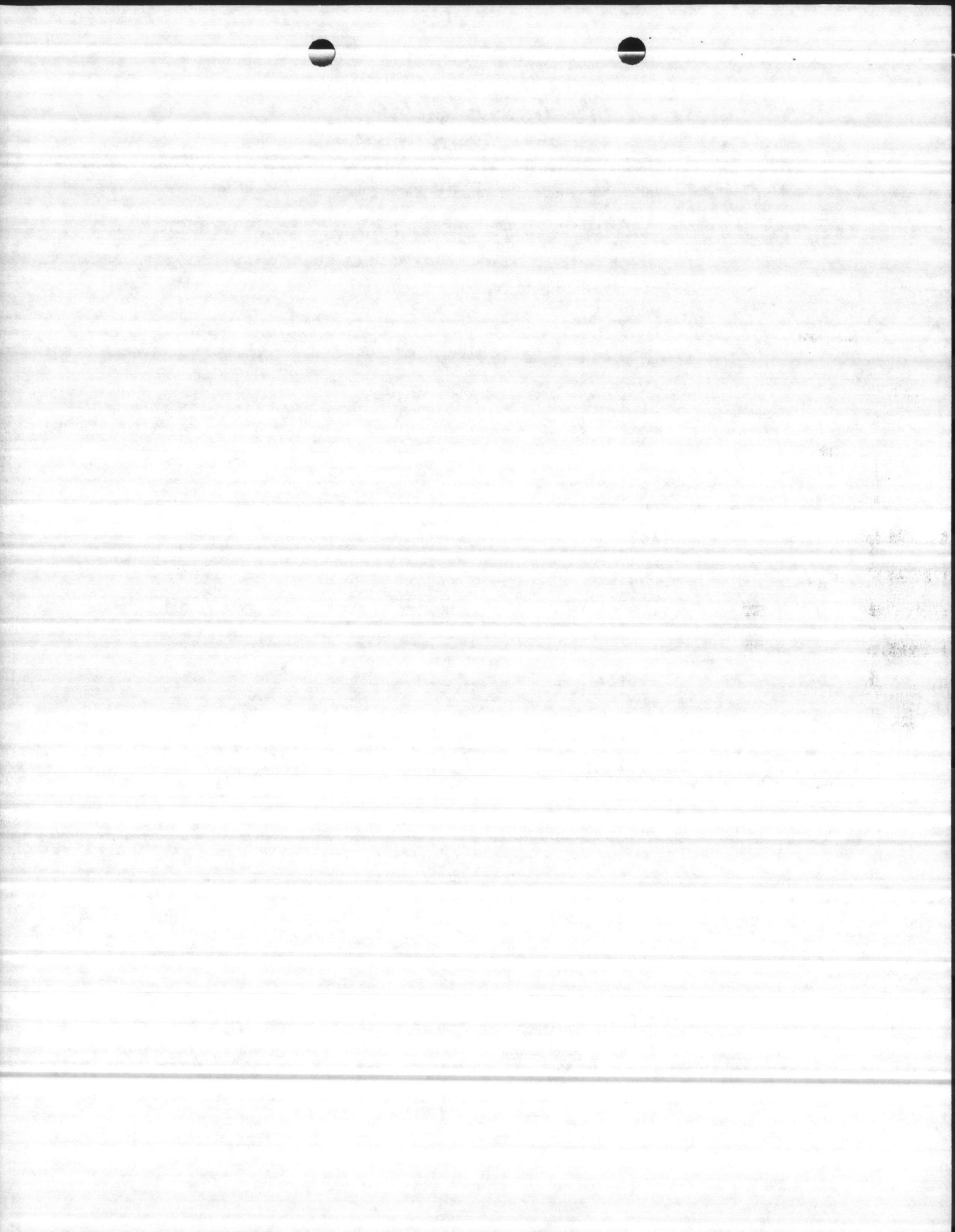
Serving Tidewater, Virginia and Eastern North Carolina

P. O. Box 908 Phone - 804 - 357-4105

Smithfield, Virginia 23430

WELL #13





Consulting and Analytical Chemists

ESTABLISHED 1903

Main Office
1711 Castle Street
P.O. Box 629
Wilmington, N.C. 28402

REPORT DATE: 3-11-86

RICHARD SPIVEY, President
919-762-7082 919-762-8956
TWX 510-937-0280

MAJETTE WELL & PUMP COMPANY
POST OFFICE BOX 908
SMITHFIELD, VA. 23430
ATTN: BUD KELLOG

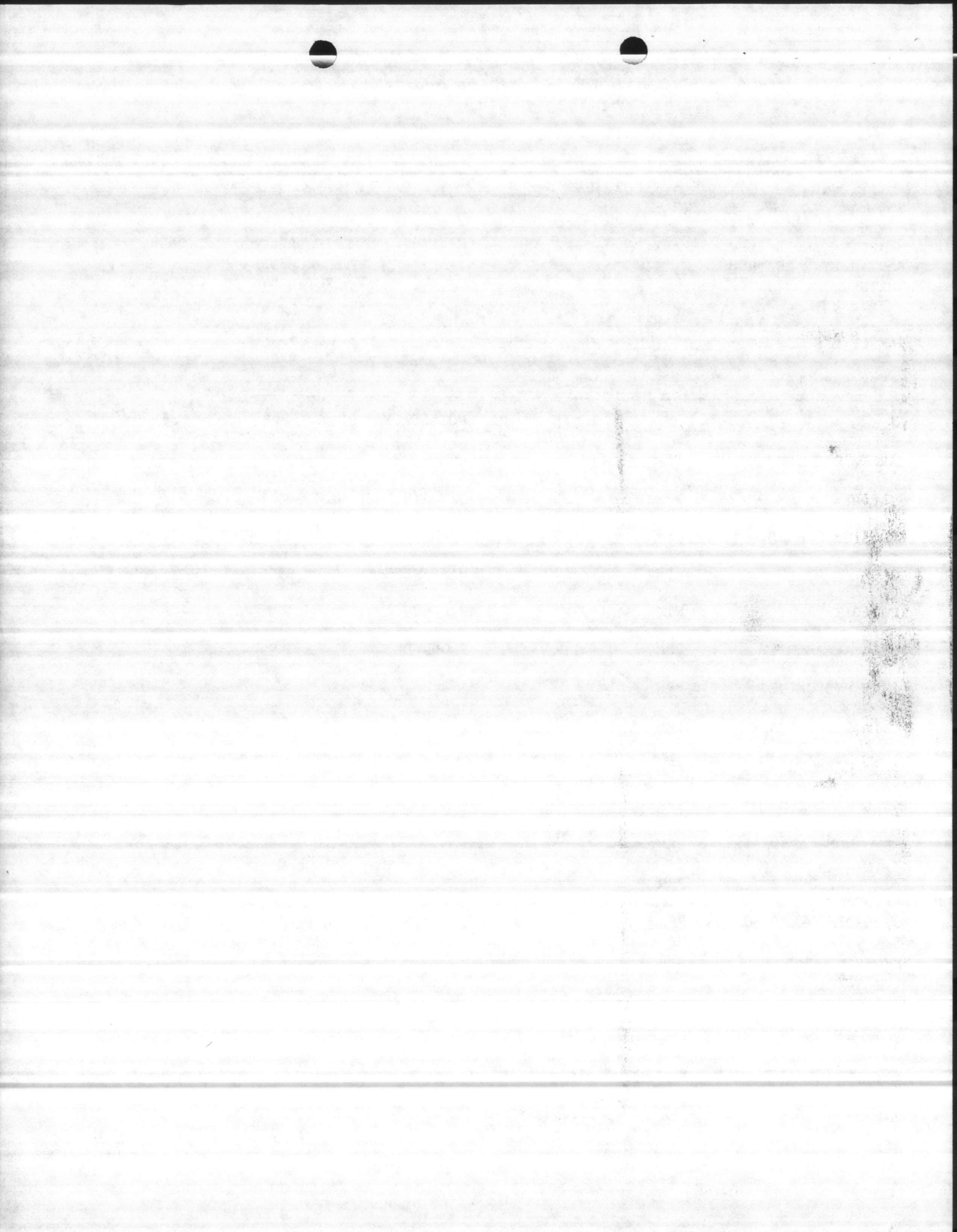
DATE COLLECTED: 2-26-86
DATE RECEIVED: 2-26-86
COLLECTED BY: CUSTOMER
LAB I.D.# EW 3507

SAMPLE DESCRIPTION: WELL# 13 @ 135feet

TESTS/SAMPLES	RESULTS	RESULTS
pH	7.8	POTASSIUM PPM 1.6
CARBON DIOXIDE PPM	0	CHLORIDE PPM 34
SULFIDES PPM	10	NITRATE NITROGEN PPM <.2
CHLORINE DEMAND PPM	1.8	IRON PPM <.00025
COLOR APHA	10	MANGANESE PPM 0.03
TURBIDITY NTU	5.7	SILICON PPM 2.1
TOTAL ALKALINITY PPM	144	FLOURIDE PPM <.2
HYDROXIDE PPM	0	
BICARBONATE PPM	130	
CARBONATE PPM	14	
TOTAL HARDNESS PPM	88	
NON-CARBONATE PPM	0	
CARBONATE PPM	88	
TOTAL DISSOLVED SOLIDS PPM	207	
SPECIFIC CONDUCTANCE UMHOS	255	
SULFATES PPM	4	
CALCIUM PPM	41	
MAGNESIUM PPM	1.5	
SODIUM PPM	7.2	

CHEMIST: John Bidwan

TOTAL CHARGES: 180.00



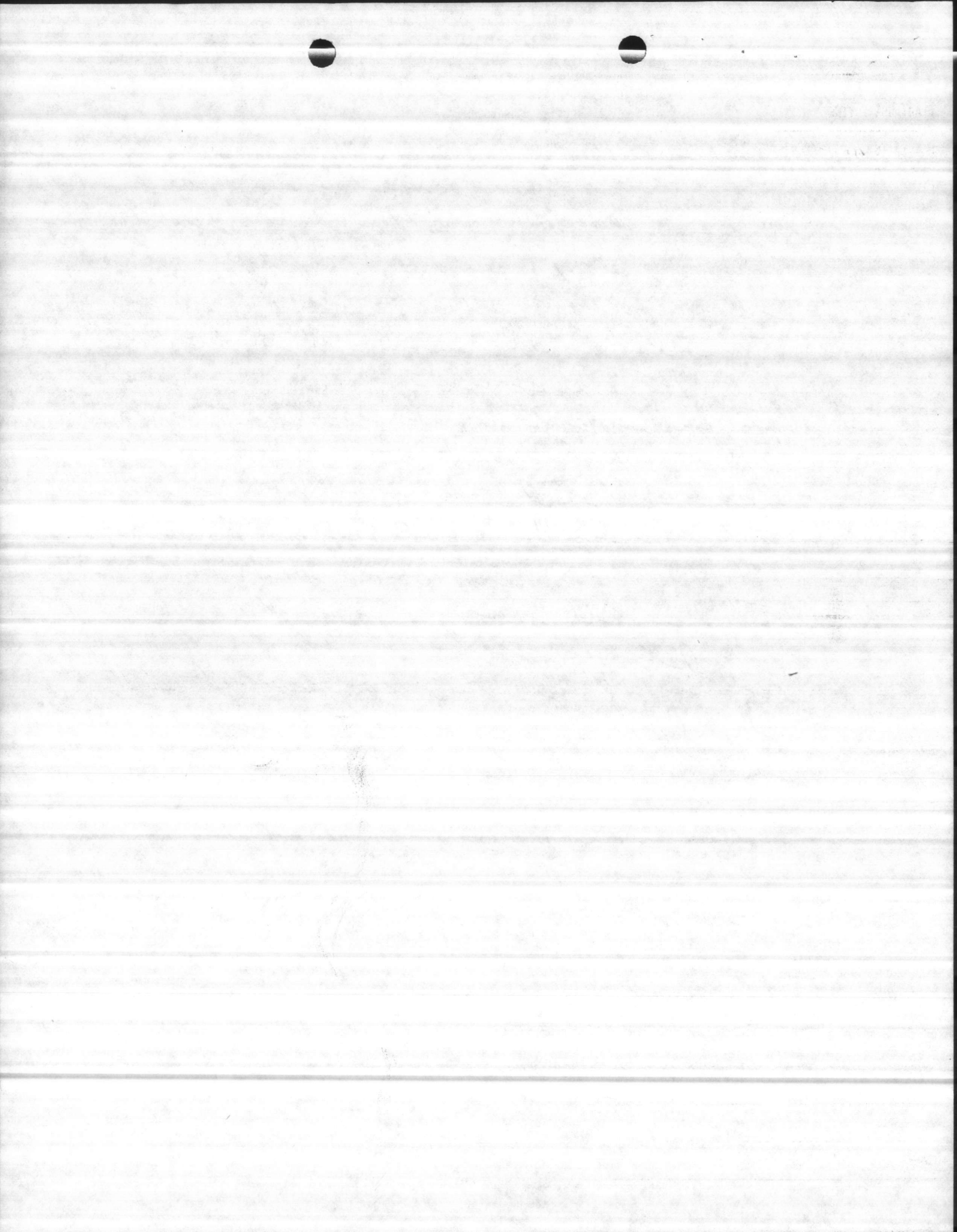
Well # 13

We are enclosing seven (7) copies of the driller log, electric log, gamma log, water analysis, and sieve analysis for your review. The test well was drilled at 250'

We recommend a .030-slot stainless steel screen set at 84' - 104' and at 125' - 145' depth for a total of 40 V F of screen. The gravel pack recommended is 8-12. It is our best estimate that this well may yield 260 GPM.

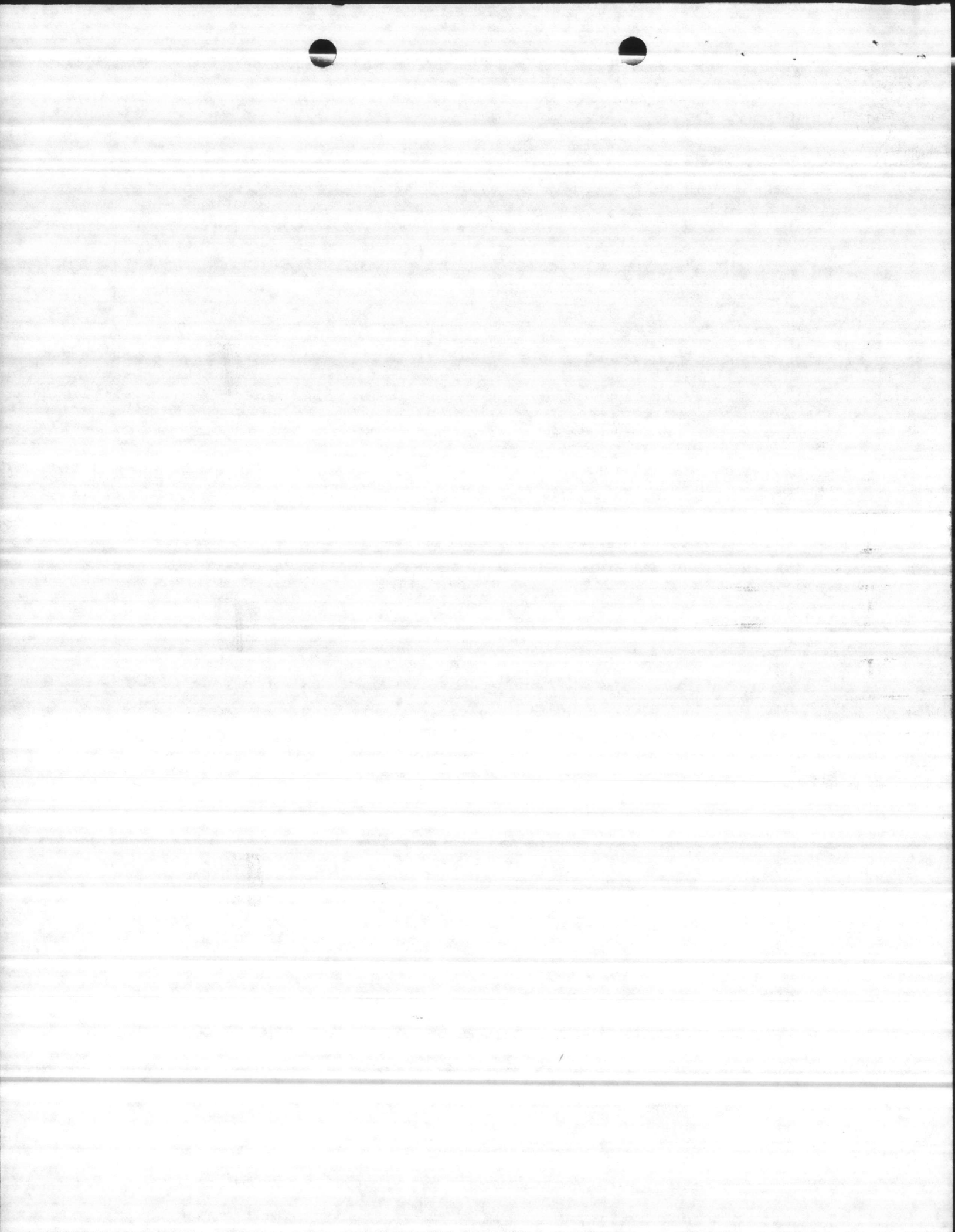
Please review the data and advise if we are to proceed with developing a permanent well at this site.

Water sample taken at 90'



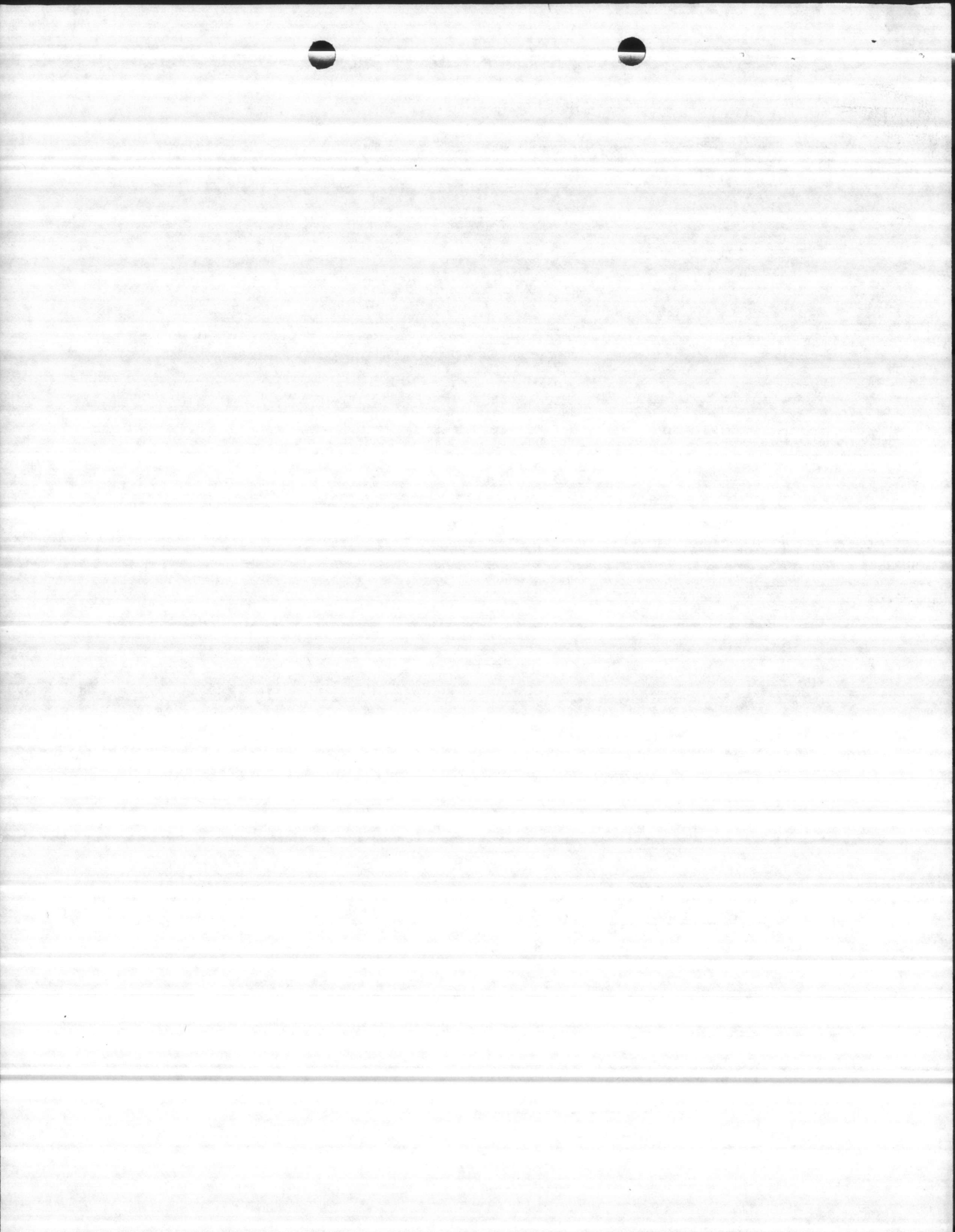
READINGS	TIME	G.P.M.	PUMP SETTING	STATIC WATER LEVEL	PUMPING LEVEL	DRAWDOWN
MINUTE 15	2:15	100	84'	16'2"	28'6"	2'4"
MINUTE 30	2:30	100			29'11"	1'5"
MINUTE 45	2:45	100			31'6"	1'7"
HOUR 1	3:00	100			32'9"	1'3"
HOUR 1.5	3:30	100			34'1"	1'4"
HOUR 2	4:00	100			34'8"	7"
HOUR 2.5	4:30	100			34'10"	2"
HOUR 3	5:00	100			34'10"	1"
MINUTE 15	5:15	150			50'2"	5'3"
MINUTE 30	5:30	150			51'11"	1'9"
MINUTE 45	5:45	150			53'	1'1"
HOUR 1	6:00	150			54'8"	1'8"
HOUR 1.5	6:30	150			55'3"	7"
HOUR 2	7:00	150			55'6"	3"
HOUR 2.5	7:30	150			55'7"	1"
HOUR 3	8:00	150			55'9"	2"
MINUTE 15	8:15	200			70'10"	5'1"
MINUTE 30	8:30	200			71'11"	1'1"
MINUTE 45	8:45	200			72'9"	10"
HOUR 1	9:00	200			73'5"	8"
HOUR 1.5	9:30	200			73'11"	6"
HOUR 2	10:00	200			74'2"	3"
HOUR 2.5	10:30	200			74'3"	1"
HOUR 3	11:00	200			74'5"	2"
MINUTE 15	11:15	250			77'6"	3'1"
MINUTE 30	11:30	250			78'9"	1'3"
MINUTE 45	11:45	250			79'2"	5"
HOUR 1	12:00	250			79'4"	2"

Top Screen at 65'20"
 Dr Down 55'



Pumping level DRAWDOWN

HOUR 1.5	250	79'30"
HOUR 2	250	79'5"
HOUR 2.5	250	79'6" 1"
HOUR 3	250	79'8" 2"
MINUTE 15	300	79'4" 3"
MINUTE 30	300	
MINUTE 45	300	
HOUR 1	300	
HOUR 1.5	300	
HOUR 2	300	
HOUR 2.5	300	
HOUR 3	300	
MINUTE 15	350	
MINUTE 30	350	
MINUTE 45	350	
HOUR 1	350	
HOUR 1.5	350	
HOUR 2	350	
HOUR 2.5	350	
HOUR 3	350	
MINUTE 15	400	
MINUTE 30	400	
MINUTE 45	400	
HOUR 1	400	
HOUR 1.5	400	
HOUR 2	400	
HOUR 2.5	400	
HOUR 3	400	
MINUTE 15	450	
MINUTE 30	450	



MINUTE 45 490

HOOR 4 450

HOOR 1.5 450

HOOR 2 450

HOOR 2.5 450

HOOR 3 450

