



Pacific Gas and Electric Company
Gas Pipeline Facilities Strength Test Pressure Report
 (For Pipeline Facilities Designed to Operate over 100 PSIG)

92-1921 (Rev. 7/89)
 Gas & Electric Technical Services
 (Use in Accordance with Gas Std. A-34 and GO 112)

Sheet 3 of 4

PART I—DESIGN DATA—(TO BE PREPARED BY PROJECT ENGINEER)

Feeder Main, Line No., or Sta. <u>L-109</u>	Region/PLO <u>GOLDEN GATE</u>	Division/Area <u>SKYLINE</u>	Job Order No. <u>GM 4966073</u>	Date Job Order Authorized
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Description of Job—Include Reference Drawing Numbers
REPLACE 1400' of Line 109 on SULLIVAN AVE., DOLY CITY
DWG 489310

Location Class <u>3</u>	Design Factor (F) <u>0.5</u>	MAOP of Existing Facilities <u>400 PSIG</u>	MAOP to Be Established for This Section by This Test <u>400 PSIG</u>	Design Pressure—This Section (Use Future Design Pressure Whenever Possible) <u>400 PSIG</u>
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STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE)	Max. Elevation <u>142.5</u> Ft.	Static Head Calculation for Water 0.433 X Elev. Diff. = <u>22.6</u> PSIG
	Min. Elevation <u>90.2</u> Ft.	
	Elev. Diff. <u>52.3</u> Ft.	
Other (Specify) _____		X Elev. Diff. = _____ PSIG

Pipe Specification		Footage To Be Tested	Pipe Spec. and Footage Verified in Field	% of SMYS			Press. To Give 90% SMYS
Size	API or ASTM Grade Long Seam (ERW, DSAW, Seamless, Etc.)			At Design Press.	At Min. Test Press.	At Max. Test Press.	
O.D. <u>24.00"</u> W.T. <u>0.312"</u>	<u>API-5L, X60 DSAW</u>	<u>1020</u> <u>939.9</u>	<u>KS</u>	<u>25.6</u>	<u>90</u>	<u>95</u>	<u>1404</u>

4966073
 L-109 SEG 190.8

Min. Test Press. <u>1404</u> PSIG	Test fluid to be used. <u>WATER</u>	MINIMUM TEST DURATION: - UNDER 30% SMYS (1 HR. MIN.) - 30% SMYS & OVER (8 HRS. MIN.) - PREINSTALLATION TEST (SEE APPENDIX "A", GAS STD. A-34)	<u>1</u> HRS.
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Information or Changes, Call 3-4724 Approved By: _____ Date: 7/30/91

Note: Minimum test pressure and duration are not to be changed without written approval.

10.2 FEET	Min. Required Test Press at Test Point (1) PSIG	<u>1426.6</u>	Max. Allowable Test Press at Test Point (4) PSIG	<u>1482</u>
142.5 FEET	Min. Indicated Test Press (2) PSIG	<u>1445</u>	Max. Indicated Test Press (5) PSIG	<u>1460</u>
90.2 FEET	Min. Test Press at Max. Elevation (3) PSIG	<u>1422</u>	Max. Test Press at Min. Elev (6) PSIG	<u>1460</u>

Test Fluid Used WATER Pipe Spec. & Footage Verified (See Part I) _____

Make, Range, and Serial No. of Pressure Recording Gauge <u>MERCURY, 0-2000 PSI, 8905549</u>	Date Last Calibration <u>9/26/91</u>	Make, Range, and Serial No. of Dead Weight Tester (See Note 7) <u>CHANDLER, 0-2000 PSI, 57000</u>	Date Last Calibration <u>7/25/91</u>
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Test Supervised By: _____	Date: <u>10/10/91</u>	Approved By: _____	Date: <u>10/11/91</u>
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PUT SCHEMATIC SKETCH ON BACK OF THIS SHEET
 SHOW LOCATION OF FACILITY TESTED, MIN. & MAX. ELEVATION IN FEET, MILE POINTS, VALVE NUMBERS AND INCORPORATED AREAS. USE AN ADDITIONAL SHEET IF NECESSARY (SHOW REFERENCE NUMBERS ON FACE OF ALL DRAWINGS AND ATTACHMENTS). FOR STATION PIPING, FABRICATED UNITS AND SHORT SECTION OF PIPE, ALSO SHOW A DETAILED SKETCH OF EACH ASSEMBLY TESTED.

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| <p>NOTES</p> <ol style="list-style-type: none"> Add the static head due to elevation difference (between test point and maximum elevation) to "minimum test pressure at maximum elevation" from PART I. Lowest pressure on test gauge at any time during test. Subtract static head due to elevation difference (between test point and maximum elevation) from minimum indicated test pressure. Subtract static head due to elevation difference (between test point and minimum elevation from "maximum test pressure at minimum elevation" from PART I. Highest pressure on test gauge at any time during test. Add static head due to elevation difference (between test point and minimum elevation) to maximum indicated test pressure. A DEAD WEIGHT TESTER IS ONLY REQUIRED WHEN TESTING TO A PRESSURE WHICH PRODUCES A STRESS LEVEL OF 90% OF SMYS OR GREATER. HOWEVER, IF A DEAD WEIGHT TESTER IS USED ON ANY TEST, ENTER THE INFORMATION IN THE SPACE PROVIDED ABOVE. | <p>DISTRIBUTION</p> <p>DIVISION GAS & ELECTRIC OPERATIONS MANAGER
 JOB FILE
 REGION GAS MANAGER
 PROJECT ENGINEER
 GC GAS—ASSIGNED JOBS
 PLANT ACCOUNTING (WITH FOREMAN'S COPY OF JOB)
 *PIPELINE HISTORY FILE
 REPORT FAILURES UNDER TEST TO GAS SYSTEM DESIGN AND GAS DISTRIBUTION DEPARTMENTS</p> |
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Pacific Gas and Electric Company
Gas Pipeline Facilities Strength Test Pressure Report
 (For Pipeline Facilities Designed to Operate over 100 PSIG)

32-1921 (Rev. 7/89)
 Gas & Electric Technical Services
 (Use in Accordance with Gas Std. A-34 and GO 112)

Sheet 3 of 4

PART I—DESIGN DATA—(TO BE PREPARED BY PROJECT ENGINEER)

Feeder Main, Line No., or Sta. <u>L-109</u>	Region/PLO <u>GOLDEN GATE</u>	Division/Area <u>SKYLINE</u>	Job Order No. <u>GM 4966073</u>	Date Job Order Authorized
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Description of Job—Include Reference Drawing Numbers
REPLACE 1400' of Line 109 on SULLIVAN AVE., DOLY CITY
DWG 489310

Location Class <u>3</u>	Design Factor (F) <u>0.5</u>	MAOP of Existing Facilities <u>400</u> PSIG	MAOP to Be Established for This Section by This Test <u>400</u> PSIG	Design Pressure—This Section (Use Future Design Pressure Whenever Possible) <u>400</u> PSIG
STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE)		Max. Elevation <u>142.5</u> Ft.	Min. Elevation <u>90.2</u> Ft.	Elev. Diff. <u>52.3</u> Ft.
			Static Head Calculation for Water	0.433 X Elev. Diff. = <u>22.6</u> PSIG
			Other (Specify)	X Elev. Diff. = PSIG

Pipe Specification		Footage To Be Tested	Pipe Spec. and Footage Verified in Field	% of SMYS			Press. To Give 90% SMYS
Size	API or ASTM Grade Long Seam (ERW, DSAW, Seamless, Etc.)			At Design Press.	At Min. Test Press.	At Max. Test Press.	
O.D.	W.T.						
<u>24.00"</u>	<u>0.312"</u>	<u>1020</u>	<u>KS</u>	<u>25.6</u>	<u>90</u>	<u>95</u>	<u>1404</u>
		<u>939.9</u>					

Minimum Test Pressure @ Max. Elevation	<u>1404</u> PSIG	Test fluid to be used.	MINIMUM TEST DURATION: - UNDER 30% SMYS (1 HR. MIN.) - 30% SMYS & OVER (8 HRS. MIN.) - PREINSTALLATION TEST (SEE APPENDIX "A", GAS STD. A-34)
Maximum Test Pressure @ Min. Elevation	<u>1482</u> PSIG	<u>WATER</u>	<u>1</u> HRS.

Prepared By	Date <u>7/30/91</u>	For Information or Changes, Call <u>223-4724</u>	Approved By	Date <u>7/30/91</u>
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PART II—TEST DATA—To be prepared by person supervising test at time of test. Note: Minimum test pressure and duration are not to be changed without written approval.

*Time and Date Test Pressure Reached	<u>7:45 PM</u> <u>10/1/91</u>	Elevation at Test Point	<u>90.2</u> FEET	Min. Required Test Press at Test Point	<u>1426.6</u> (1) PSIG	Max. Allowable Test Press at Test Point	<u>1482</u> (4) PSIG
Time and Date Test Ended	<u>8:55 PM</u> <u>10/1/91</u>	Max. Elevation in Test Section	<u>142.5</u> FEET	Min. Indicated Test Press	<u>1445</u> (2) PSIG	Max. Indicated Test Press	<u>1460</u> (5) PSIG
Actual Duration of Test	<u>1 HR. 10 MIN.</u>	Min. Elevation in Test Section	<u>90.2</u> FEET	Min. Test Press at Max. Elevation	<u>1422</u> (3) PSIG	Max. Test Press at Min. Elev	<u>1460</u> (6) PSIG

Test Fluid Used WATER Pipe Spec. & Footage Verified (See Part I)

Make, Range, and Serial No. of Pressure Recording Gauge <u>MERCURY, 0-2000 PSI, 89055490</u>	Date Last Calibration <u>9/26/91</u>	Make, Range, and Serial No. of Dead Weight Tester (See Note 7) <u>CHANDLER, 0-2000 PSI, SER # 35000</u>	Date Last Calibration <u>7/25/91</u>
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Test Supervised By: [Redacted]	Date: <u>10/10/91</u>	Approved By: [Redacted]	Date: <u>10/11/91</u>
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PUT SCHEMATIC SKETCH ON BACK OF THIS SHEET
 SHOW LOCATION OF FACILITY TESTED, MIN. & MAX. ELEVATION IN FEET, MILE POINTS, VALVE NUMBERS AND INCORPORATED AREAS. USE AN ADDITIONAL SHEET IF NECESSARY (SHOW REFERENCE NUMBERS ON FACE OF ALL DRAWINGS AND ATTACHMENTS). FOR STATION PIPING, FABRICATED UNITS AND SHORT SECTION OF PIPE, ALSO SHOW A DETAILED SKETCH OF EACH ASSEMBLY TESTED.

NOTES

- (1) Add the static head due to elevation difference (between test point and maximum elevation) to "minimum test pressure at maximum elevation" from PART I.
- (2) Lowest pressure on test gauge at any time during test.
- (3) Subtract static head due to elevation difference (between test point and maximum elevation) from minimum indicated test pressure.
- (4) Subtract static head due to elevation difference (between test point and minimum elevation from "maximum test pressure at minimum elevation" from PART I.
- (5) Highest pressure on test gauge at any time during test.
- (6) Add static head due to elevation difference (between test point and minimum elevation) to maximum indicated test pressure.
- (7) A DEAD WEIGHT TESTER IS ONLY REQUIRED WHEN TESTING TO A PRESSURE WHICH PRODUCES A STRESS LEVEL OF 90% OF SMYS OR GREATER. HOWEVER, IF A DEAD WEIGHT TESTER IS USED ON ANY TEST, ENTER THE INFORMATION IN THE SPACE PROVIDED ABOVE.

DISTRIBUTION

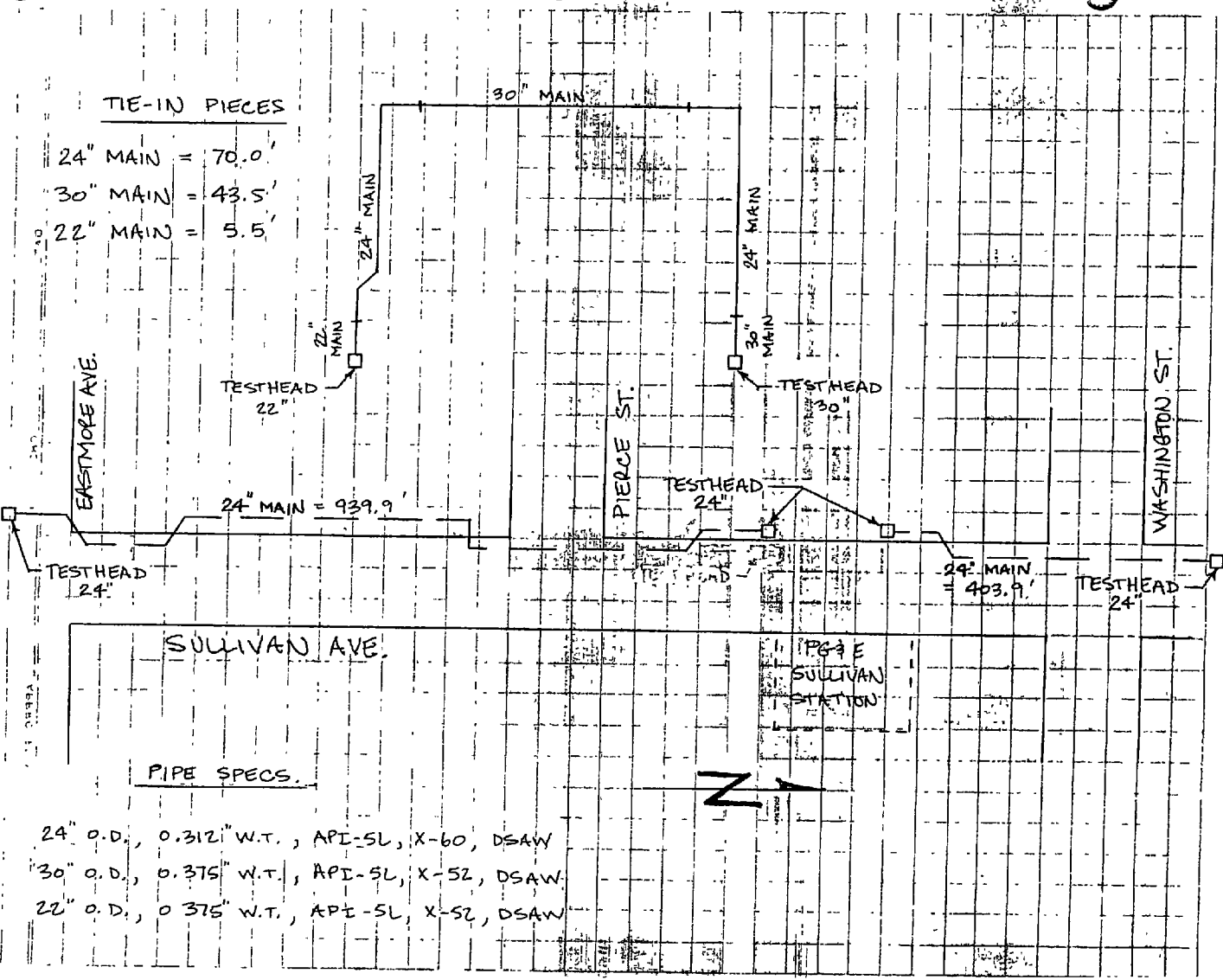
- DIVISION GAS & ELECTRIC OPERATIONS MANAGER
- JOB FILE
- REGION GAS MANAGER
- PROJECT ENGINEER
- GC GAS—ASSIGNED JOBS
- PLANT ACCOUNTING (WITH FOREMAN'S COPY OF JOB)
- *PIPELINE HISTORY FILE
- REPORT FAILURES UNDER TEST TO GAS SYSTEM DESIGN AND GAS DISTRIBUTION DEPARTMENTS

P. 11 502

PETE
COLMA
YARD

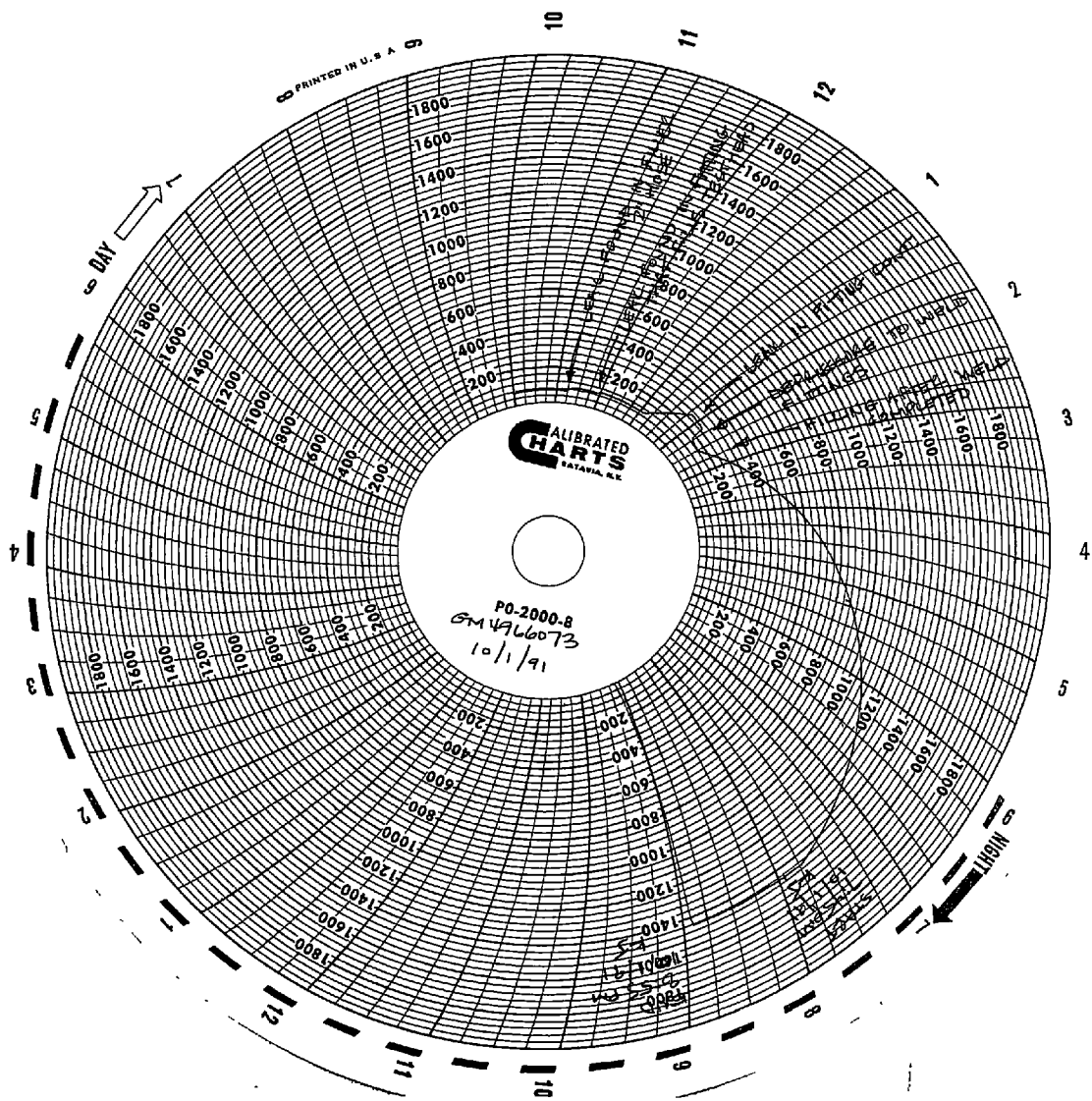
TIE-IN PIECES

- 24" MAIN = 70.0'
- 30" MAIN = 43.5'
- 22" MAIN = 5.5'



PIPE SPECS.

- 24" O.D., 0.312" W.T., API-5L, X-60, DSAW
- 30" O.D., 0.375" W.T., API-5L, X-52, DSAW
- 22" O.D., 0.375" W.T., API-5L, X-52, DSAW



STRENGTH TEST INFORMATION
JOB 4966073
LOCATION SULLIVAN AVE. DALY CITY
3. DATE 10/11/91 PRESSURE 1445 PSI
4. TIME 7:45 PM - 8:55 AM DURATION 1 HR. 10 MIN.
5. LENGTH 939.9' 24" W.T. 0.312"
6. PIPE SPEC. API-5L X-60 DSAW
7. RECORDING GAUGE MERCURY SER. 8905549
RANGE 0 - 2000 PSI TEST CALIBRATED 9/26/91
DEAD WGT. CHANDLER LAST CALIBRATED 7/25/91
TEST FLUID WATER
12. SUPERVISOR [REDACTED] DATE 10/11/91
13. APPROVED [REDACTED] DATE 10/11/91

STRENGTH TEST INFORMATION

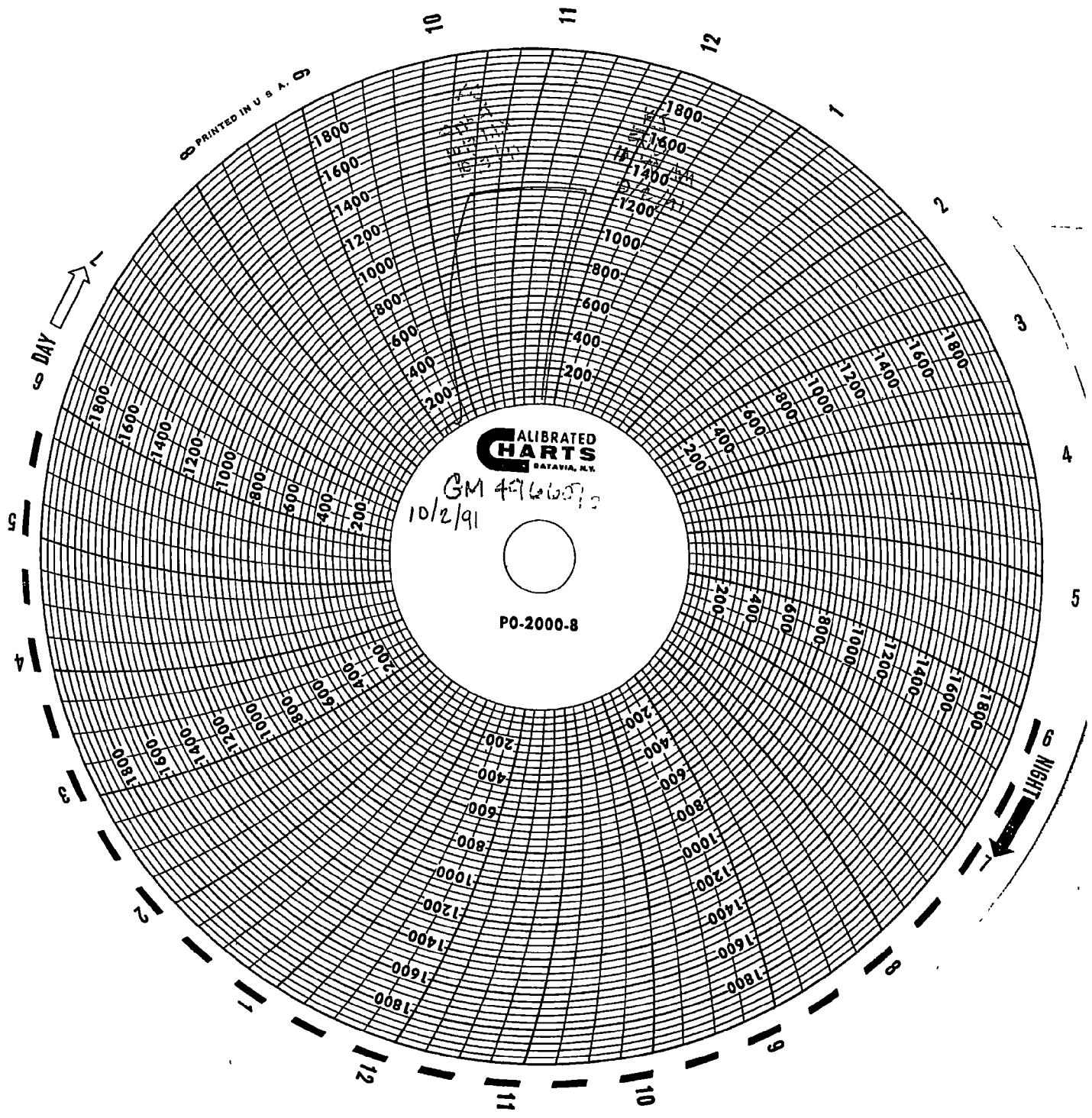
JOB 4966073
 LOCATION SULLIVAN AVE. DALY CITY
 DATE 10/2/91 PRESSURE 1210 PSI
 TIME 10:27 AM - 11:40 AM DURATION 1 HR. 13 MIN.
 LENGTH PIPE SPEC. SIZE
 RECORDING GAUGE MERCURY
 RANGE 0-2000 PSI
 TEST FLUID CHANDLER SER. 8905548
 TEST FLUID WATER SER. 7000
 SUPERVISED
 APPROVED

LAST CALIBRATED 9/26/91
 LAST CALIBRATED 7/25/91
 DATE 10/11/91
 DATE 12/1/91

LENGTH	SIZE	WT.
70.0'	24"	0.312"
43.5'	30"	0.375"
5.5'	22"	0.375"

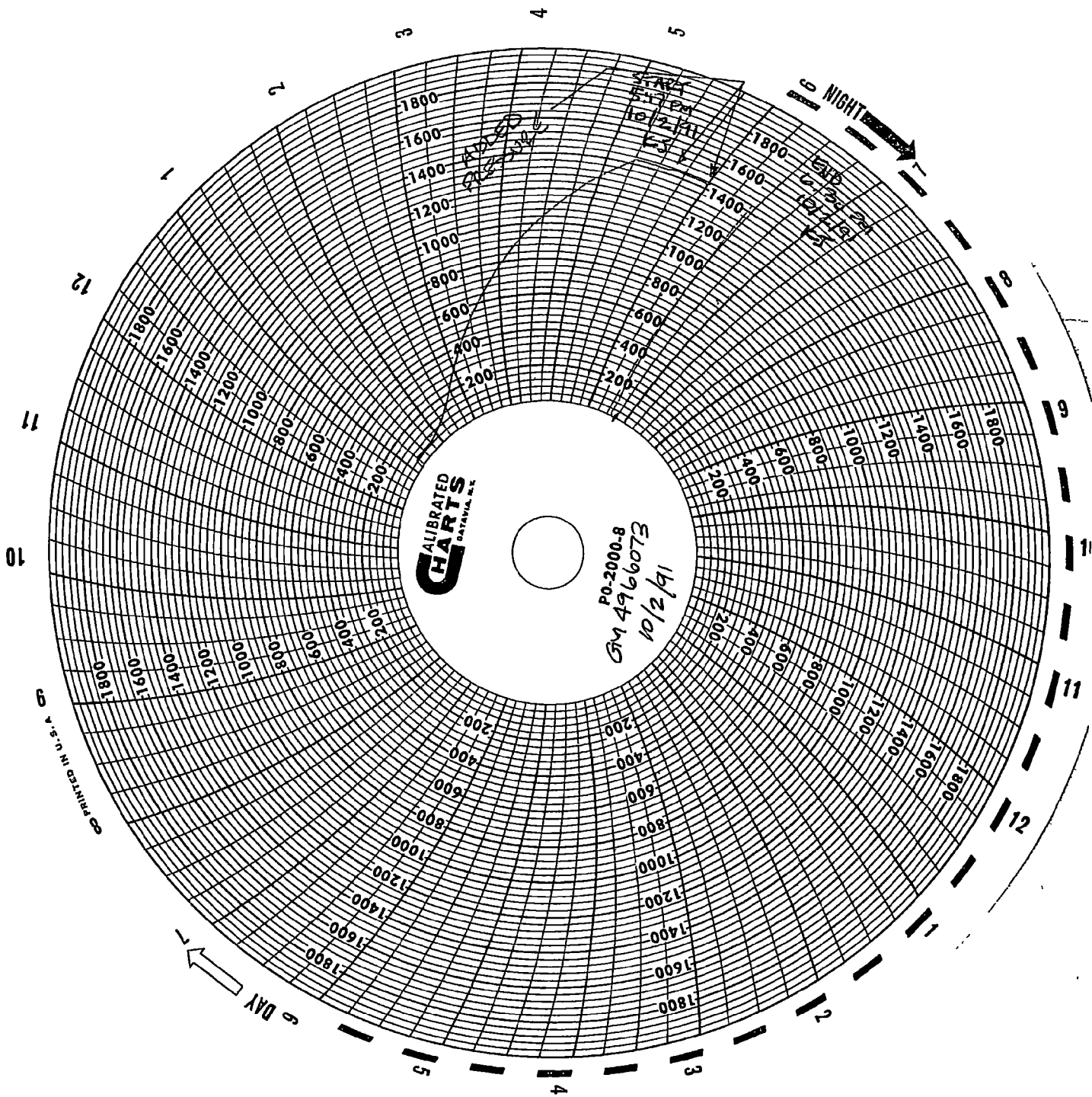
SPEC.
 API-5L, X-60, DSAW
 API-5L, X-52, DSAW
 API-5L, X-52, DSAW

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STRENGTH TEST INFORMATION

JOB 4966073
1. LOCATION SULLIVAN AVE DAILY CITY
2. DATE 10/2/91 PRESSURE 1430 PSI
3. TIME 5:17 PM - 6:30 PM DURATION 1 HR. 3 MIN.
4. LENGTH 403.9' SIZE 24" W.T. 0.312
5. PIPE SPEC. API 5L X-60 DRAW
6. RECORDING GAUGE MERCURY SER. 890554B
7. RANGE 0-2000 PSI 1ST CALIBRATED 9/26/91
8. DEAD WGT. CHANDLER SER. 7000
9. RANGE 0-2000 PSI LAST CALIBRATED 7/25/91
11. TEST FLUID WATER DATE 10/11/91
12. SUPERVISED [REDACTED] DATE 10/11/91
13. APPROVED [REDACTED]



RTW L-109

1991 ANNUAL REPORT

JOB 4966073 TYPE GM L.TYPE T L.NO 109 ODOR Y

ACTION R YEAR 1991 SIZE 24 LENGTH 1493

DESIG SULLIVAN AVE REG STA TO SAN FRANCISCO DIV GAS LOAD CTR

STARTED 08/19/91 COMPLETED 11/06/91 INST OLD (GC/DIV)

REGION GOLDEN GATE
DIVISION SKYLINE
COUNTY SAN MATEO

DESCR REPL'D PORTION OF L-109 ON SULLIVAN AVE. BTW WASH. ST & EASTMOOR

1991 ANNUAL REPORT

JOB 4966073 TYPE GM L.TYPE T L.NO 109 ODOR Y

ACTION A YEAR 1936 SIZE 22 LENGTH 1400

DESIG SULLIVAN AVE REG STA TO SAN FRANCISCO DIV STA

STARTED 08/19/91 COMPLETED 11/06/91 INST GC (GC/DIV)

REGION GOLDEN GATE
DIVISION SKYLINE
COUNTY SAN MATEO

DESCR ABANDONED PORTION OF L-109 ON SULLIVAN AVE BTW WASH. ST. & EASTMOOR
