

SOURCE INFORMATION
GROUND WATER

DATE 6-19-00

PWSID 04-67043

WELL # 706

WELL NAME Holcomb Blvd 706

BLDG. 706

CODE G

AVAILABILITY P

LOCATION Hwy 24 east

LATITUDE _____

LONGITUDE _____

WELL DIAMETER 10"

WELL DEPTH 185'

SCREEN INTERVAL 130'-140'

165'-185'

YIELD 260 GPM

STATIC LEVEL 36'

PUMPING LEVEL 73'

PUMP TYPE Vertical Turbine

MOTOR HP 10"

INTAKE DEPTH 86'

DESIGN CAPACITY 230 GPM X

ACTUAL GPM 230 GPM

SIZE OF CONCRETE SLAB _____

HEIGHT OF CASING 19"

DOWN

584 Replaced
this well.

DATE 6-19-00 ✓

PWSID 04-67043

WELL # 706 ----- ✓

WELL NAME Holcomb Blvd 706 -----

BLDG. 706 ----- ✓

CODE G -----

AVAILABILITY P -----

LOCATION Hwy 24 east -----

LATITUDE ----- ✓

LONGITUDE ----- ✓

WELL DIAMETER 10" -----

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STATIC LEVEL 36' -----

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PUMP TYPE Vertical Turbine -----

MOTOR HP 10" -----

INTAKE DEPTH 86' -----

DESIGN CAPACITY 230 GPM ----- X

ACTUAL GPM 230 GPM -----

SIZE OF CONCRETE SLAB -----

HEIGHT OF CASING 19" -----

DOWN

1900
1900

1900
1900

1900

1900

1900

1900

1900

1900

1900

1900

1900

1900

1900

1900

1900

1900

1900

1900

1900

1900

1900

SOURCE INFORMATION GROUND WATER

Date Form Completed

M M D D Y Y
0 1 2 7 9 5

PWSID
0
4
6
7
0
4
3

Owner Assigned Source Code

706

Well Name (If purchase, name of system)

H 0 1 C O M B B I V D 7 0 6

Code

G

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

If Purchase, seller ID#

Source Begin Date

M M Y Y
M M Y Y

Source exempt—
SWTR?

Y
 N

Direct Influence Date

M M D D Y Y

Availability

P

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

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

H W Y 2 4 E A S T

Latitude (N)

3 4 4 2 5 7 9

Longitude (W)

0 7 7 1 9 3 1 7

How Determined

G=GPS
M=Map
S=Surveyed

G

GPS Data

Q 2

Q# or
DOP #

No. of Sats. Locked on

3

(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

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

C

Availability

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

P

Owner Assigned
Entry Point Code

2 0 0

Entry Point Name

H B 6 7 0 6 M C B H O L C O M B A L V D W T P I

Location:

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

Sources of pollution/distance:

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

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

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

Condition of house: OK Type of freeze protection: Electric heat

Well: Diameter: 10" Type: Shank Packed Yield (gpm): 260 Properly sealed? (Y,N)

Properly vented? (Y,N) Casing depth 150 ft. (If unknown, put 'UNK') Well depth: 185 Meter available? (Y,N)

Concrete slab adequate? (Y,N) If no, explain: 50 Size: 12x12

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

Pumps: Capacity: GPM: 230 HP: 10 Pump intake depth: 86 Auxiliary Power? (Y,N)

Type pump: Vertical Turbine Height above floor (pump/casing): 19"

Storage at well site: Elev: Hydro: Ground:

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

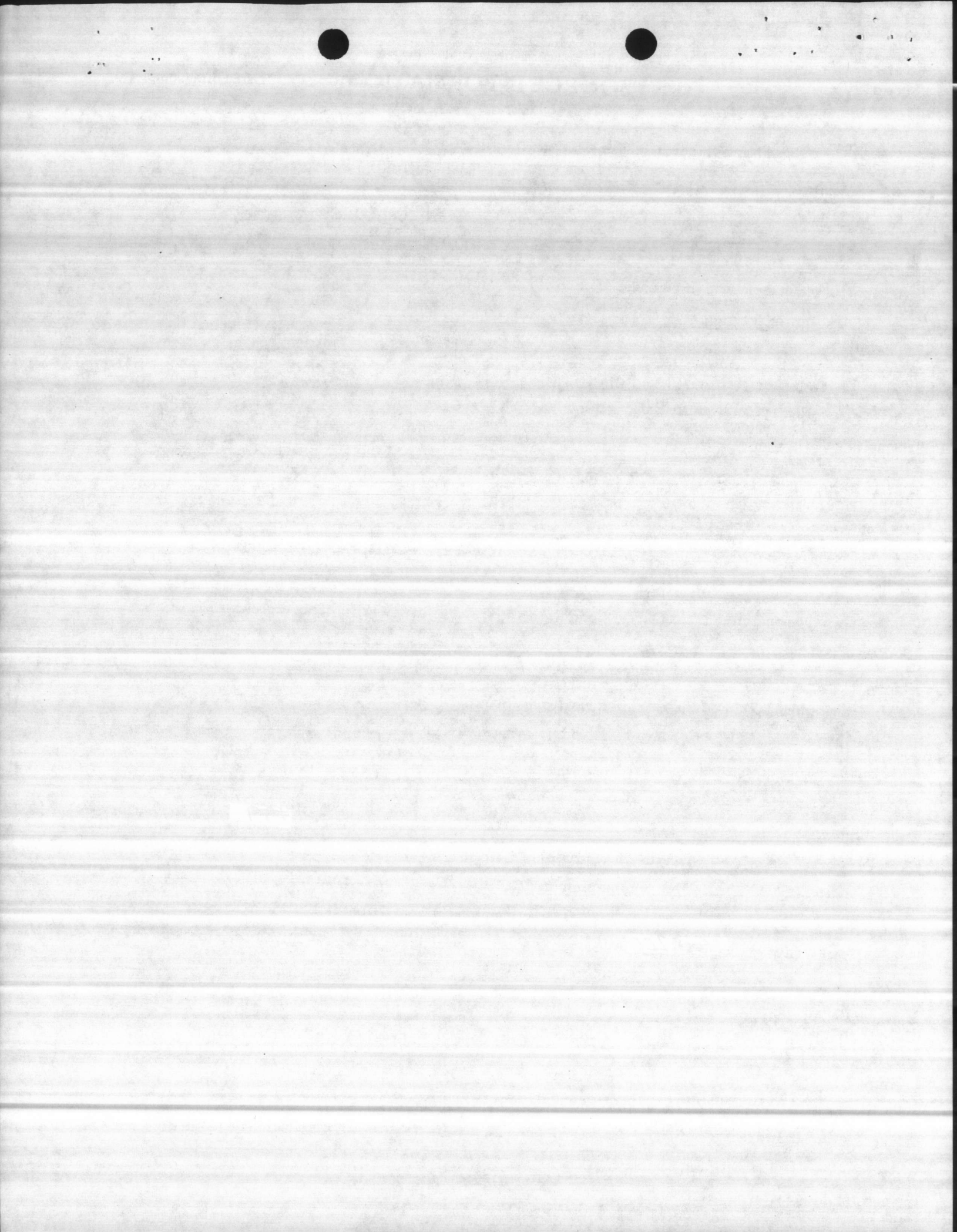
High service pumps: 1. gpm hp 2. gpm hp 3. gpm hp Auxiliary Power? (Y,N)

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? HB 670 PLANT

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

1) Repair Vent
2) Seal pedestal



Hunt

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

X / 1/14/86

CONTRACT NO 81-C-1644		TRANSMITTAL NO 149-A	DATE 3-14-86
FROM CONTRACTOR Harry Pepper & Associates, Inc.		PROJECT TITLE AND LOCATION Holcomb Blyd 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 ----- Well # 8			
1	2.2.4	Recommendation and Data Submittal	7	A	MB
2	2.2	Driller's Log	7	A	MB
3	2.2.3	Electric Log and Gamma Log	7	A	MB
4	2.2.2	Water Analysis	7	A	MB
5	2.2.2	Sieve Analysis	7	A	MB
6	1.2.1	Shop Drawings	7	A	MB

CONTRACTOR'S COMMENTS

Water Samples for 130' and 175' are 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

330

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

27 MAR 1986 12 45

Handwritten signature

DEAR THE CONVENTION

I have read the report of the ...

I have read the report of the ...

Handwritten signature

NO.	NAME	ADDRESS	PHONE	TELETYPE	TELEX	CODE	DATE
1
2
3
4
5
6
7
8
9
10

Handwritten notes in right margin:

1. ...

2. ...

3. ...

4. ...

5. ...



HARRY PEPPER & ASSOCIATES, INC.

Item # 1

ENGINEERING CONTRACTORS

March 14, 1986

Henry Von Oesen & 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 # 8

Gentlemen:

We are enclosing seven (7) copies of the Driller's Log, Gamma Log, Electric Log, Water Analysis and Sieve Analysis for your review. The test was drilled at 250'. Water Samples were taken at the 95' level, 130' level and at the 175' level.

We recommend a line of .030 slot stainless steel screen set at the 130' to 140' level and at the 165' to 185' level for a total of 30VF 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.

Handwritten signature of Phil Reese

Phil Reese
COC Officer ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511

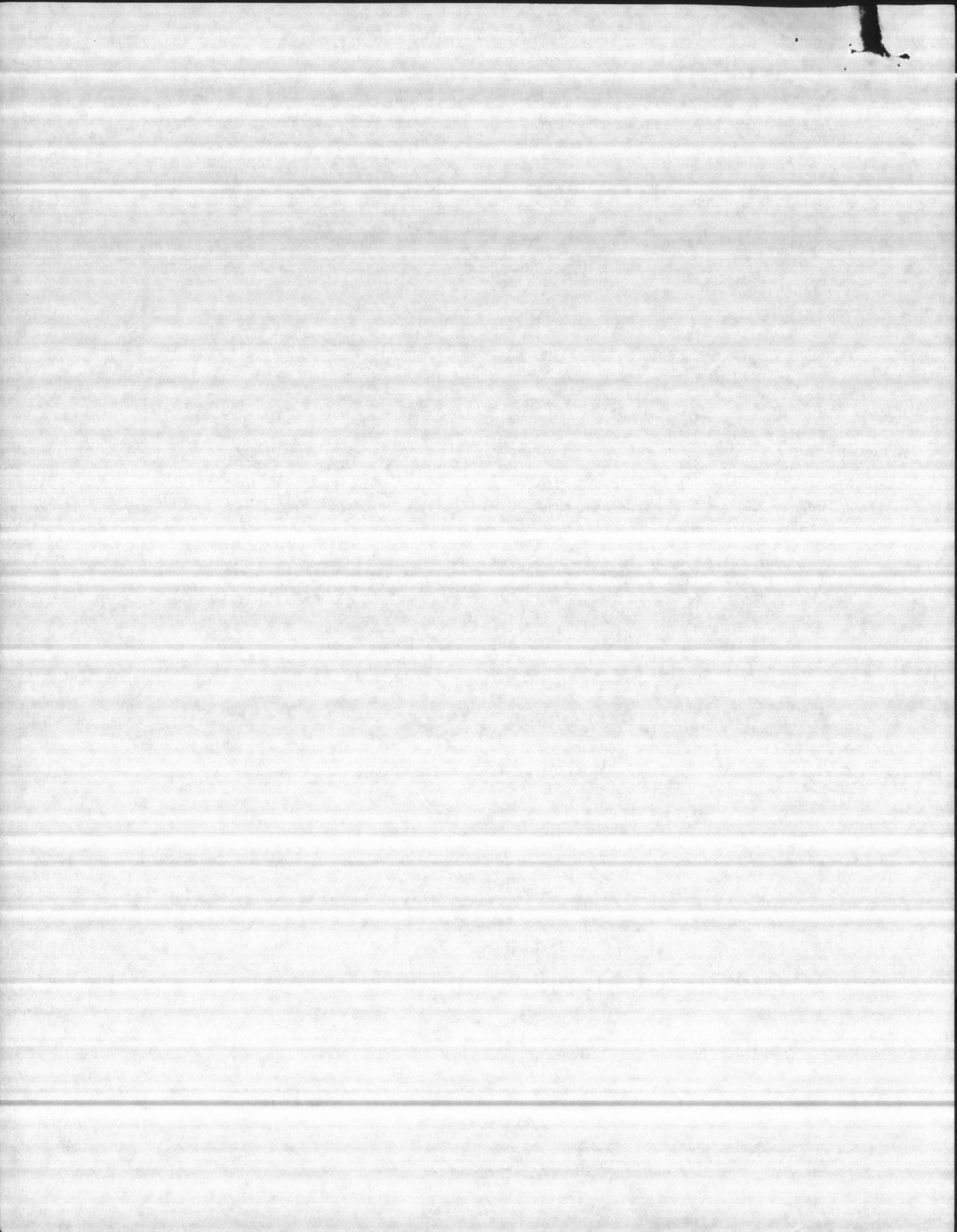
Enclosures
APPROVED X
APPROVED AS NOTED
DISAPPROVED

SUBJECT TO THE REQUIREMENTS OF THE
CONTRACT NO. N6470-81-C-1644
APPROVAL OF A SUBMITTAL DOES NOT INCLUDE
APPROVAL OF ANY DEVIATION FROM THE CON-
TRACT REQUIREMENTS. IF THE CONTRACTOR
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.

Approval form with checkboxes:
Approved for use.
Approved for use.
Submitted for Government approval.
Approved for use subject to Government approval of specific deviation.
Authorized Reviewer: Phil Reese
DATE: 3-14-86

REVIEWED DATE MAR 21 1986

FOR OFFICER IN CHARGE OF CONSTRUCTION



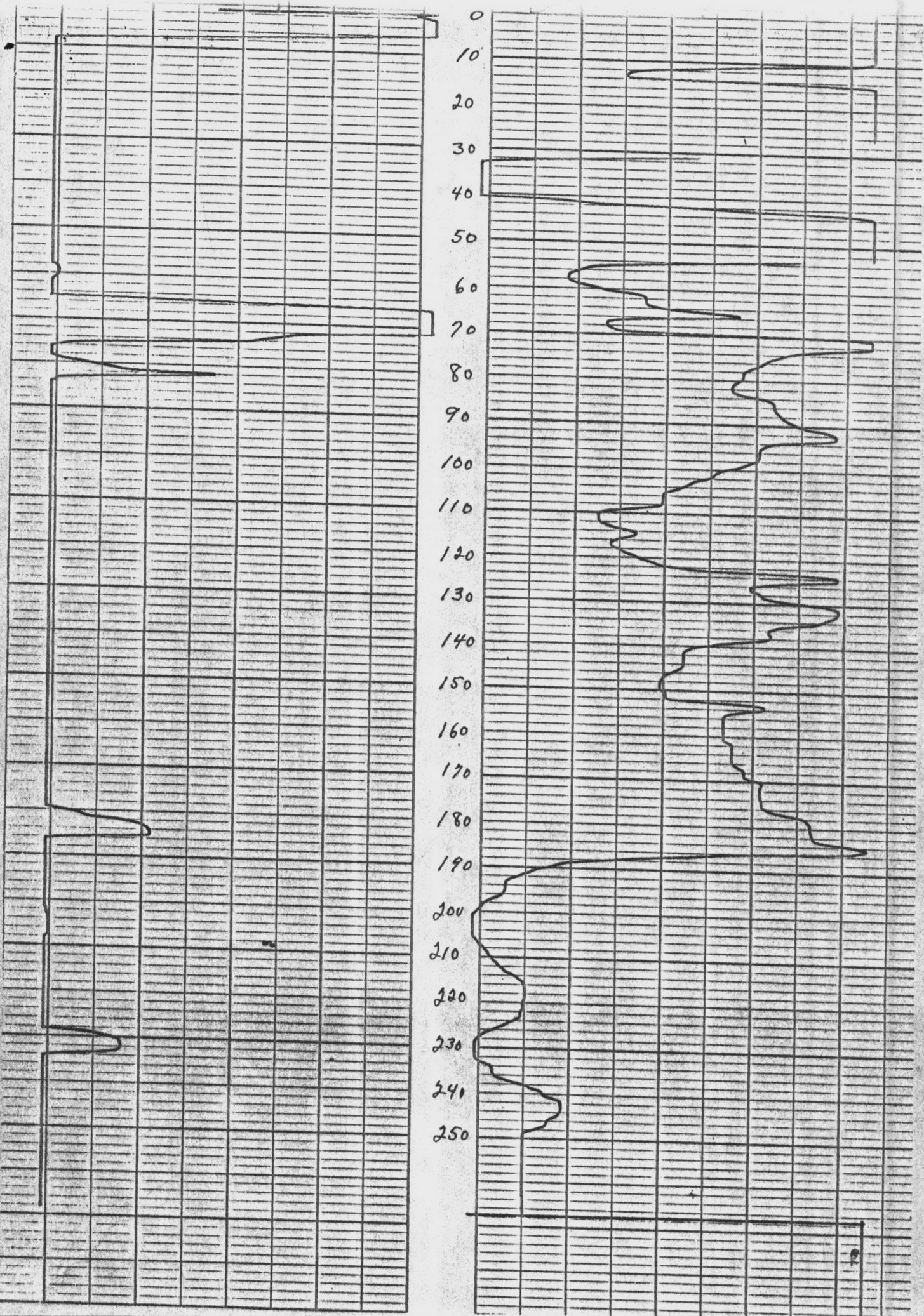
Item #2

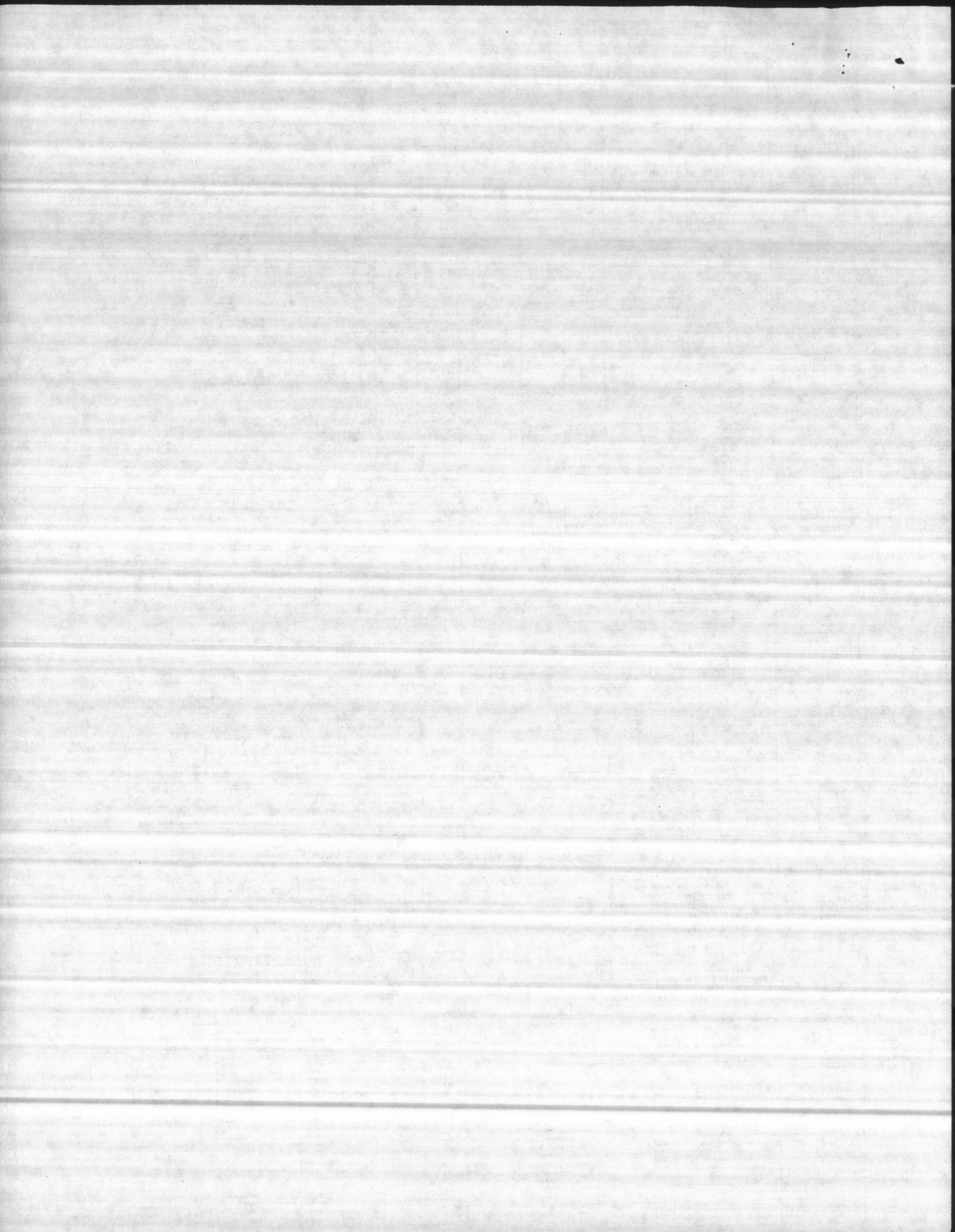
DRILLERS LOG CAMP LEJEUNE WELL #8

DEPTH OF SAMPLE

0 - 5 FT.	TOPSOIL
5 - 55 FT.	GRAY CLAY AND FINE SAND
55 - 140 FT.	LIMESTONE
140 - 185 FT.	LIMESTONE AND GREEN CLAY
185 - 250 FT.	GREEN CLAY

Item # 2+3





Item # 4

LAW & COMPANY
Consulting and Analytical Chemists

ESTABLISHED 1903

Well # 706

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

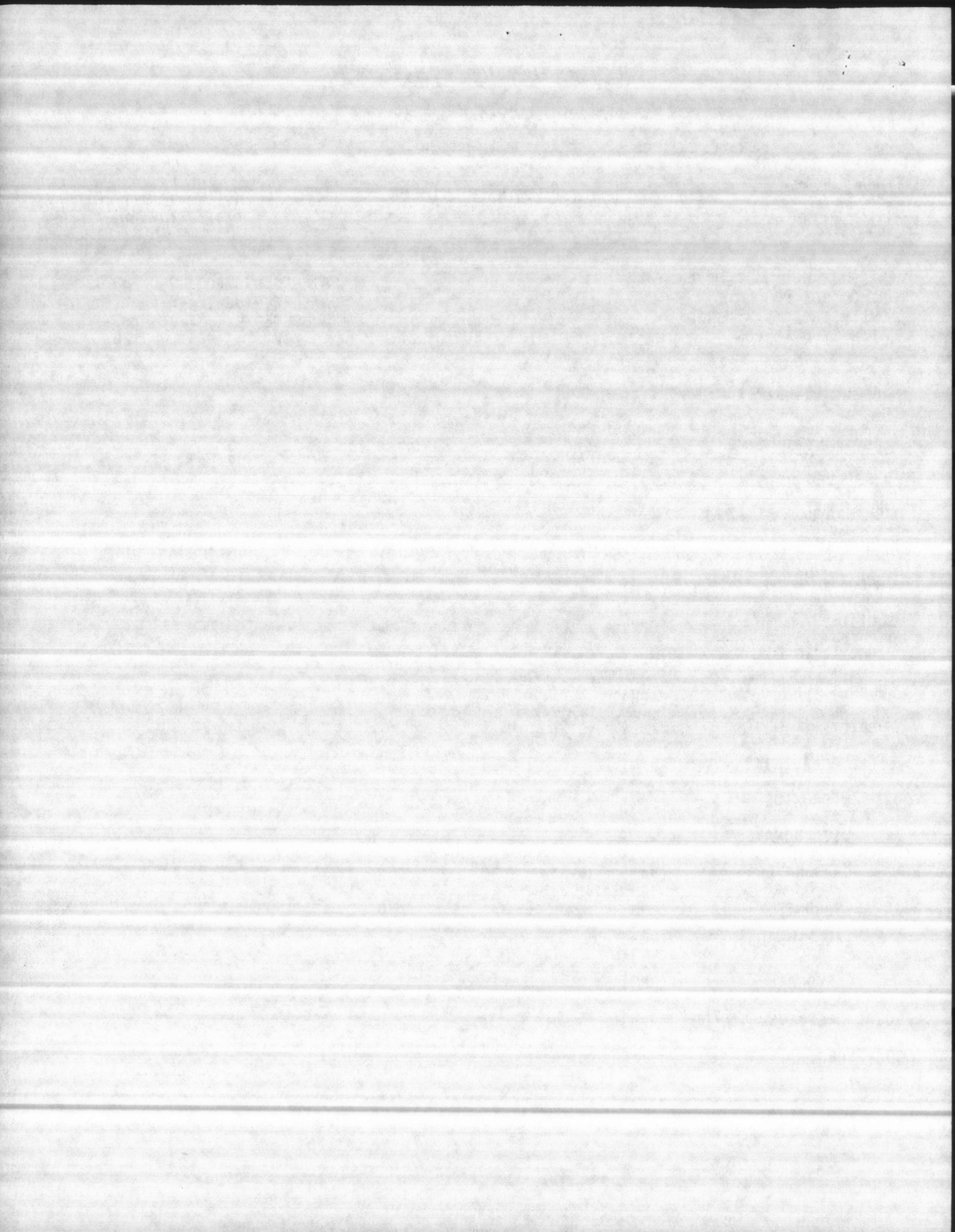
MAJETTE WELL & PUMP CO
P. O. BOX 908
SMITHFIELD, VA 23430
ATTN: BUD KELLOG

DATE COLLECTED: 9-03-85
DATE RECEIVED: 9-03-85
COLLECTED BY: CUSTOMER
LAB ID# EW 9228

SAMPLE DESCRIPTION: WELL #8

<u>TESTS/UNITS</u>		<u>RESULTS</u>
DISSOLVED OXYGEN	(MG/L)	6
TEMPERATURE		19.5
pH		8.1
CARBON DIOXIDE	(PPM)	0
SULFIDES	(PPM)	.6
CHLORINE DEMAND	(PPM)	1.1
COLOR	(APHA)	60
TURBIDITY	(NTU)	9
TOTAL ALKALINITY	(PPM)	149
HYDROXIDE	(PPM)	0
BICARBONATE	(PPM)	125
CARBONATE	(PPM)	24
TOTAL HARDNESS	(PPM)	152
NON-CARBONATE	(PPM)	149
CARBONATE	(PPM)	3
TOTAL DISSOLVED SOLIDS	(PPM)	86

CONTINUED.....



LAW & COMPANY
Consulting and Analytical Chemists

ESTABLISHED 1903

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

Well #706

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

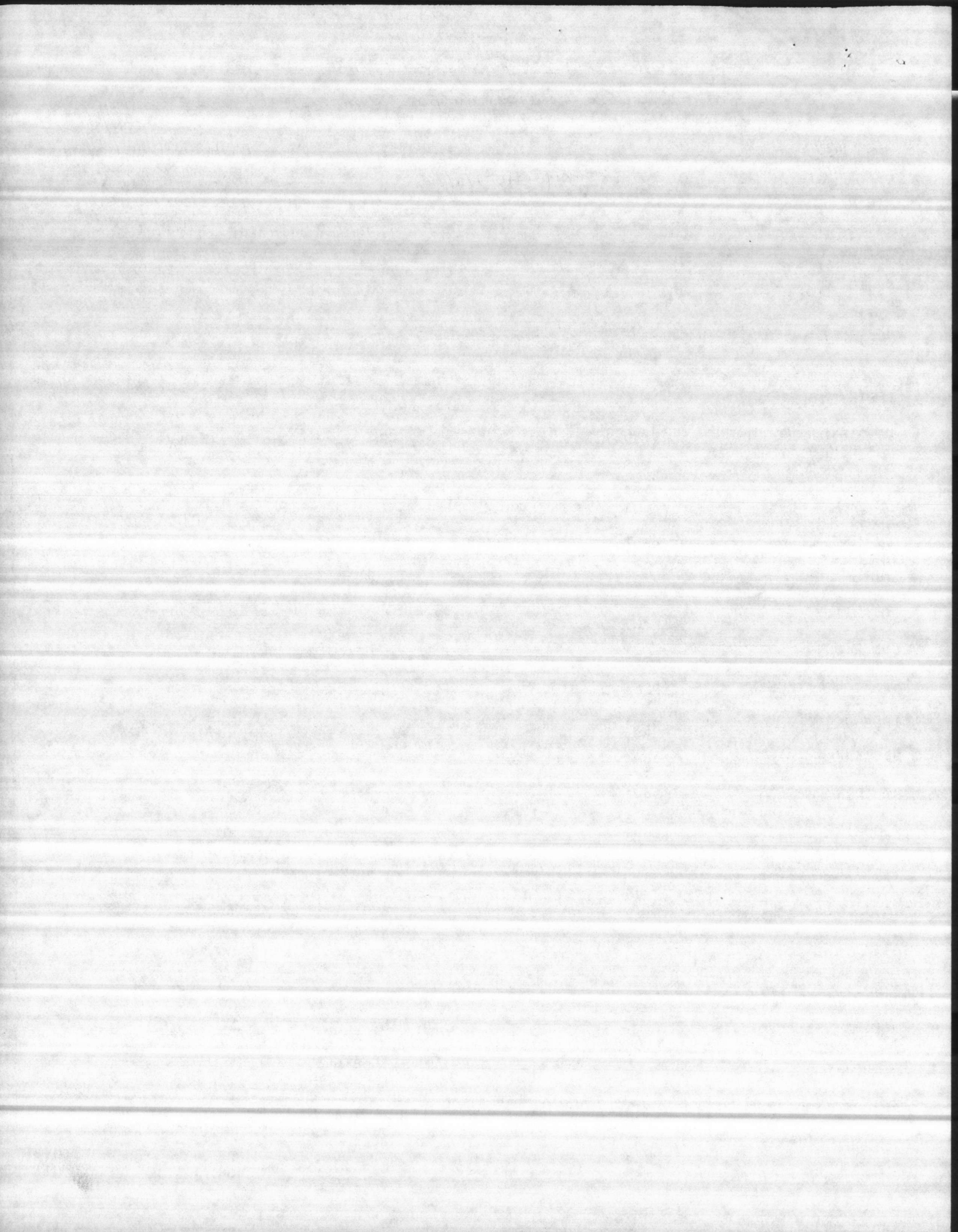
<u>TESTS/UNITS</u>		<u>RESULTS</u>
SPECIFIC CONDUCTANCE	(UMHOS)	250
SULFATES	(PPM)	16.5
CALCIUM	(PPM)	46
MAGNESIUM	(PPM)	.9
SODIUM	(PPM)	7.4
POTASSIUM	(PPM)	.8
CHLORIDE	(PPM)	21.8
NITRATE NITROGEN	(PPM)	<.2
IRON	(PPM)	.40
MANGANESE	(PPM)	<.015
SILICON	(PPM)	6.2
FLOURIDE	(PPM)	<.2

CHEMIST

Jolly Bidwan

TOTAL CHARGES:

\$180.00



Consulting and Analytical Chemists

ESTABLISHED 1903

Well #706

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

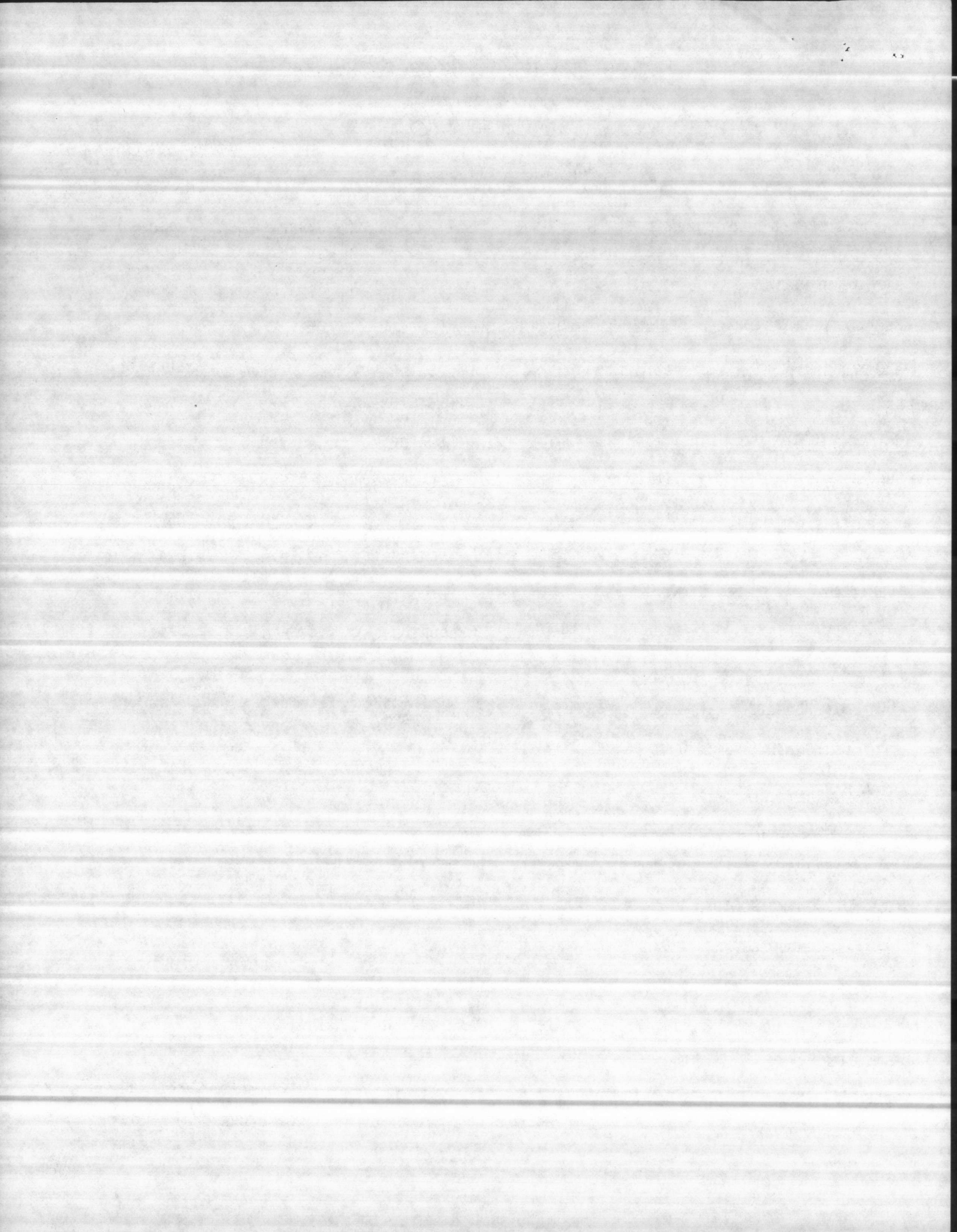
DATE COLLECTED: 2-27-86
DATE RECEIVED: 2-28-86
COLLECTED BY: CUSTOMER
LAB I.D.# EW 3508

SAMPLE DESCRIPTION: WELL #8 @ 130 feet

TESTS/SAMPLES	RESULTS	RESULTS
pH	7.1	POTASSIUM PPM .8
CARBON DIOXIDE PPM	0	CHLORIDE PPM 29
SULFIDES PPM	4	NITRATE NITROGEN PPM <.2
CHLORINE DEMAND PPM	1.6	IRON PPM 0.05
COLOR APHA	35	MANGANESE PPM <0.015
TURBIDITY NTU	57	SILICON PPM 1.4
TOTAL ALKALINITY PPM	184	FLOURIDE PPM <.2
HYDROXIDE PPM	0	
BICARBONATE PPM	173	
CARBONATE PPM	11	
TOTAL HARDNESS PPM	180	
NON-CARBONATE PPM	0	
CARBONATE PPM	180	
TOTAL DISSOLVED SOLIDS PPM	255	
SPECIFIC CONDUCTANCE UMHOS	320	
SULFATES PPM	20	
CALCIUM PPM	58	
MAGNESIUM PPM	1.6	
SODIUM PPM	7.6	

CHEMIST: Dolly Bidwan

TOTAL CHARGES: 180.00



Consulting and Analytical Chemists

ESTABLISHED 1903

Well # 706

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: 2-27-86
DATE RECEIVED: 2-28-86
COLLECTED BY: CUSTOMER
LAB I.D.# EW 3508

SAMPLE DESCRIPTION: WELL #8 @ 175 feet

TESTS/SAMPLES	RESULTS		RESULTS	
pH		7.2	POTASSIUM	PPM 2
CARBON DIOXIDE	PPM	0	CHLORIDE	PPM 20
SULFIDES	PPM	0	NITRATE NITROGEN	PPM <.2
CHLORINE DEMAND	PPM	1.6	IRON	PPM 0.8
COLOR	APHA	15	MANGANESE	PPM <0.015
TURBIDITY	NTU	8.5	SILICON	PPM 4.9
TOTAL ALKALINITY	PPM	176	FLOURIDE	PPM <.2
HYDROXIDE	PPM	0		
BICARBONATE	PPM	176		
CARBONATE	PPM	0		
TOTAL HARDNESS	PPM	160		
NON-CARBONATE	PPM	0		
CARBONATE	PPM	160		
TOTAL DISSOLVED SOLIDS	PPM	246		
SPECIFIC CONDUCTANCE	UMHOS	305		
SULFATES	PPM	12		
CALCIUM	PPM	50		
MAGNESIUM	PPM	1.6		
SODIUM	PPM	7.6		

CHEMIST: Dolly Bidwan

TOTAL CHARGES: 180.00

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

Item # 5

HSSC

HOWARD SMITH
 SCREEN COMPANY

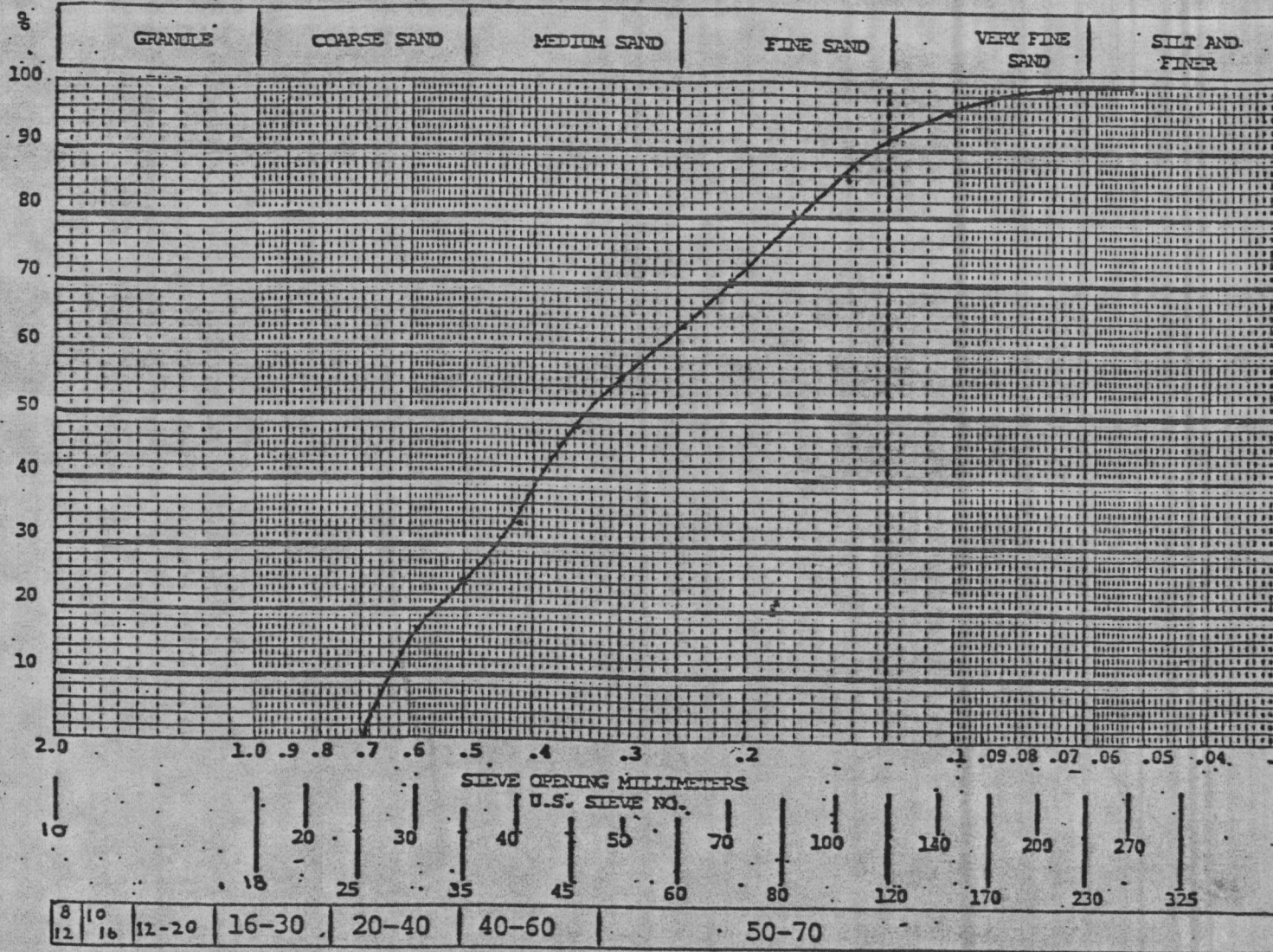
A Halliburton Company
 P.O. Box 666 • Houston, Texas 77001
 713-869-5771 • Telex: 77-4667

Item #

COMPANY...R.L.MAGETTE COMPANY
 WELL.....#8
 DEPTH.....110-140
 FIELD.....-
 COUNTY.....-
 STATE.....VA

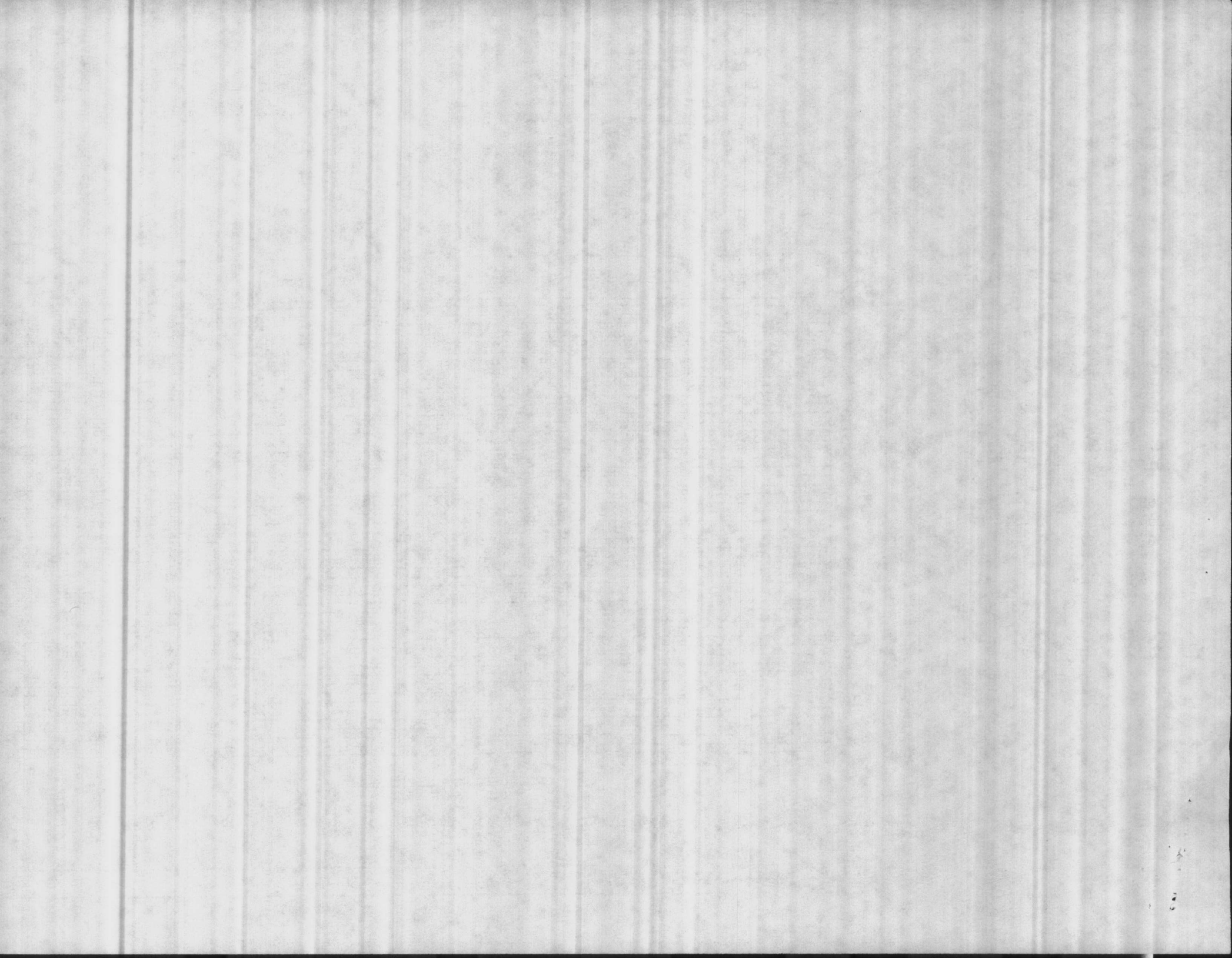
SIEVE ANALYSIS REPORT

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	6.2	6.2	16.9
35	.0197	0.500	2.7	8.9	24.3
40	.0165	0.420	3.3	12.2	33.2
45	.0139	0.351	3.2	17.6	48.0
50	.0117	0.297	2.6	20.2	55.0
60	.0098	0.250	3.0	23.2	63.2
70	.0083	0.210	2.4	25.6	69.8
80	.0070	0.177	3.8	29.4	80.1
100	.0059	0.149	2.4	31.8	86.6
120	.0049	0.124	2.1	33.9	92.4
140	.0041	0.104	1.3	35.2	95.9
170	.0035	0.088	0.8	36.0	98.1
200	.0029	0.074	0.4	36.4	99.2
230	.0024	0.062	0.2	36.6	99.7
270	.0021	0.053	0.1	36.7	100.0
325	.0017	0.044	--	--	--
425	--	--	--	--	--



MES E JACKSON
 2-22-85

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

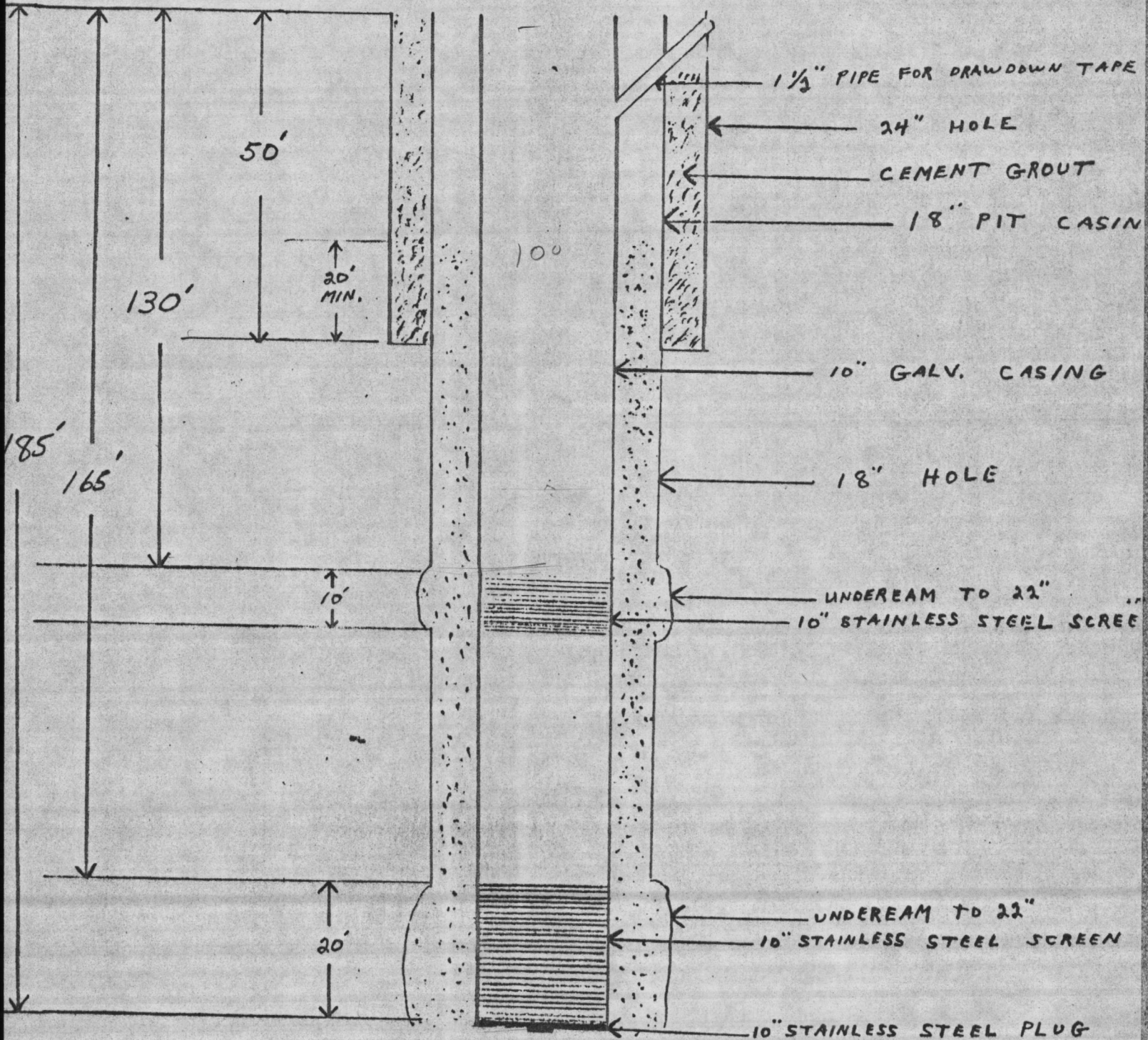


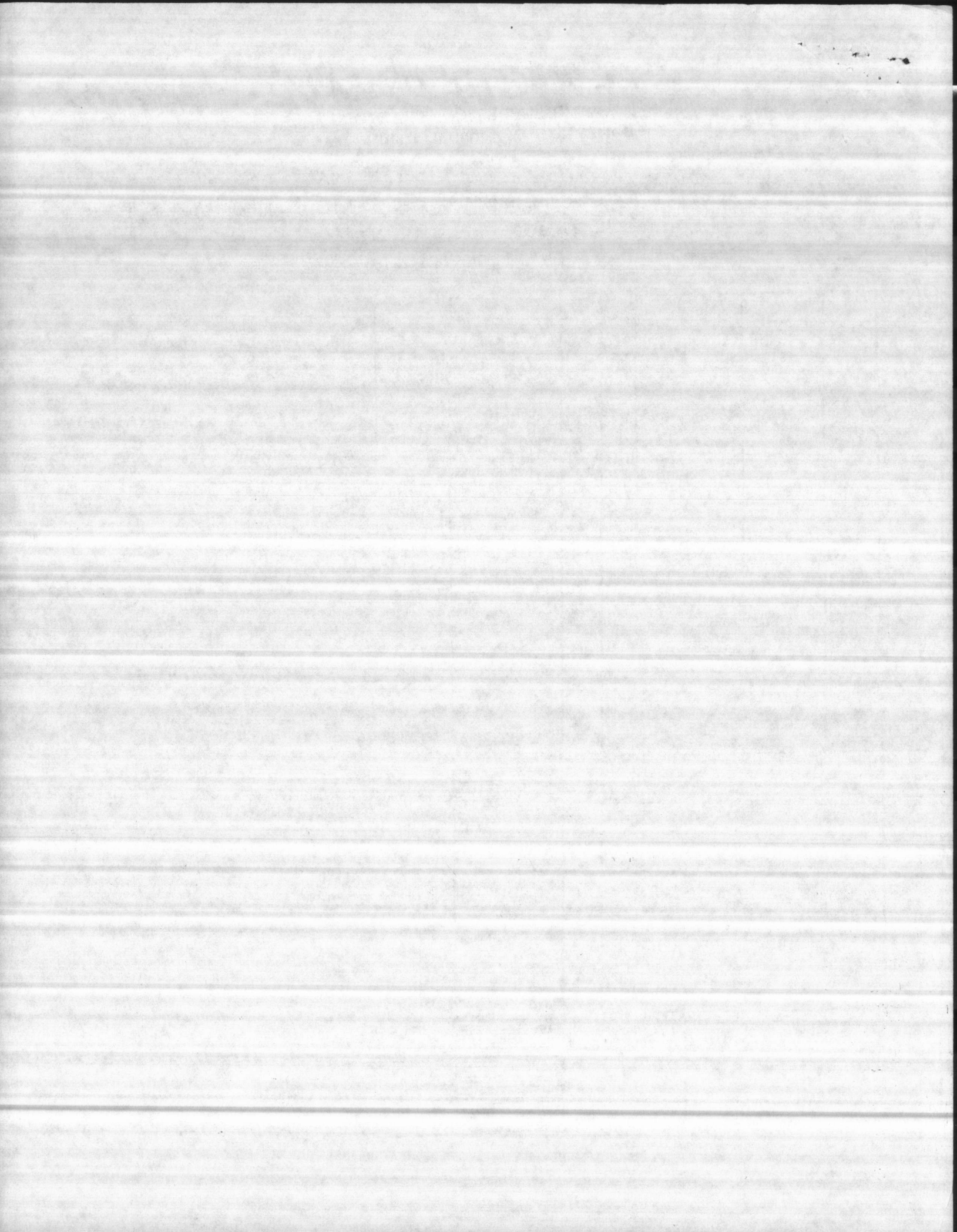
Serving Tidewater Virginia and Eastern North Carolina

WELL # 8

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

Smithfield, Virginia 23430





Hunt

CONTRACTOR'S SUBMITTAL TRANSMITTAL

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

CONTRACT NO 81-C-1644	TRANSMITTAL NO 216	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

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 # 8			
1	1.2.1	Shop Drawings	7		

CONTRACTOR'S COMMENTS

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

This Shop Drawing replaces shop drawing previously submitted. See Transmittal # 149-A, dated 3-14-86.

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 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

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

DATE

6/13/86

SIGNATURE

M. Br...

Handwritten marks at the top left of the page.

CONTRACTOR'S SUBMITTAL TRANSMITTAL

PROJECT NO. _____
CONTRACT NO. _____
CONTRACT DATE _____
SUBMITTAL NO. _____

CONTRACT USE ONLY
DATE OF SUBMISSION _____
SUBMITTED BY _____
SUBMITTED TO _____
SUBMITTAL TITLE _____
SUBMITTAL NO. _____
CONTRACT NO. _____
PROJECT NO. _____
CONTRACT DATE _____

ACTION CODE	REVIEWER INITIALS	REVIEW DATE	ACTION CODE	REVIEWER INITIALS	REVIEW DATE	ITEM IDENTIFICATION		DRAWING IDENTIFICATION	
						DESCRIPTION	REVISION NO.	DWG NO.	REV. NO.

CONTRACTOR'S SIGNATURE _____
DATE _____
PROJECT NO. _____
CONTRACT NO. _____

REVIEWER'S SIGNATURE _____
DATE _____
PROJECT NO. _____
CONTRACT NO. _____

REVISIONS SECTION

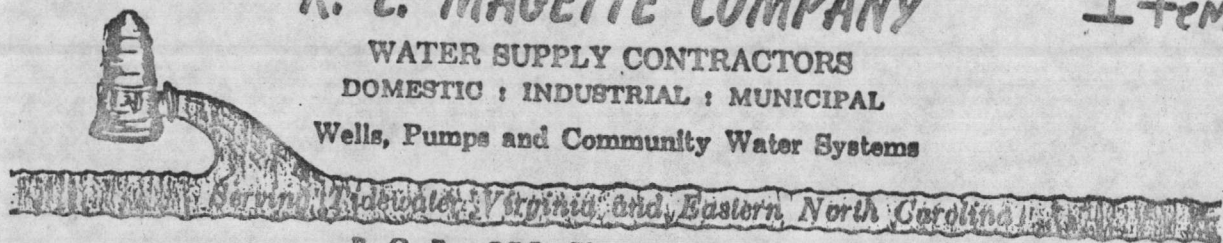
NO.	DESCRIPTION	DATE

R. L. MAGETTE COMPANY

Item # 1

WATER SUPPLY CONTRACTORS
DOMESTIC : INDUSTRIAL : MUNICIPAL

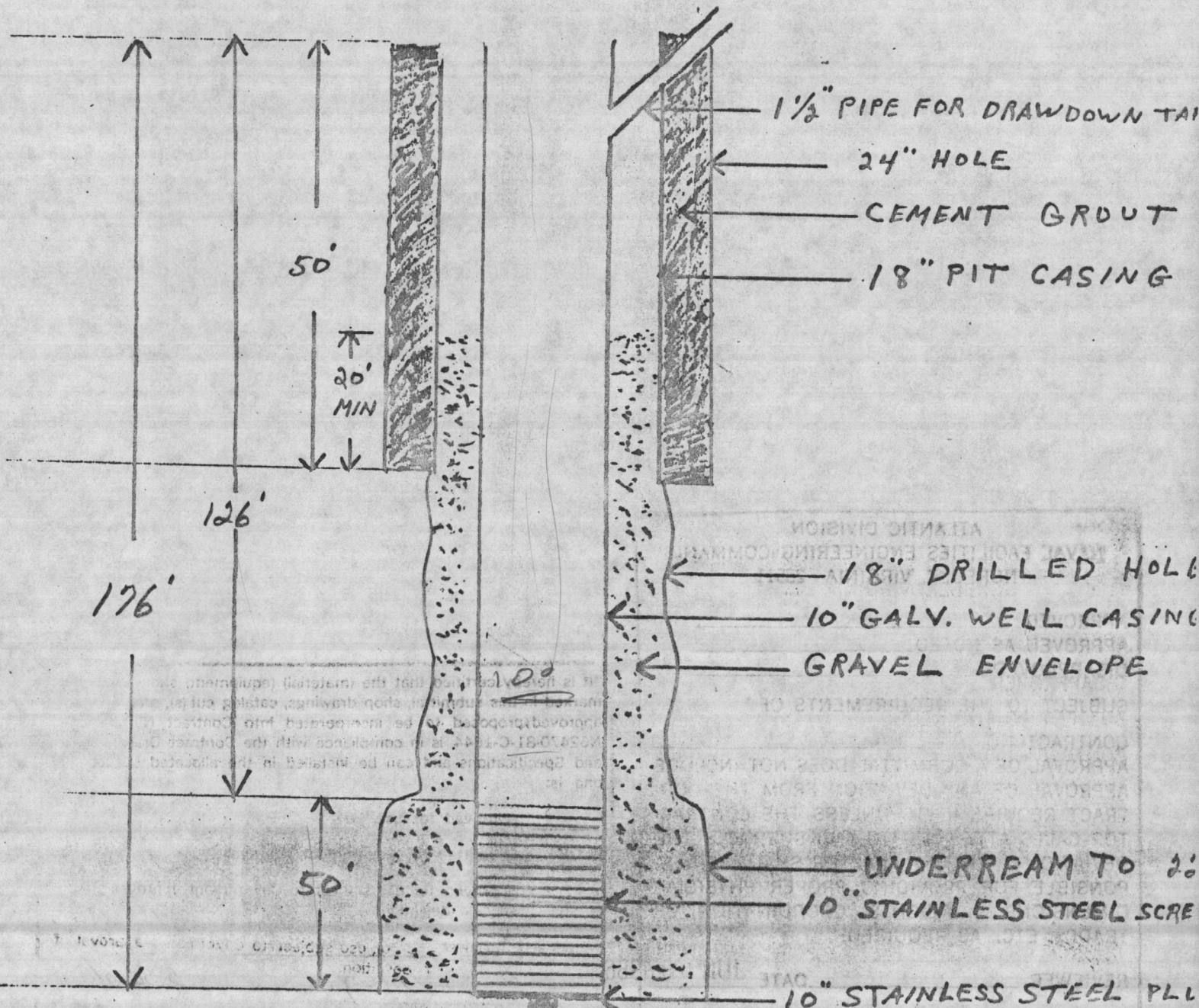
Wells, Pumps and Community Water Systems



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

Smithfield, Virginia 23430

WELL #8



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. J. [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 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 [Signature]* DATE 5-30-86

R. L. MAGETTE COMPANY

Item # 1

WATER SUPPLY CONTRACTORS
DOMESTIC : INDUSTRIAL : MUNICIPAL

Wells, Pumps and Community Water Systems

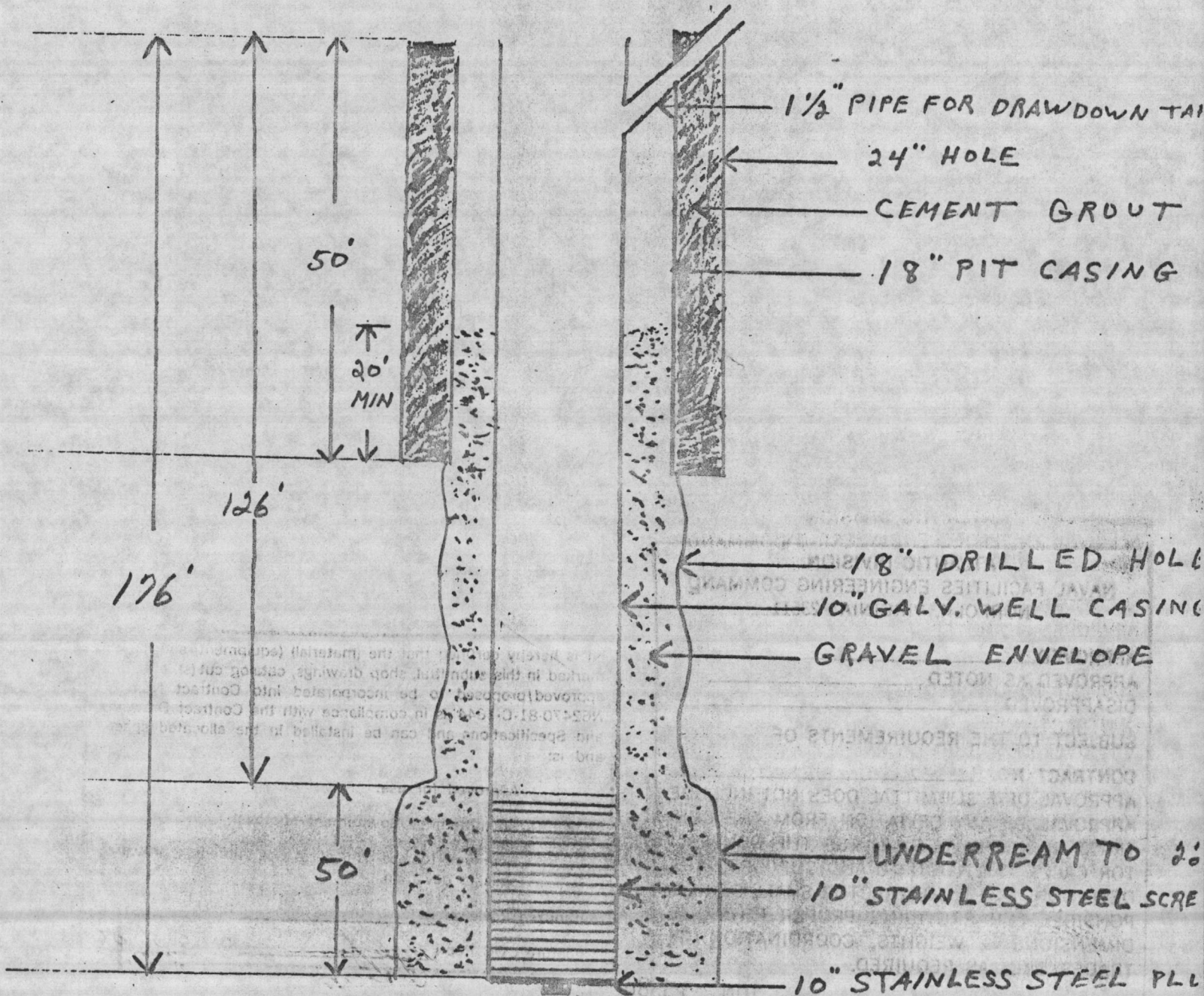


Serving Tidewater, Virginia and Eastern North Carolina

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

Smithfield, Virginia 23430

WELL #8



FOR OFFICER IN CHARGE OF CONSTRUCTION
DATE REVIEWER

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 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 Reese* DATE 5-30-86

Hunt

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

CONTRACT NO 81-C-1644	TRANSMITTAL NO 200	DATE 4-25-86
--------------------------	-----------------------	-----------------

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

<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 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			
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

ONE COPY TO ROICC

CONTRACTOR REPRESENTATIVE (Signature)
Phil Reese *Phil Reese*

DATE RECEIVED BY REVIEWER: 4/28/86

FROM (Reviewer): Henry von Oesen & Assoc.

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: 5/1/86

SIGNATURE: *M. Bruner*

-5 MAY 1986 12 54

[Handwritten signature]

OFFICE	NAME	TITLE	STATUS
[]	[]	[]	[]
[]	[]	[]	[]
[]	[]	[]	[]
[]	[]	[]	[]
[]	[]	[]	[]

24 Hour Pump Test
Well # 8

4-21-86

Pumping Rate 250 GPM

ITEM #1

TIME	PUMP SETTING 126'	STATIC 21'1"
	PUMPING LEVEL	DRAWDOWN
9:01	55'1"	43'
9:02	57'2	2'1
9:03	58'11	1'9
9:04	60'2	1'3'
9:05	61'3	1'1
9:06	62'1	10"
9:07	63'	11"
9:08	63'11	11"
9:09	64'10	11"
9:10	65'8	10"
9:15	68'2	2'6
9:20	69'11	1'9
9:25	71'9	1'10
9:30	73'	1'3
9:35	73'11	11"
9:40	74'8	9"
9:45	75'7	11"
9:50	76'5	10"
9:55	77'2	9"
10:00	78'	10"
11:00	80'3	2'3
12:00	81'1	10"
1:00	81'8	7"
2:00	82'5	9"
3:00	82'6	6"
4:00	82'11	7"
5:00	83'	6"
6:00	84'	12"
7:00	84'9	9"
8:00	85'4	7"
9:00	86'1	9"
10:00	86'6	5"
11:00	86'11	5"
12:00	87'2	3"
1:00	87'5	3"
2:00	87'7	2"
3:00	87'8	1"
4:00	"	"
5:00	"	"
6:00	"	"
7:00	"	"
8:00	"	"
9:00	"	"

ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511

APPROVED ✓
 APPROVED AS NOTED _____
 DISAPPROVED _____

SUBJECT TO THE REQUIREMENTS OF
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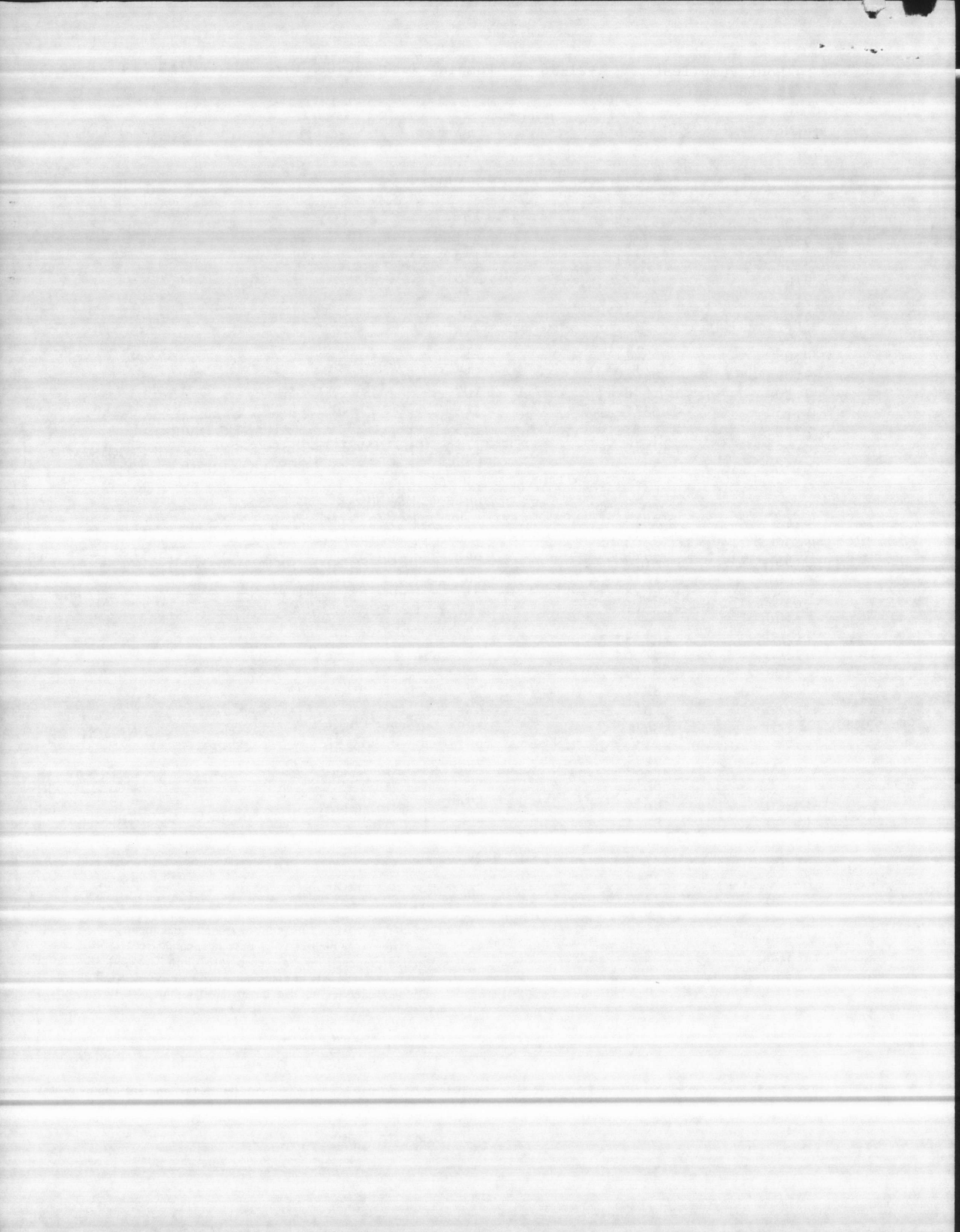
REVIEWER [Signature] DATE APR 30 1986

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:

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

Authorized Reviewer _____ DATE _____
 _____ DATE 4-25-86



2 HOUR RECOVERY
WELL # 8

ITEM # 2

9:01	33'1
9:02	31'3
9:03	30'9
9:04	29'2
9:05	27'11
9:06	26'10
9:07	25'11
9:08	25'2
9:09	24'4
9:10	23'9
9:15	23'1
9:20	22'6
9:25	22'1
9:30	21'8
9:35	21'5
9:40	21'1
9:45	"
9:50	"
9:55	"
10:00	"
11:00	"

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

CONTRACT NO. **81-C-1644** TRANSMITTAL NO. **199** DATE **4-24-86**

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

- Contractor Approved OICC Approval Deviation/Substitution For OICC Approval

- 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 # 8			
1		Step Test	7	A	JRB

CONTRACTOR'S COMMENTS

Advised by Title II Inspector to Pump Test at 250GPM for 24 Hour Pump Test.

COPY OF TRANSMITTAL AND SUBMITTALS TO ROICC

ONE COPY TO ROICC

CONTRACTOR REPRESENTATIVE (Signature)

Phil Reese *Phil Reese*

DATE RECEIVED BY REVIEWER

4/28/86

FROM (Reviewer)

Henry von Oesen & Assoc.

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.
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REVIEWER'S COMMENTS

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

DATE

5/2/86

SIGNATURE

M. Bussard

-5 MAY 1986 12 54

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[Handwritten signature]

[Faint handwritten text, possibly a title or header]

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[Faint handwritten text at the bottom of the page]

WELL # 8
 Step Test
 4/17/86

ITEM # 1

<u>TIME</u>	<u>STATIC</u>	<u>PUMPING LEVEL</u>	<u>PUMPING RATE</u>
1:15	21'2"	38'2"	100 GPM
1:30		44'6"	"
1:45		46'3"	"
2:00		48'4"	"
2:30		49'11"	"
3:00		50'6"	"
3:30		51'9"	"
4:00		52'4"	"
4:15		63'1"	150 GPM
4:30		63'7"	"
4:45		63'10"	"
5:00		64'2"	"
5:30		64'4"	"
6:00		64'6"	"
6:30		64'6"	"
7:00		64'6"	"
7:15		72'4"	200 GPM
7:30		73'3"	"
7:45		73'11"	"
8:00		74'2"	"
8:30		74'5"	"
9:00		74'8"	"
9:30		74'9"	"
10:00		74'10"	"
10:15		85'2"	250 GPM
10:30		86'1"	"
10:45		86'5"	"
11:00		86'11"	"
11:30		87'3"	"
12:00		87'6"	"
12:30		87'9"	"
1:00		87'11"	"
1:15		102'2"	300 GPM
1:30		102'11"	"
1:45		103'5"	"
2:00		103'8"	"
2:30		103'11"	"
3:00		104'1"	"
3:30		104'1"	"
4:00		104'2"	"
4:15		112'2"	325 GPM
4:30		113'3"	"
4:45		113'11"	"
5:00		113'2" 114.6	"
5:30		113'3" 114.1	"
6:00		113'4" 115.2	"
6:30		115.3	"
7:00		115.4	"

APPROVED
 APPROVED AS NOTED
 DISAPPROVED
 SUBJECT TO THE OPINIONS OF
 CONTRACT NO. 11-80-01-001
 APPROVED BY THE COMMANDER
 APPROVED BY THE CONTRACTOR
 TRACT DESIGN
 FOR OFFICER IN CHARGE OF CONSTRUCTION
 REVIEWER
 DATE
 APR 17 1986
 NAVY FACILITIES ENGINEERING COMMAND
 NORFOLK, VIRGINIA 23511
 ATLANTIC DIVISION

Approved for use subject to Government approval.
 Approved for use.
 Approved for use subject to Government approval.
 Approved for use.

ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511

APPROVED

APPROVED AS NOTED

DISAPPROVED

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REVIEWER *M. S. ...*

DATE APR 30 1986

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specific deviation.

Authorized Reviewer *Phil ...*

DATE

Signature CQC Rep. *Phil ...*

DATE 4-24-86

WELL NUMBER 706		BY STEVENSON			DATE 7-9-97	
AIR LINE	STATIC LEVEL	PUMPING LEVEL	DRAIN DOWN	DISCHARGE PRESSURE	GPM	START TIME
85	36	50	14	20	100	00
		57	21	15	140	10
		65	29	10	187	20
		73	37	05	230	

REMARKS

D/H 27 PSI

MANUFACTURER	STAGE	S.N.	TOTAL HEAD	SIZE

WELL NUMBER		BY			DATE	
AIR LINE	STATIC LEVEL	PUMPING LEVEL	DRAIN DOWN	DISCHARGE PRESSURE	GPM	START TIME
706					10-11-94	
85	35	51	16	15	100	
		61	26	10	170	
		67	32	5	199	

REMARKS

D/H - 18 P.S.I.

MANUFACTURER	STAGE	S.N.	TOTAL HEAD	SIZE



1942
 12
 10
 8

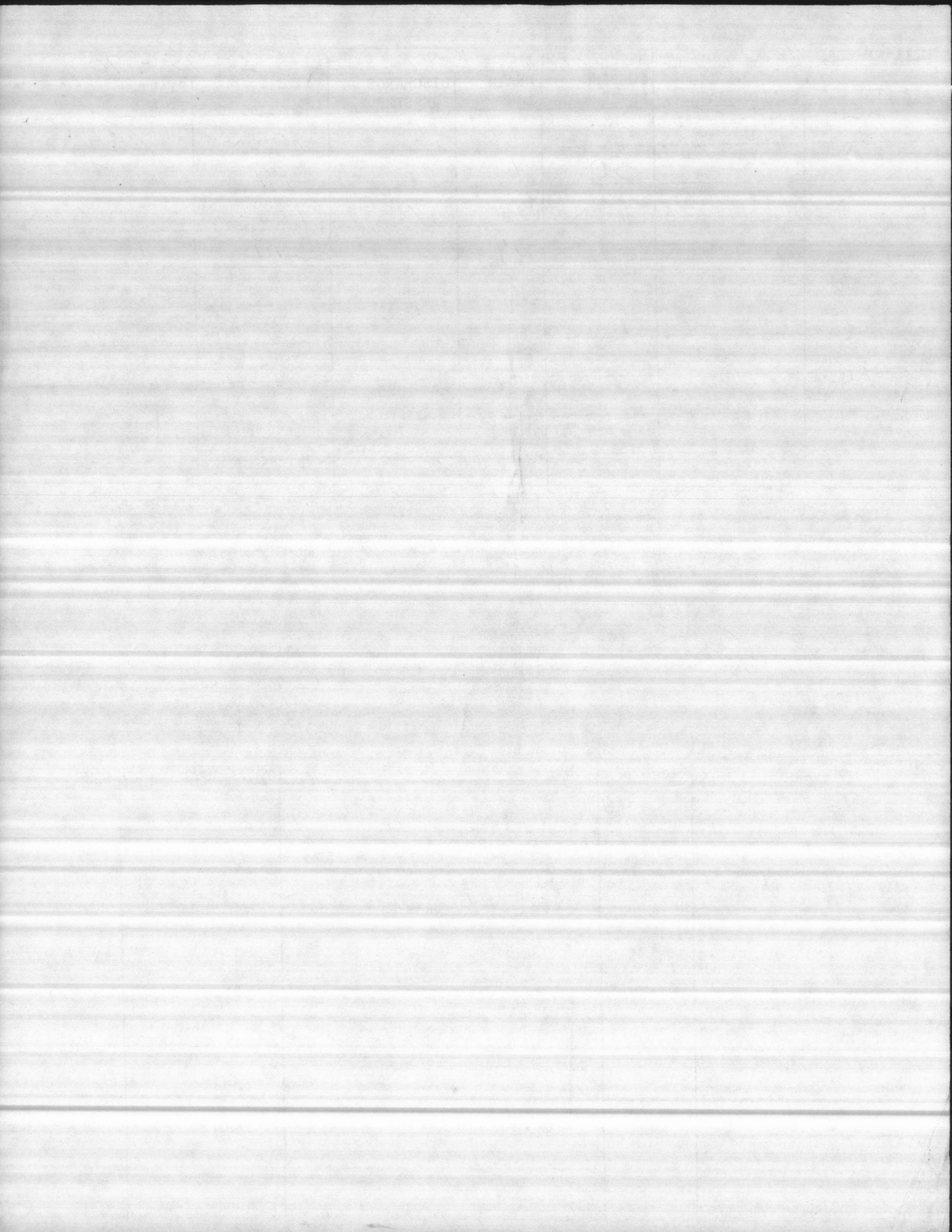
19

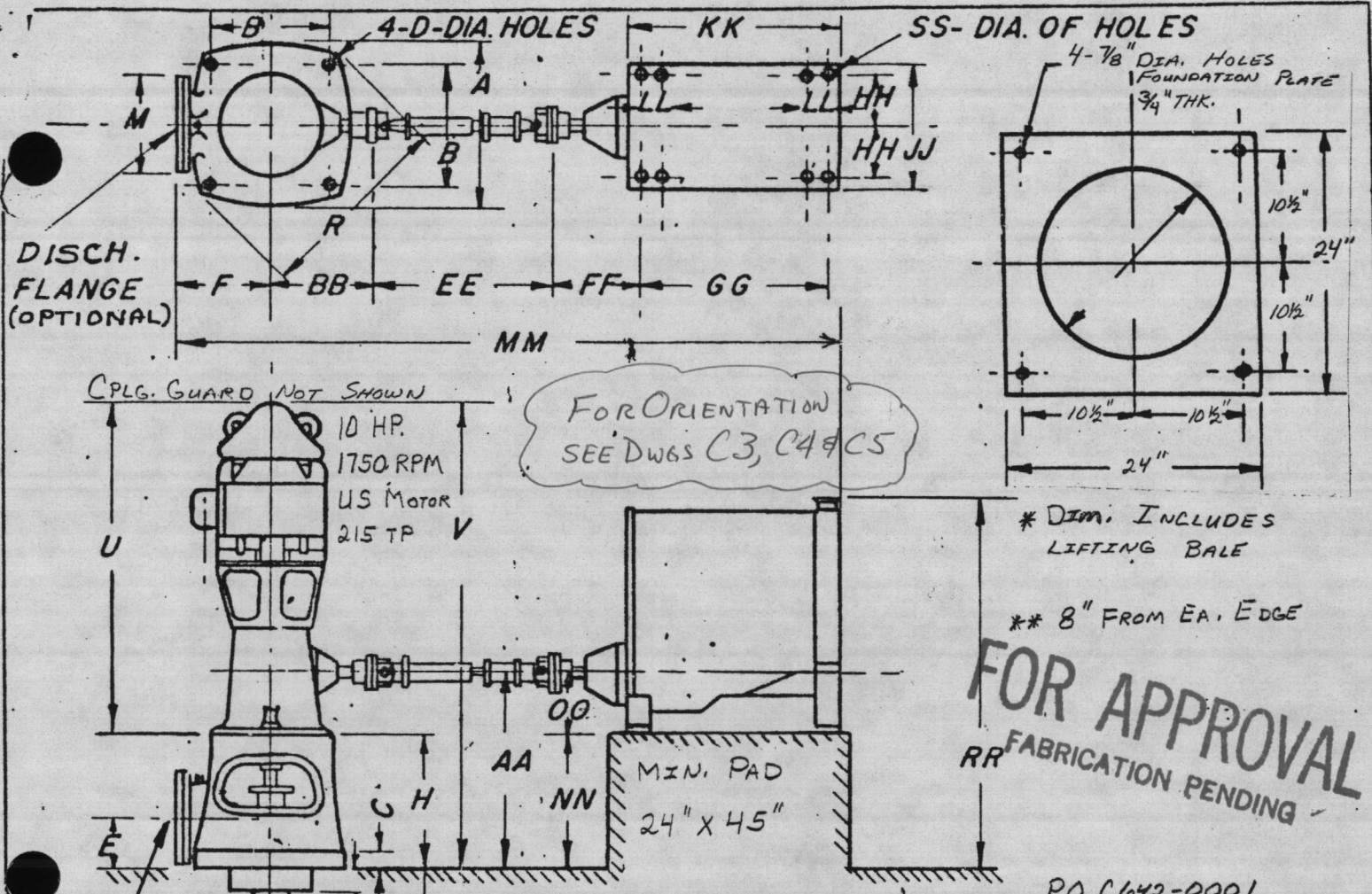
WELL NUMBER <i>706</i>		BY <i>Thomas - Brown</i>			DATE <i>3-15-90</i>	
AIR LINE	STATIC LEVEL	PUMPING LEVEL	DRAIN DOWN	DISCHARGE PRESSURE	GPM	START TIME
<i>85'</i>	<i>33</i>	<i>47</i>	<i>14</i>	<i>19</i>	<i>100</i>	<i>05</i>
		<i>50</i>	<i>17</i>	<i>15</i>	<i>149</i>	<i>15</i>
		<i>63</i>	<i>30</i>	<i>10</i>	<i>192</i>	<i>20</i>
		<i>67</i>	<i>34</i>	<i>05</i>	<i>214</i>	<i>45</i>
						<i>57</i>

REMARKS

Dead heads @ - 26'
Left set @ - 5' loss

MANUFACTURER	STAGE	S.N.	TOTAL HEAD	SIZE





"N" 125# ASA DISCHARGE

5"x1" COL. & SHAFT

4-STAGES

TT-SIZE OF SUCTION

PIPE & RAINER

HARRY PEPPER & ASSOC. INC.

S.O. 1635-08

DIMENSIONS

A	17"	Z	11'-0 3/8"
B	14 1/2"	CS	86'-6 3/4"
C	2"	OA	101'-0 3/8"
D	7/8"	AA	1'-10 1/4"
E	6 1/2"	BB	10 7/8"
F	9"	EE	24"
G	3 3/4"	FF	21 1/16"
H	15 1/2"	GG	29"
J	9 7/8"	HH	11 1/4"
M	11"	JJ	20"
N	6"	KK	45"
R	23"	LL	-
T	-	MM	7'-4 7/8"
U	3'-11 1/2"	NN	10 1/4"
V	5'-3"	OO	12"
W	6 1/4"	RR	56 1/4" *
X	7 1/2"	SS	5/8" **
Y	3'-5 1/4"	TT	5"

CAMP LEJEUNE NO. 8 WELL
TITLE
 VERTICAL TURBINE PUMP WITH
 COMBINATION RIGHT ANGLE GEAR
 DRIVE WITH ENGINE & MOTOR
 DATE 1-26-81 SCALE 1/4" = 1"

DATE OF ISSUE
 3-1-85
 DESTROY ALL PREVIOUS PRINTS
 FIG. 4700 SIZE M8
 DRAWING NO T82515

THE DEMING CO.
 SALEM, OHIO
 RPLW

FOR APPROVAL
FABRICATION BENDING

CAMP LEJEUNE NO. 8 WELL

DEMING PUMP CO.

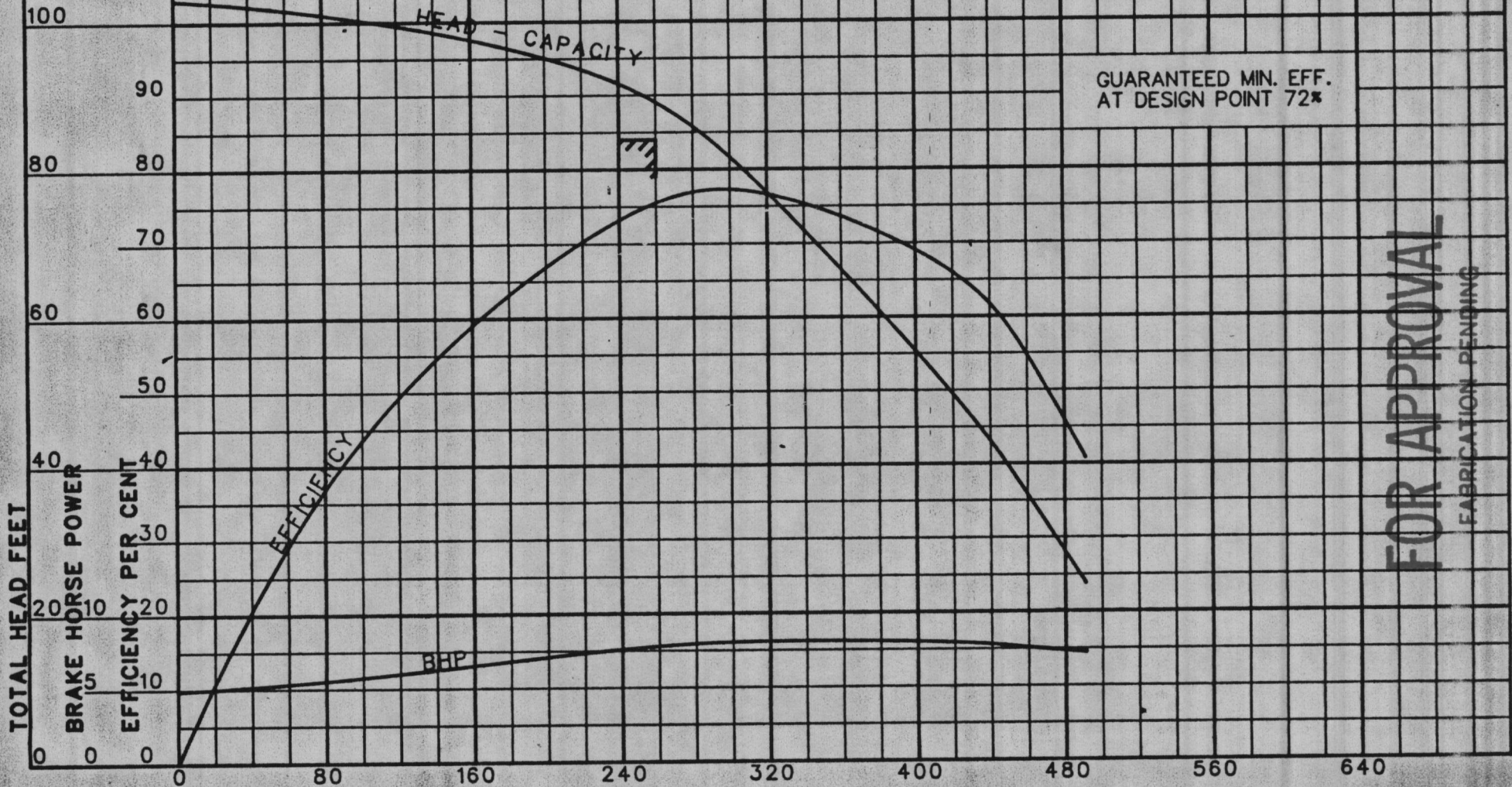
SALEM, OHIO, U.S.A.

120 HARRY PEPPER & ASSOC. INC. S.D. 1635-08 P.O. C642-0001

CHARACTERISTIC CURVES

FIG. 4700 SIZE M 8 STAGES 4 IMPELLER 22665
 DESIGNED RATING: G.P.M. 260 HEAD 84 R.P.M. 1770

OTHER CURVE POINTS AND GENERAL SHAPE OF CURVES ARE APPROXIMATE



GUARANTEED MIN. EFF. AT DESIGN POINT 72%

FOR APPROVAL
FABRICATION PENDING

SERIAL NO. ****

U. S. GALLONS PER MINUTE

DATE 2-20-85

IMP. DIA. 5 3/8"

NO. Q23643

EXERCISES

FOR THE STUDENT

WELL #706