

**MP 608 – Marshall, Michigan Incident
NTSB/PHMSA Information Request No. 82**

82 Reference: Email request by Matt Nicholson on October 1, 2010

Preamble:

Request: Provide Hydrotest records from original installation.

Required by: October 14th, 2010

Response: See attachments



LAKEHEAD PIPE LINE COMPANY

MAIN LINE PRESSURE TEST RECORD

Test Report Number: 6B1-69-17
Line Number: 6B1
Line Size: 30
Mile Post Location: From Milepost # 607.53 to 611
Date of Test: 11/22/69
Min Test Pressure: 792 at Milepost # 607.5
Test Medium: Water
MAOP: 624
Yield Strength:
Description: Test Section 2-D East - Ref. Dwg. D-6-5.73-1468--562.

FIELD PRESSURE & TEST REPORT

WILLIAMS PRESSURE SERVICE CORP.

Contractor or Company: H. G. Price Company - Lakehead Pipeline Company, Inc.
Pipe Line Description: Same as previous sheet
Section Tested: From: _____ To: _____
Test Section No.: _____ Length: _____
Type and Size of Pipe: _____ O. D. x _____ W.T. x Grade _____ Manufacturer: _____
Pressure Unit No.: _____ Gallons per Stroke: _____ Fill Unit No.: _____
Pressure Unit Location: _____ Water Source: _____
Time and Date Test Started: _____ ^{AM}/_{PM} Test Pressure (Maximum): _____ PSIG
Time and Date Test Ended: _____ ^{AM}/_{PM} Pressure Volume Plot: Yes _____ No _____
Section Accepted _____ Section Leaking _____ Section Ruptured _____

DEADWEIGHT RECORDED READING (PSIG)

Date: 11/21/69

TIME	PRESSURE	Temp.	TIME	PRESSURE	Temp.	TIME	PRESSURE	Temp.
AM PM			AM PM			AM PM		
11:15	792	22	5:45	792	21			
11:45	792	22	6:15	794	22			
12:15 AM	792	22	6:45	794	24			
12:45	792	22	7:15	794	26			
1:15	792	22	7:45	794	26			
1:45	793	20	8:15	794	26			
2:15	793	20	8:45	794	28			
2:45	793	20	9:15	794	32			
3:15	793	20	9:45	794	34			
3:45	793	20	10:15	794	34			
4:15	793	20	10:45	794	34			
4:45	793	20						
5:15	793	20						

Strokes per 10 psi: _____ Remarks: 11/22/69 - 10:45 AM - Test accepted.

WPS INC. Supt. s/ S. A. Kelly Inspector s/ Edward Kupsick
Witness: 1. s/ Milton Buford 2. s/ Lynn Kilparbiok

Gauges and Recorders Last Tested 2/69 Deadweight Serial No. 3090

FIELD PRESSURE & TEST REPORT

WILLIAMS PRESSURE SERVICE CORP.

Contractor or Company: H. C. Price Company - Lakehead Pipeline Company, Inc.

Pipe Line Description: Griffith, Indiana to Sarnia, Ontario

Section Tested: From: M.P. 607.53 Station 7495+04 To: M.P. 611.00 Station 7678+25
ASB & LPL MI.

Test Section No.: 2-D (East) Length: 3.47 Miles

Type and Size of Pipe: 30" O. D. x 0.250" W.T. x Grade X-52 Manufacturer: Italsider

Pressure Unit No.: 46 Gallons per Stroke: 0.55 Fill Unit No.: 4

Pressure Unit Location: M.P. 607.53 Station 7495+04 Water Source: Kalamazoo River

Time and Date Test Started: 6:10 ~~AM~~ 11/21/69 Test Pressure (Maximum): 798 @ Sta. ^{M.P. 607.53} 7495+04 PSIG

Time and Date Test Ended: 10:45 ~~AM~~ 11/22/69 Pressure Volume Plot: Yes Yes No No

Section Accepted Yes Section Leaking Section Ruptured

DEADWEIGHT RECORDED READING (PSIG)

TIME	PRESSURE	Temp.	TIME	PRESSURE	Temp.	TIME	PRESSURE	Temp.
Date: <u>11/21/69</u>								
<u>6:10 AM ^{AM}</u>	<u>798</u>	<u>20</u>	<u>9:50 AM ^{AM}</u>	<u>786</u>	<u>28</u>	<u>4:15 AM ^{PM}</u>	<u>793</u>	<u>30</u>
<u>6:20</u>	<u>792</u>	<u>20</u>	<u>10:10</u>	<u>785</u>	<u>30</u>	<u>4:45</u>	<u>793</u>	<u>30</u>
<u>6:30</u>	<u>790</u>	<u>20</u>	<u>10:30</u>	<u>785</u>	<u>30</u>	<u>5:15</u>	<u>793</u>	<u>28</u>
<u>6:40</u>	<u>789</u>	<u>20</u>	<u>10:45 *</u>	<u>785-798</u>	<u>30</u>	<u>5:45</u>	<u>792</u>	<u>26</u>
<u>6:50</u>	<u>789</u>	<u>20</u>	<u>11:15</u>	<u>796</u>	<u>30</u>	<u>6:15</u>	<u>792</u>	<u>26</u>
<u>7:00</u>	<u>788</u>	<u>20</u>	<u>11:45</u>	<u>795</u>	<u>31</u>	<u>6:45</u>	<u>792</u>	<u>24</u>
<u>7:10</u>	<u>788</u>	<u>20</u>	<u>12:15 PM</u>	<u>795</u>	<u>33</u>	<u>7:15</u>	<u>792</u>	<u>24</u>
<u>7:30</u>	<u>787</u>	<u>22</u>	<u>12:45</u>	<u>795</u>	<u>34</u>	<u>7:45</u>	<u>792</u>	<u>24</u>
<u>7:50</u>	<u>787</u>	<u>22</u>	<u>1:15</u>	<u>794</u>	<u>38</u>	<u>8:15</u>	<u>792</u>	<u>24</u>
<u>8:10</u>	<u>787</u>	<u>22</u>	<u>1:45</u>	<u>794</u>	<u>38</u>	<u>8:45</u>	<u>792</u>	<u>23</u>
<u>8:30</u>	<u>786</u>	<u>24</u>	<u>2:15</u>	<u>794</u>	<u>36</u>	<u>9:15</u>	<u>792</u>	<u>22</u>
<u>8:50</u>	<u>786</u>	<u>24</u>	<u>2:45</u>	<u>794</u>	<u>34</u>	<u>9:45</u>	<u>792</u>	<u>22</u>
<u>9:10</u>	<u>786</u>	<u>24</u>	<u>3:15</u>	<u>793</u>	<u>32</u>	<u>10:15</u>	<u>792</u>	<u>22</u>
<u>9:30</u>	<u>785</u>	<u>24</u>	<u>3:45</u>	<u>793</u>	<u>32</u>	<u>10:45</u>	<u>792</u>	<u>22</u>

Strokes per 10 psi: 195 Remarks: 10.7 Gallons per lb. * Repressure Interval.

11/21/69 - 6:10AM - Reached maximum pressure. Begin stabilization period.

10:45AM - Repressured and begin 24 hour test period.

Approximately 1200 feet of pipe was exposed.

WPS INC. Supt. s/ S. A. Kelly Inspector s/ Edward Kupsick

Witness: 1. s/ Milton Buford 2. s/ L. Kilpatrick

Gauges and Recorders Last Tested 2/69 Deadweight Serial No. 3090



WILLIAMS PRESSURE SERVICE CORPORATION

P. O. BOX 7392 • (318) 424-8331

SHREVEPORT, LOUISIANA 71107


February 3, 1970

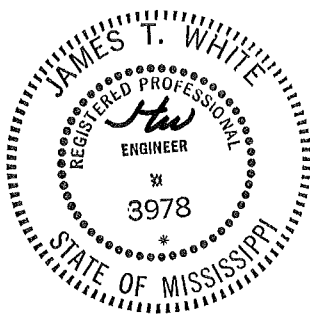
Lakehead Pipeline Company, Inc.
3025 Tower Avenue
Superior, Wisconsin 54880

Gentlemen:

This is to certify that Test Section 2-D (East), a ^{ASB} 3.47 Mile section _{ELPL MI.} of 30" O. D. x 0.250" w.t. X-52 pipeline constructed in 1969 by H. C. Price Company between Sta. ^{M.P. 607.53} 7495+04 and Sta. ^{M.P. 611.00} 7678+25 in the State of Michigan has been tested to a minimum pressure of 783 P.S.I.G. and a maximum pressure of 820 P.S.I.G. for a minimum period of 24 hours.

This is to certify that this data, a copy of which is in Williams Pressure Service Corporation permanent files is true and correct.


James T. White
Chief Engineer

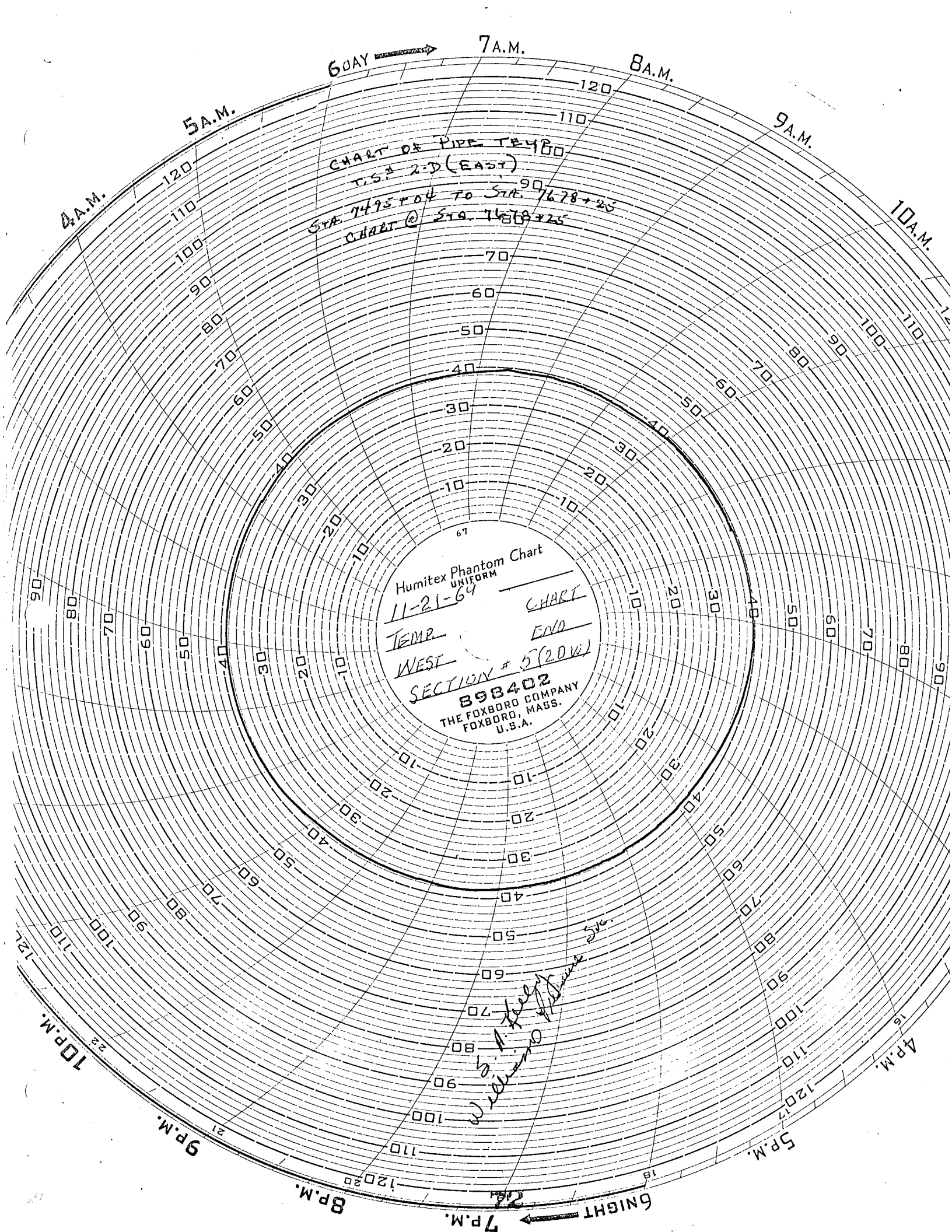


PRESSURE STROKE DATA

30" O. D. x 0.250" WT Pipe, Test Section 2-D (East)

Location ~~XXX~~ Sta. 7495+04 Date 11/21/69

<u>Pressure</u> <u>PSIG</u>	<u>Strokes</u>	<u>Pressure</u> <u>PSIG</u>	<u>Strokes</u>
600	0	775	3326
605	114	780	3412
610	179	785	3502
615	280	790	3598
620	382	795	3679
625	475	798	3739
630	570		
635	680		
640	780		
645	890		
650	883		
655	1078		
660	1181		
665	1276		
670	1377		
675	1475		
680	1573		
685	1668		
690	1759		
695	1851		
700	1948		
705	2045		
710	2137		
715	2238		
720	2326		
725	2419		
730	2506		
735	2593		
740	2689		
745	2780		
750	2864		
755	2957		
760	3046		
765	3139		
770	3228		



6 DAY →

7 A.M.

8 A.M.

9 A.M.

10 A.M.

CHART OF PIPE T-2480

U.S. # 2-D (EAST)

STA 7495+04 TO STA 7678+25

CHART @ STA 7678+25

Humitex Phantom Chart
UNIFORM

11-21-64

TEMP. WEST

CHART

END

SECTION # 5 (2D W)

898402
THE FOXBORO COMPANY
FOXBORO, MASS.
U.S.A.

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8 P.M.

7 P.M.

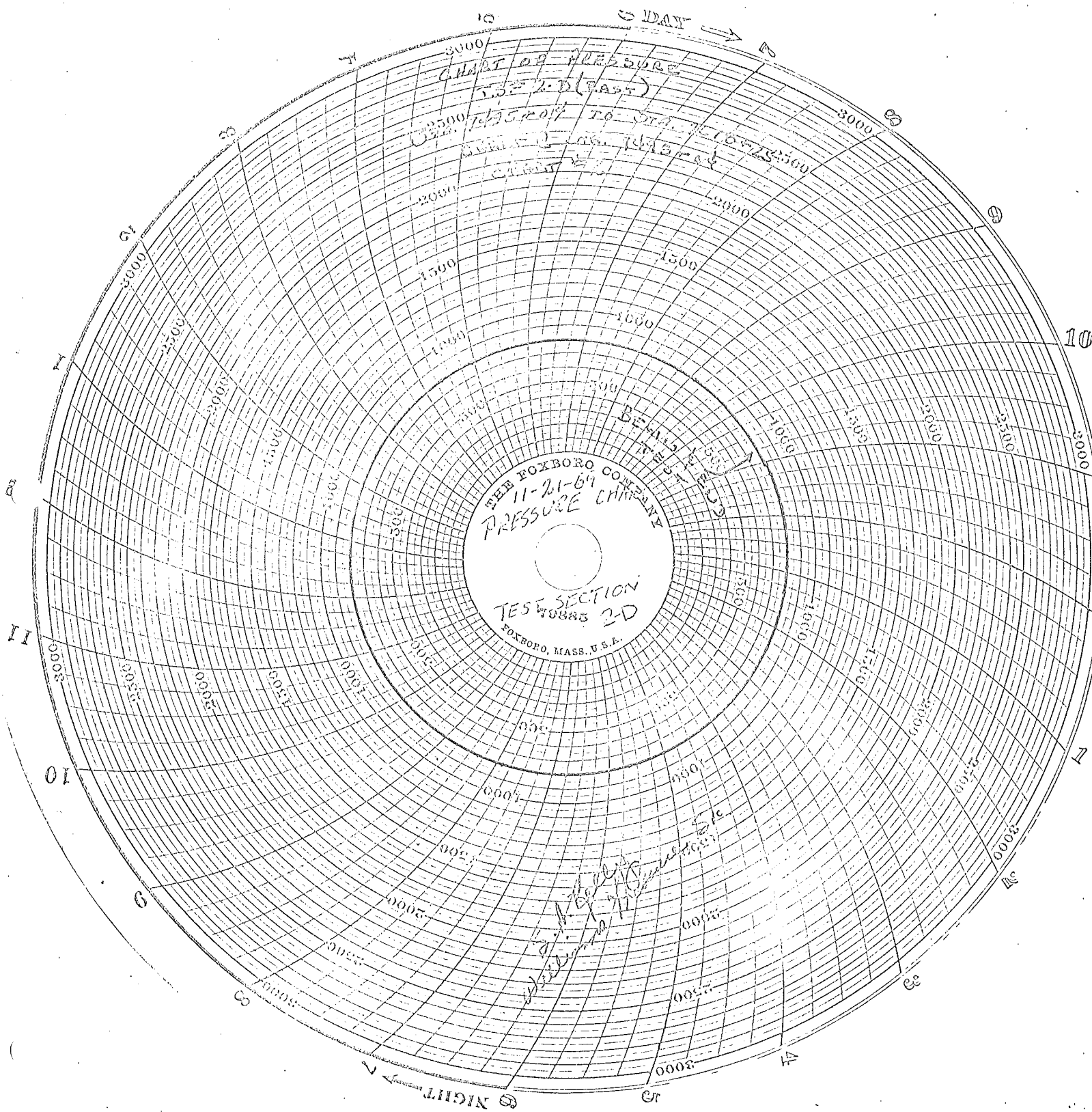
6 NIGHT ←

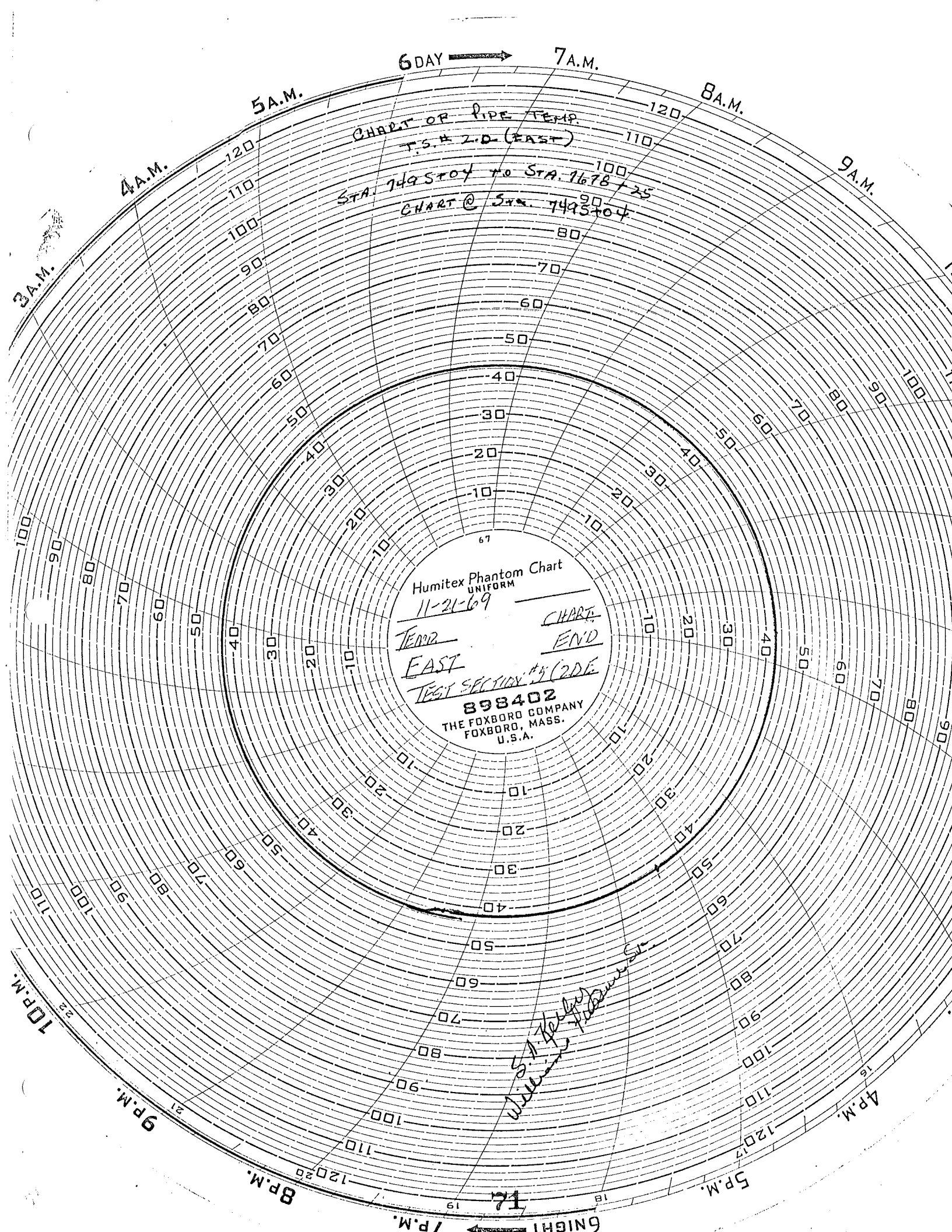
5 P.M.

4 P.M.

10 P.M.

9 P.M.





6 DAY → 7 A.M.

5 A.M.

8 A.M.

9 A.M.

4 A.M.

3 A.M.

CHART OF PIPE TEMP.
T.S. # 2.D. (EAST)

STA. 7495704 to STA. 7495725

CHART @ STA. 7495704

Humitex Phantom Chart
UNIFORM

11-21-69

TEMP
EAST

CHART
END

TEST SECTION #5 (2DE)

898402
THE FOXBORO COMPANY
FOXBORO, MASS.
U.S.A.

S.A. Kelly
District Engineer

10 P.M.

9 P.M.

8 P.M.

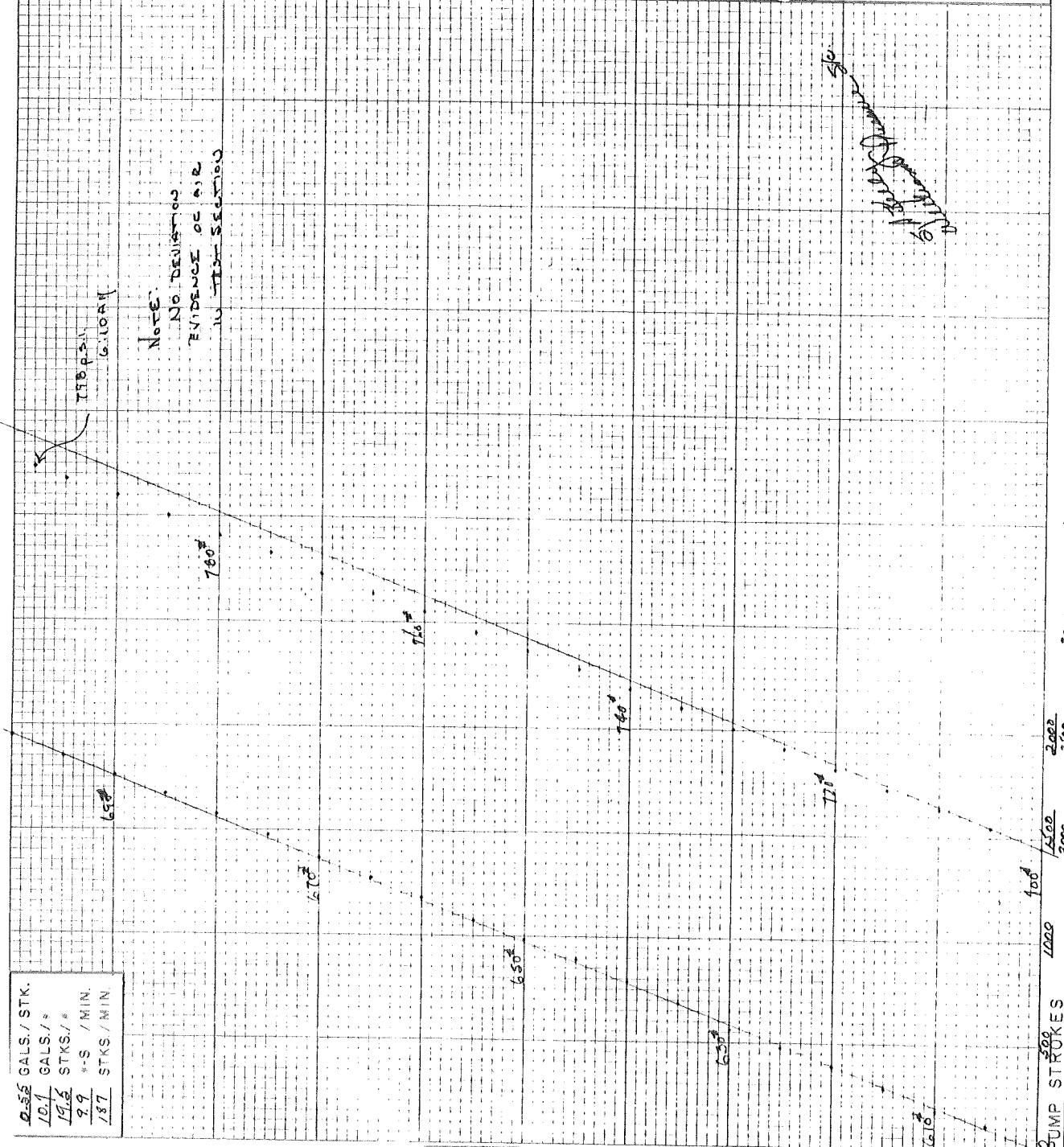
6 NIGHT ← / P.M.

7

5 P.M.

4 P.M.

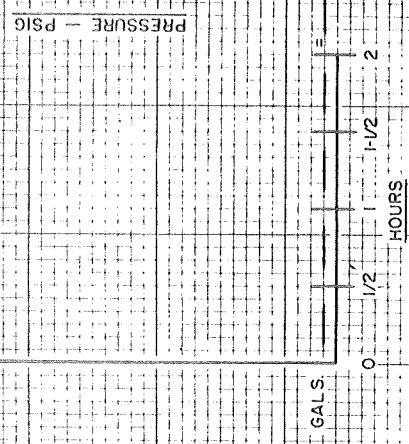
2.55 GALS. / STK.
 10.1 GALS. / *
 9.2 STKS. / *
 9.9 * - S / MIN.
 1.87 STKS. / MIN.



770 PSI
 G. LOAN

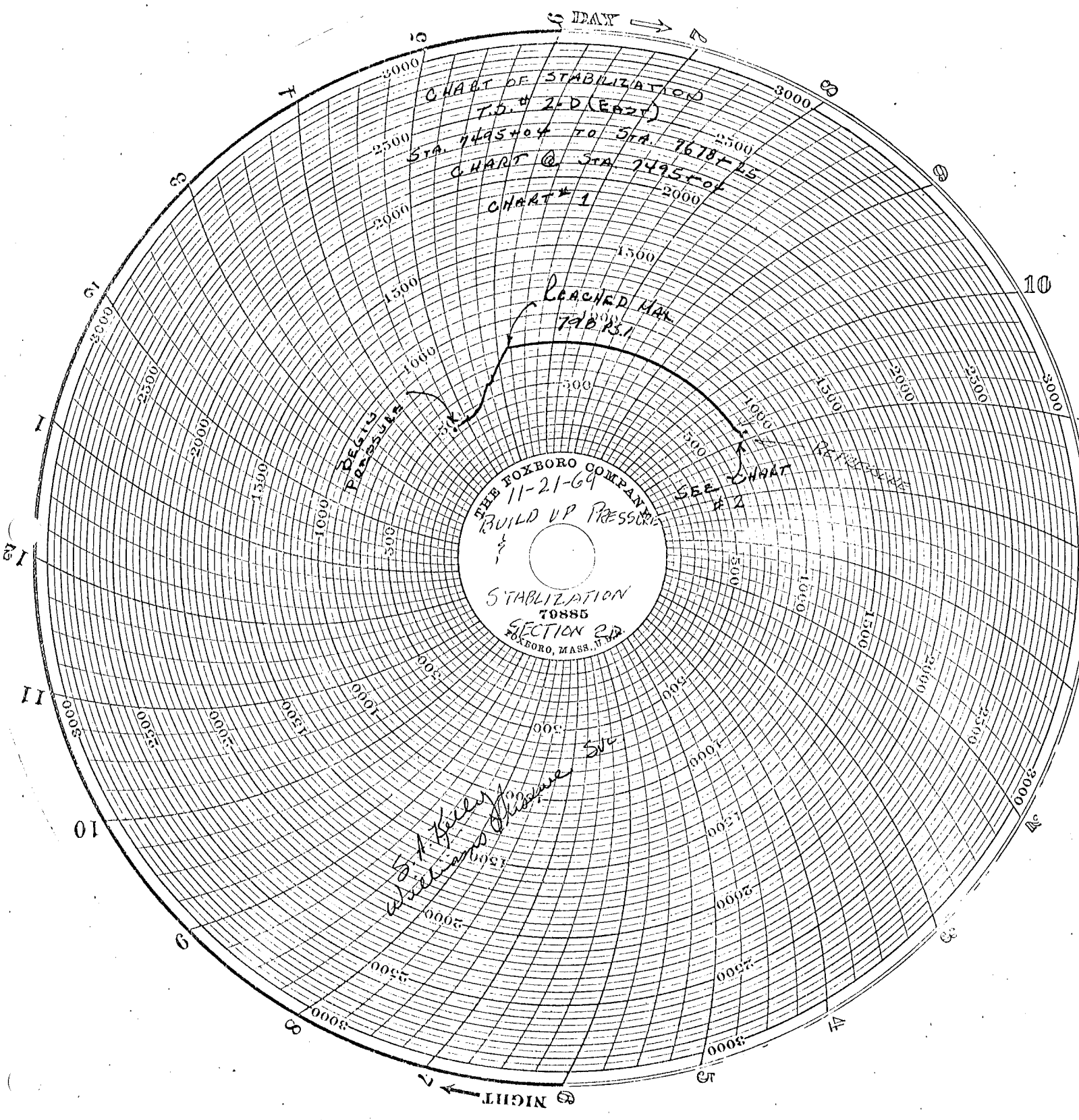
NOTE:
 NO DEVIATION
 EVIDENCE OF AIR
 IN TEST SECTION

611
 S. A. Kelley



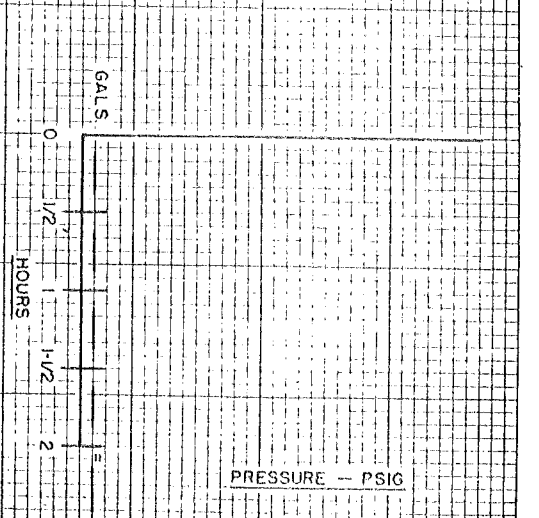
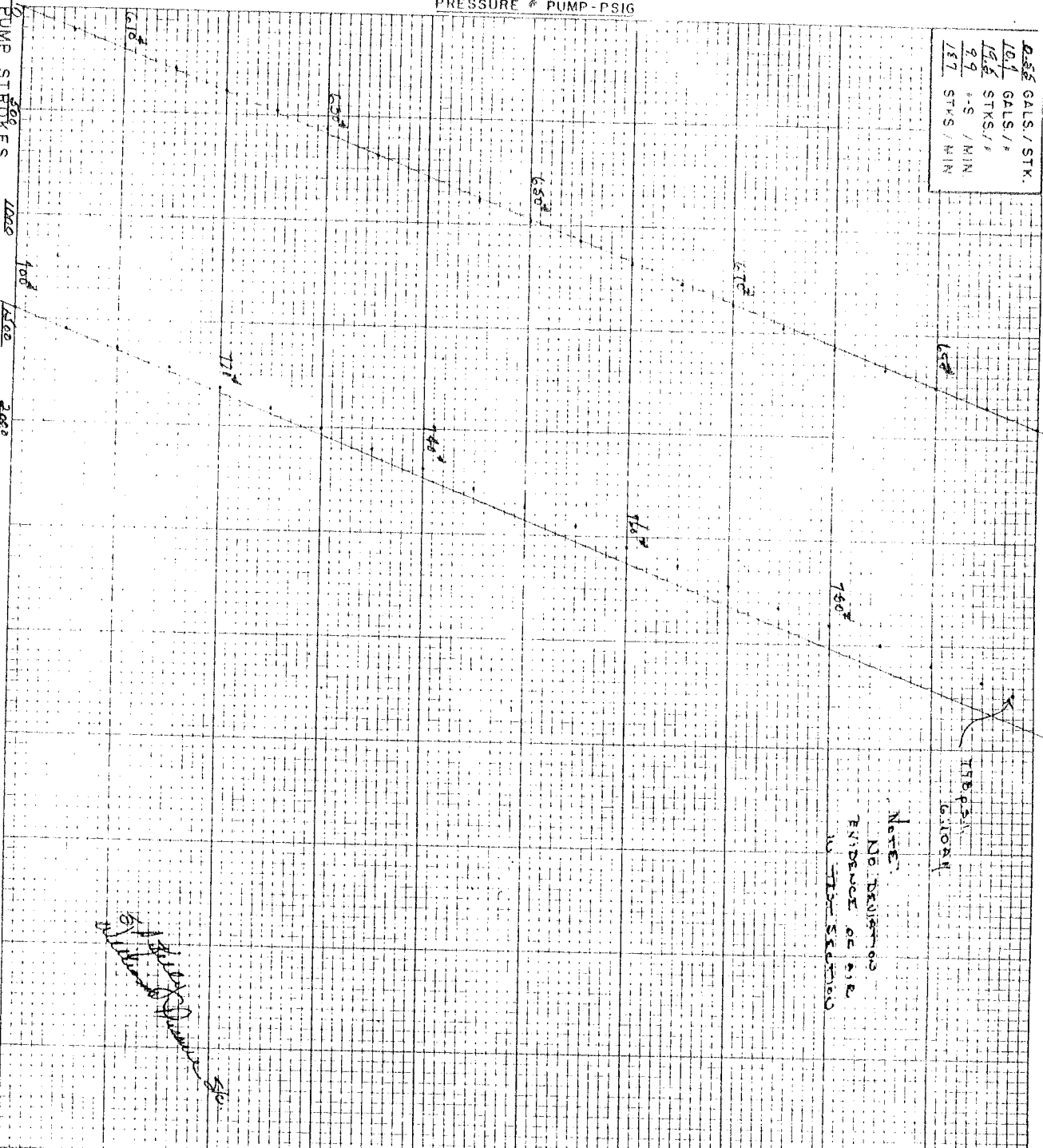
STROKE - PRESSURE GRAPH
 30" O.D. x 0.0250" WALL - X-52 PIPE
 GRAFFERTY TO SARDIA LINE
 JOB # _____ T.S. # 2-D EAST PIPE
 145104 TO 347 MILES
 PRESS. PUMP @ 52.2 WPS-54 M.P.
 DATE TEST ACCEPTED 11/22/69
 TEST ENGINEER S.A. Kelley

I.D. STRESS O.D. STRESS
 198 # PRESS PUMP - 47082 PSI 41880 PSI
 783 # HIGH ELEV. PT. - 46,197 PSI 46,950 PSI
 820 # LOW ELEV. PT. - 48,580 PSI 49,200 PSI
 GALLONS DEVIATION = _____ GALLONS
 GALLONS DEV. / MI. = _____ GALLONS / MILE
 GALLONS PER JT. = _____ GALLONS
 NO. OF 40 FOOT JTS _____ JOINTS
 % YIELD OF - 1% - JTS. = (_____) - 1 = _____ %
 % YIELD OF - 10% - JTS. = (_____) - 10 = _____ %
 % YIELD OF - 1% - JTS. = (_____) - 1 = _____ %
 % YIELD OF - 2% - JTS. = (_____) - 2 = _____ %



PRESSURE * PUMP - PSIG

0.55 GALS / STK.
 10.1 GALS / #
 18.8 STKS / #
 9.9 # S / MIN
 18.7 STKS / MIN



STROKE - PRESSURE GRAPH

30" O.D. x 0.0250" WALL - X - 52 PIPE

GENERATED TO SERRA LINE

JOB # _____ T.S. # 2-D EAST

LENGTH OF TEST SECTION _____ MILES

FROM 2495124 TO 5147 2618+25

PRESS. PUMP @ 520 785+04 M.P.

DATE TEST ACCEPTED 11/22/69

TEST ENGINEER S.H. JONES

J.D. STRESS	O.D. STRESS
198 #6 PRESS PUMP - 47002 PSI	41800 PSI
183 #6 HIGH ELEV. PT. - 46197 PSI	40960 PSI
820 #6 LOW ELEV. PT. - 48380 PSI	49200 PSI

GALLONS DEVIATION = _____ GALLONS
 GALLONS DEV. / MI. = _____ GALLONS / MILE
 GALLONS PER 40 FT. = _____ GALLONS
 NO. OF 40 FOOT JTS = _____ JOINTS
 % YIELD OF -1- JTS = _____ %
 % YIELD OF 10- JTS = _____ %
 % YIELD OF -1% JTS = _____ %
 % YIELD OF -2% JTS = _____ %

60005
 S.S. 6/4
 11/21/69