Salishan Uprate 2012
Job Number: 887024719
Test Records

Salishan Supply

Facility Type	Facility ID
Main	020.A-01
Main	020.A-04
Main	020.A-05
Main	020.A-01.B
Main	020.A-01.C
Main	020.A-01.D
Main	020.A-01.E
Main	020.A-01.F
Main	020.AR-01
Main	020.B-01
Main	020.C-01
Main	020.U-01
Main	020.U-02
Main	020.U-03
Main	020.U-04
Reg Station	RS-0266 (Retired)
Reg Station	RS-0983 (Retired)
Reg Station	RS-1031 (Retired)
Reg Station	RS-1220 (Retired)
Reg Station	RS-1306 (Retired)
Reg Station	RS-1327 (Retired)
Reg Station	RS-1371 (Retired)
Reg Station	RS-1404 (Retired)
Reg Station	RS-1418 (Retired)
Reg Station	RS-1480 (Retired)
Reg Station	RS-1472 (Retired)
Reg Station	RS-1538 (Retired)
Reg Station	RS-1877 (Retired)
Reg Station	RS-1973 (Retired)
Reg Station	RS-2123 (Retired)
Reg Station	RS-2311
Reg Station	RS-2695
Reg Station	RS-2696
Reg Station	RS-2697
Reg Station	RS-2698
Reg Station	RS-2723

Pierce Transit Supply

Facility Type	Facility ID
Main	020.X-01
Main	020.X-02
Main	020.Y-01
Main	020.Z-01
Main	020.Z-01.A
Main	020.Z-01.B
Main	020.Z-01.C
Main	020.Z-01.D
Main	020.Z-01.G
Main	020.AA-01
Main	020.AA-01.A
Main	020.AB-01
Main	020.AC-01
Main	020.AS-01
Main	020.AT-01
Main	020.AY-01
Main	020.AW-01
Service	HPS-0001 through HPS-0021
Service	HPS-0023 through HPS-0052
Main	020.Z-01
Main	020.Z-01.A
Main	020.Y-01.A
Main	020.Y-01-B
Main	020.Z-01.E
Main	020.Z-01.F
Main	020.AC-01.A
Main	020.AC-01.B
Main (To be tested prior to the uprate)	020.AV-01
Reg Station	RS-2311

020:A-01

LR. 9272.
JOB # ~~7876~~
Wrong, belongs in Southern division, under 60-223 (E-72

WASHINGTON NATURAL GAS COMPANY

PRESSURE TEST REPORT

Date 10-25-60 TO 10-26-60

Location TACOMA, WASH. 020.A-01

Description SALISHAN SUPPLY 020 A-04 ~~020 A-05~~

Volume of Pipe ______ c.f. Elevation ______ ft. above m.s.l.

Test medium NITROGEN Gauge Type DEAD WEIGHT Gauge Location 25TH & M ST

Weather CLOUDY & COOL Atmos. Temp. ______ Barometer ______

	Time	Pressure	Temp.	Time	Pressure	Temp.
10-25-60						
STARTED TEST	3:30 PM	492.9				
10-26-60	9:30 AM	492.2				
ENDED TEST	3:30 PM	491.8				

Remarks ______

Performed by Andrew O. Eye

Witnessed by ______

Witnessed by Fred E. King

11:45 PM Jome off duty
Blythe On duty

JUN 12 1963 — WEDNESDAY — JUN 12 1963

{ Blythe off duty
Chris C. Berger on duty.

30 AM Test pressure on 8" H.P. Salishan East "L" Street offset is 458.3 psig this A.M. The 3.7 psi drop since 2:30 PM yesterday is equivalent to a temp. drop of (3.7/475)(520) or 4 degs

A.M. Boeing Plant #2 (No. PROPERTY BOILER ROOM) going "off of gas" for approximately two weeks.

45 am Tacoma Smelter Multiplex Circuit 4DM 0397 went open on both sides @ 10:30 AM Trouble traced to Bow Lake where telco opened the pair in error. They must find another pair between Seattle & Tacoma before the circuit can be re-established. CNEa

5 AM Tacoma Smelter Multiplex Circuit 4DM 0397 restored.

PM { Joe Quint on duty
Chris C. Berger off duty.

M Sam Frace reported grader hit something near So. TAC. - Men headed that way. Flow has increased thru So. TAC. GATE. Estimated lost gas during break = 13.4 MCF Telemeter charts shows break @ 3:30 PM PDST with leak controlled @ 4:23 PM PDST and line back back to normal by 5:05 PM

{ J Quint off
Blythe On duty

020 A-01B
Pg 1/2
020 A-01D
020 A-01E

PM { Chris C. Berger off duty.
{ J Orme on duty

00 PM N. SEATTLE (16" BYPASS) SUPPLY LINE UNDER TEST 309.5 ~~READING~~ AT 3:30P
CEDAR WAY - 44 AVE W & 204TH S.W. (FR)

45 PM J. Orme off duty
Bertrand on

JUN 11 1963 — TUESDAY — JUN 11 1963 JUN 11

45 AM } Bertrand off
Chris C. Berger on duty.

7:30 A Press 309.0 N. Seattle Supply Line

020.A-01B Pg 2½
020.A-01D
020.A-01E

30 PM 2130 pm Balihan 8" H.P. offset section over East "L" St bridge is under test with an initial nitrogen pack of (462.0 PSIG) (Warm afternoon with some of pipe exposed to sun.)

3:45 PM. Chris C. Berger off duty.
J Orme on duty

020 A21.C
Pg 1/2

REPORT OF PRESSURE TEST ON NEW MAIN

WNG 746.2 S (//93) O.P.S. 6.14

JOB NUMBER	IR NUMBER	DATE
109008726		5-11-2001

JOB LOCATION: E 38th & 'M' ST BETWEEN E38th & E40th

CONTRACTOR OR FITTER: Pilchuck Const. INSPECTOR: Dave Lockhart

SECTION TESTED: New 8" Stw. H.P. Main -
(4) 2" Service valves - (2) 8" WELD Caps.
(2) 1" " " "
(2) 8" Elbows and All Assoc. piping

TEST INFORMATION

STARTED Leak 10:00 / Strength 11:45 (AM) PM PRESSURE Leak 159# / Strength 497.1# PSIG DATE 5-11-2001

COMPLETED 11:00 / 20:15 (AM) PM PRESSURE 159# / 496.7# PSIG DATE 5-11-2001

TYPE OF TEST: [X] LEAK [X] STRENGTH

TEST MEDIUM: [ ] AIR [X] NITROGEN [ ] HYDROSTATIC*

GAUGE: [ ] ~~SPRING~~ Electronic [X] RECORDING [X] DEAD WEIGHT

LOCATION OF TEMPERATURE PROBE:

T 1 [X] BURIED [ ] EXPOSED
T 2 [X] BURIED [ ] EXPOSED
T 3 [ ] BURIED [ ] EXPOSED
T 4 [ ] BURIED [ ] EXPOSED

***FOR HYDROSTIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:**

1) FILL MAIN ______ 2) RAISE TO LEAK TEST PRESSURE ______

3) RAISE TO STRENGTH TEST PRESSURE ______

RESULTS: [X] ACCEPTED [ ] REJECTED BY: Randy Bush
[X] PHONE [ ] IN PERSON DATE: 5-11-2001

REMARKS: ______

SIGNED: E. [illegible]
PRESSURE CONTROL

NOTE: *RETURN ORIGINAL TO MANAGER OF ENGINEERING DESIGN*

020-A-01.C

Pg 2/2

READINGS

DATE	TIME	PRESSURE Dewelt		TEMPERATURE			
		P 1	P 2*	T 1	T 2	T 3	T 4
5-11-2001	10:00	159#					
LEAK TEST	10:15	159#					
	10:30	159#					
5-11-2001	10:45	159#					
5-11-2001	11:00	159#					
5-11-2001				55.4° / 57.2°	59.6° / 62.4°		
	11:45	497.0#	497.1#				
	12:15	497.0#	497.1#	58.4°	61.6°		
	12:45	497.0#	497.2#	58.6#	61.8#		
	13:15	497.0#	497.2#	60.0°	61.9°		
	13:45	497.0#	497.4#	60.4°	61.8°		
CHARLES 5-11-2001	14:15	497.0#	497.4#	59.8°	61.4°		
START FINAL TEST	14:45	497.0#	497.2#	59.8°	61.6°		
	15:15	497.0#	497.2#	59.6°	61.6°		
CHECK	* 15:45	497.0#	497.2#	59.6°	61.6#		
	16:15	497.0#	497.2#	59.6°	62.2°		
	16:45	496.0#	496.5#	59.2°	61.2°		
5-11-2001	17:15	496.0#	496.9#	60.0°	61.8°		
CHECK FIN	* 17:45	496.0#	496.9#	59.4°	61.6°		
	18:15	496.0#	496.9#	59.4	61.4°		
	18:45	496.0#	496.9#	59.6	61.4°		
	19:15	496.0#	496.7#	58.1°	59.2°		
CALL	* 19:45	496.0#	496.7#	58.0°	58.7°		
5-11-2001	20:15	496.0#	496.7#	57.6°	58.0°		
	20:45						

*IF REQUIRED BY THE WRITTEN PROCEDURE

020.A-1.F   020A-1F pg 1/2

PSE PUGET SOUND ENERGY

REPORT OF PRESSURE TEST ON NEW MAIN

JOB NUMBER	IR NUMBER	DATE
109017759		4-19-2005

JOB LOCATION: E. "M" ST. / LENNOX PL. - E. 36 ST. TACOMA
8" STW H.P. RELOCATE

CONTRACTOR OR FITTER: PILCHUCK   INSPECTOR: JIM CARGILL

SECTION TESTED: 483' - 8" STW PIPE, 6 - 8" X 90° WELD ELLS, 2 - 8" X 300# B/O LINESTOPPERS, 2 - 8" X 2" WELD-O-LETS, 4 - 2" X 3" SAVE-A-VALVE NIPPLES, 2 - 1" X 3" SAVE-A-VALVE NIPPLES, 9 1/2' 8" STW PIPE WITH 2 - 8" WELD CAPS

TEST INFORMATION

STARTED 1330 AM (PM) PRESSURE 484.7 PSIG DATE 4-19-2005

COMPLETED 1730 AM PM PRESSURE 484.7 PSIG DATE 4-19-2005

TYPE OF TEST: ☒ LEAK ☐ STRENGTH

TEST MEDIUM: ☐ AIR ☒ NITROGEN ☐ HYDROSTATIC*

GAUGE: ☒ ~~SPRING~~ DIGITAL ☒ RECORDING ☒ DEAD WEIGHT

LOCATION OF TEMPERATURE PROBE:

T 1 ☒ BURIED ☐ EXPOSED
T 2 ☒ BURIED ☐ EXPOSED
T 3 ☐ BURIED ☐ EXPOSED
T 4 ☐ BURIED ☐ EXPOSED

*FOR HYDROSTIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:

1) FILL MAIN ________ 2) RAISE TO LEAK TEST PRESSURE ________

3) RAISE TO STRENGTH TEST PRESSURE ________

RESULTS: ☒ ACCEPTED ☐ REJECTED   BY: RANDY BUSCH
☒ PHONE ☐ IN PERSON   DATE: 4-19-2005

REMARKS: ________

SIGNED: W. J. [signature]
PRESSURE CONTROL

32B (3/97)

NOTE: RETURN ORIGINAL TO MANAGER OF ENGINEERING DESIGN

READINGS

DATE	TIME	PRESSURE		TEMPERATURE			
		P1	P2*	T1	T2	T3	T4
4-19-05	1330	484.7		51.8	54.4		
	1400	484.7		51.8	55.0		
	1430	484.7		51.6	55.6		
	1500	484.7		51.6	55.0		
	1530	484.7		51.6	55.0		
	1600	484.7		51.4	55.0		
	1630	484.7		51.4	55.0		
	1700	484.7		51.2	55.0		
4-19-05	1730	484.7		51.2	55.0		

*IF REQUIRED BY THE WRITTEN PROCEDU

020 B-01
020 AR-01

Pg 1/2

August 15, 1968

Washington Utilities and Transportation Commission
State of Washington
Insurance Building
Olympia, Washington

Attention: Mr. Bob Taylor, Executive Secretary

Gentlemen:

Re: Natural Gas Main Extension
to East 40th

Pursuant to Rules 3 and 20 of the Washington Utilities and Transportation Commission "Rules and Regulations Pertaining to Matters of Public Safety in the Construction and Operation of Facilities for the Transmission and Distribution of Gas", we herewith submit a report and proposed route of a supply main to serve a portion of S.E. Tacoma, Washington.

DESCRIPTION

This main consists of 4,500 feet of 8" pipe extending east on East 40 Street from East "M" Street to Portland Avenue; thence south in Portland Avenue to East 48 Street all in the City of Tacoma, Washington in accordance with the attached Drawing #7647.

This main and all its appurtenances will be constructed in accordance with "American Standard Code for Pressure Piping ASA B31.8 - 1955 - Gas Transmission and Distribution Piping Systems", and in compliance with the rules and regulations of the Washington Utilities and Transportation Commission as set forth in Consolidated Cause Nos. U-5799 and U-6800.

The following specifications apply to this main:

Location	Class 3
Construction	"D" or better
Design Pressure	300 psig
Pipe Size	8.625 O.D. x 0.188 wall

Material	API 5L Grade B - Electric Weld Steel Line Pipe - Minimum Yield 35,000 psi
Tensile Stress at Design Pressure Due to Internal Pressure	at 300 psig, 6500 psi 18.6% of allowable yield strength
Valves	8" Nordstrom Figure 4149-½ 720 WOG 4" Nordstrom Figure 2245-½ 720 WOG
Fittings	Forged steel, Welding type
Protective Coating	Minimum 1/8" plasticized coal tar enamel reinforced with glass matting.
Testing	Leak test @ 100 psig for 24 hours Strength test @ 450 psig

It is anticipated that this main will be operated below 125 psig for the first two or three years. Nevertheless, we propose to test and certify this main for 300 psig when completed and ready to be placed in operation. Construction of this main is expected to begin in September 1962.

Very truly yours,

James P. Gary
Vice President,
Operations

000.C-01

File Copy

WASHINGTON NATURAL GAS COMPANY

REPORT OF PRESSURE TEST ON NEW MAIN

JOB NUMBER 69-5528A IR NUMBER 6508-1 DATE 6-16-70

JOB LOCATION Portland Ave, Tacoma

CONTRACTOR OR FITTER J. Rockey

INSPECTOR Don LEIN

SECTION TESTED Ea. 48th to Ea 72nd on portland Ave

TEST INFORMATION

STARTED 10:15 AM (PM) PRESSURE 452.7 psig DATE June 15-70

COMPLETED 4:30 AM (PM) PRESSURE 462.4 psig DATE June 16 70

TYPE TEST: _____ LEAKAGE; ___X___ STRENGTH

TESTING MEDIUM: X AIR; _____ NITROGEN; _____ HYDROSTATIC

GAUGE: _____ SPRING; _____ RECORDING; _____ DEAD WEIGHT X

READINGS:

DATE	TIME	PRESSURE	TEMPERATURE
6-16-70	10:15 PM	452.7	
6-17	7:00 AM	452.4	
6-17	1:30 PM	452.4	
6-17	4:30 PM	452.4	

RESULTS: Accepted ACCEPTED, _____ REJECTED

REMARKS: 24 hour test per supervisor

SIGNED [signature]

Form P.C. 14
1-1-62

020-U-01
020-U-02
020-U-03
020-U-04

NOTES

1. ALL CONSTRUCTION IS TO CONFORM TO WASHINGTON NATURAL GAS CO. OPERATING STANDARDS.

FIELD LOCATE ALL UNDERGROUND UTILITIES. CALL ONE-CALL 48 HOURS PRIOR TO CONSTRUCTION 1-800-424-5555. ALL UTILITIES MUST BE MAINTAINED THROUGHOUT ALL CONSTRUCTION ACTIVITIES.

3. NOTIFY PROPERTY OWNERS ADJACENT TO PROPOSED CONSTRUCTION ACTIVITIES PRIOR TO BEGINNING CONSTRUCTION.

4. MAOP OF THIS MAIN IS 300 PSIG. SEE SUPPLY MAIN UPDATE SHEET.

5. LEAK TEST ALL NEW PIPING AT 100 PSIG FOR 8 HOURS AND HYDROSTATICALLY STRENGTH TEST ALL NEW PIPING AT 450 PSIG FOR 24 HOURS PER OPERATING STANDARD 6.14. PIG WITH A GIRARD POLLY PIG BEFORE TIE-IN.

6. PERFORM TIE-IN AND PURGE OPERATIONS IN ACCORDANCE WITH PROCEDURE APPROVED BY THE CHIEF ENGINEER.

7. MAX. ALLOWABLE WALL MISMATCH FOR WELDING IS 3/32". WHEN NECESSARY, (A) TAPER ENDS OF FITTING OR PIPE PER ANSI/ASME B 31.8 APPENDIX I, FIG. I5 (b), OR (B) USE TRANSITIONAL PIPE APPROVED BY WNG ENGINEERING, TO GET WITHIN TOLERANCE.

8. WELDS NOT PRESSURE TESTED MUST BE RADIOGRAPHICALLY INSPECTED PER OPERATING STANDARD 6.9.2. A MINIMUM OF 10% OF ALL WELDS WILL BE RADIOGRAPHICALLY INSPECTED PER OPERATING STANDARD 6.9.2. RADIOGRAPHICALLY INSPECT 100% OF WELDS AT RAILROAD CROSSING. INSPECTION WORK TO BE PERFORMED BY X-RAY, INC. UNDER SEPARATE CONTRACT WITH AND DIRECTION OF WNG.

9. CHECK FOR WRAPPING HOLIDAYS WITH A JEEP MACHINE AND REPAIR FAULTS AS REQUIRED PER OPERATING STANDARD 10.1, PARAGRAPH 5.

10. DESIGN PRESSURE IS 300 PSIG.

11. PROVIDE A MINIMUM OF 36" COVER OVER MAIN. WHEN INSTALLING MAIN ACROSS OR IN A DRAINAGE DITCH, MEASURE COVER FROM THE BOTTOM OF THE DRAINAGE DITCH. IF CONDITIONS REQUIRED A SHALLOWER INSTALLATION, MAIN MUST BE PROTECTED PER OPERATING STANDARD 6.5 PARAGRAPH 4.3.

12. PROTECT MAIN FROM UNDERGROUND STRUCTURES PER OPERATING STANDARD 6.10, PARAGRAPH 2.

DO NOT INSTALL ANODES. INSTALLATION TO BE RECTIFIER PROTECTED

14. ALL PAVING TO BE OPEN CUT, EXCEPT WHERE SPECIFICALLY STATED OTHERWISE ON THE DRAWING OR PERMIT.

15. SEE DWG.# 3D2-118 FOR ADDITIONAL DETAILS ON SUPPLY MAIN INSTALLATION.

16. REFERENCE DRAWINGS:

70-D-102 (SHT. 3/3)	8" STW HP SUPPLY MAIN - SALISHAN EXTN. #2
3D8-571	DISTRICT REGULATOR #2311
905-504	2" PE IP JOINT TRENCH W/8" STW HP (PIERCE TRANSIT)
2D2-401	CHEHALIS WESTERN RR PERMIT DWG.
3D2-118	SUPPLY MAIN DETAILS
⚠ 905-504(B) (SHT 1/2)	6" STW IP MAIN

ENG POSTING

AS ☒ INSTALLED ☐ RETIRED
DATE COMP. 7-18-91
100 % COMPLETED
WELD INSP.
TYPE OF TEST Hydrostatic
PRESSURE 498 #
DESCRIPTION SIZE-LENGTH
1 8" STW-9815'
2
3
4
5

IR BREAKDOWN
2700' IR 6523
7115 IR 6524

ITEM	QUAN.	DESCRIPTION	STOCK NO.
			-
			-
			-
		P.O. - SUPPLIED BY PURCHASING	-
			-
		SUBDIVISION 01 IR# 6523	-
			-
63	1	60' x 20" STL. CASING .250 x GRADE B	- P.O.
62	2	18' TYPE K INSULATED THERMO-COUPLE WIRE	- P.O.
61	4	8" x 10" CASING INSERT	66-00270
60	10'±	TL WIRE #10	85-00950
59	1	VALVE BOX ROAD COMPLETE	50-00370
58	10'±	8" STW PIPE .322 WT GRADE B	- P.O.
57	6	8" FRP ROLL ON SHIELD	- P.O.
56	2	TEST LEAD BOX	50-00321
55	2	2" SAV-A-VALVE NIPPLE H 17491	68-00841
54	1	8" x 8" x 4" STW WELD TEE	78-00445
53	1	8" STD WELD CAP	52-00740
52	1	8" x 40" IN LENGTH x .322 WT STW PIPE W/ ONE END TAPER BORED	- P.O.
51	1	8" ROCKWELL VALVE, FIG. 4249 1/2	56-00935
50	2700'±	8" x .188 WALL STW PIPE X42	70-00610
			-
	-		-
		CONSTRUCTION PRINT	-
			-
			-
			-
		SUBDIVISION 01 IR# 6524	-
			-
18	1	50' x 12" STL. CASING .250 x GRADE B	70-00720
17	2	18' TYPE K INSULATED THERMO-COUPLE WIRE	- P.O.
16	1	8" KEROTEST INSULATION COUPLING WEI7	- P.O.
15	1	VALVE BOX ROAD COMPLETE	50-00370
14	1	50' x 20" STL. CASING .250 x GRADE B	- P.O.
13	6	8" FRP ROLL ON SHIELD	- P.O.
12	3	TEST LEAD BOX	50-00307
11	3	2" SAV-A-VALVE NIPPLE H 17491	68-00841
10	1	8" x 300 PSIG BOLT KIT 30FFYX	50-00102
9	1	8" x CLASS 300 WELD NECK FLANGE	64-00510
8	8	8" x 10" CASING INSERT	66-00270
7	25'±	T.L. WIRE #10	85-00950
6	4	8" x 90° WELD ELL STD. W/ BOTH	- P.O.
		ENDS TAPER BORED	-
4	4	8" x 40" IN LENGTH x .322 WT STW PIPE	- P.O.
		GRADE B W/ONE END TAPER BORED	-
2	1	8" ROCKWELL VALVE, FIG. 4249 1/2	56-00935
1	7800'±	8" x .188 WALL STW PIPE X42	70-00610

BILL OF MATERIAL

PERMIT	TAX CODE
PERMIT	D.G.R.
PERMIT	1/4 SEC. SW27-20-3, NW34-20-3, SE27-20-3, SW34-20-3
PERMIT	PLAT 247.62, 250.62, 249.65, 251.62
Washington Natural Gas, A Washington Energy Company	OP MAP 248.62
	AREA TACOMA
	SEQ. NO.

8" STW HP MAIN
SALISHAN EXTENSION #3
(PIERCE TRANSIT)
PORTLAND AVE. & 72ND ST. E.

NO.	DESCRIPTION	DATE	BY	APP'D.
⚠1	REVISED NOTE #16		9/4	

REVISIONS

DWN J. MALM	9/10/90	IR 6523/4	RR
CHK'D. KHD	4/19/91	JOB 905-504	
SCALE NONE	APP. JBE	DRAWING ⚠1 3D7-312	1/5

SUPPLY MAIN TAC# 91D-105

020:A-01

PS-0266 Inlet
LR. 9272.
JOB # ~~1876~~
Wrong, belongs in Southern division, under 60-223 (E-726

WASHINGTON NATURAL GAS COMPANY

PRESSURE TEST REPORT

Date 10-25-60 TO 10-26-60

Location TACOMA, WASH.

Description SALISHAN SUPPLY

Volume of Pipe ________ c.f. Elevation ________ ft. above m.s.l.

Test medium NITROGEN Gauge Type DEAD WEIGHT Gauge Location 25TH & M ST

Weather CLOUDY & COOL Atmos. Temp. ________ Barometer ________

	Time	Pressure	Temp.	Time	Pressure	Temp.
10-25-60						
STARTED TEST	3:30 PM	492.9				
10-26-60	9:30 AM	492.2				
ENDED TEST	3:30 PM	491.8				

Remarks ________

Performed by Andrew O. Eye

Witnessed by ________

Witnessed by Fred E. King

PUGET SOUND ENERGY
The Energy To Do Great Things

RS-0983 Inlet
Pg 1/2

PIPELINE PRESSURE TEST REPORT

GOS 2525.3300

JOB NO. EE702610/	DATE 9/21/11

JOB LOCATION
3630 E. M ST
DR# 983

NAME OF INDIVIDUAL RESPONSIBLE FOR PERFORMING TEST MEDLEY, MARTIN	COMPANY (IF CONTRACTOR)

PROJECT ENGINEER
DEREK KOO

SECTION TESTED (NOTE SIZE AND LENGTH OF ALL PIPE TESTED)
3/4" DIMPLE TEE & ASSOCIATED WELDS

TEST INFORMATION

START TIME 1055 ☑ A.M. ☐ P.M. PRESSURE 472.5 PSIG DATE 9/21/11

STOP TIME 1155 ☑ A.M. ☐ P.M. PRESSURE 471.5 PSIG DATE 9/21/11

TYPE OF TEST
- ☐ PRELIMINARY LEAK TEST
- ☑ FINAL LEAK/STRENGTH TEST
- ☐ SOAP TEST (RATED PARTS NOT SUBJECTED TO PRESSURE TEST)

TEST MEDIUM
☐ AIR ☐ NITROGEN ☐ HYDROSTATIC *

CNG

* FOR HYDROSTATIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:
1. ☐ FILL MAIN
2. ☐ RAISE TO LEAK TEST PRESSURE
3. ☐ RAISE TO FINAL LEAK/STRENGTH TEST PRESSURE

TEST GAUGE(S)
- ☐ SPRING/DIGITAL SERIAL NO. _____ CALIBRATION DUE DATE (MM/DD/YY) _____
- ☑ RECORDING SERIAL NO. 08327649 CALIBRATION DUE DATE (MM/DD/YY) 1/4/2012
- ☐ DEAD WEIGHT SERIAL NO. _____ CALIBRATION DUE DATE (MM/DD/YY) _____

LOCATION OF TEMPERATURE PROBE(S)

T1 NA	T2	T3	T4
☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED

PYROMETER SERIAL NO. NA
PYROMETER CALIBRATION DUE DATE (MM/DD/YY)

TEST RESULTS
☑ PASS ☐ FAIL

TEST CONFIRMATION NO. (CONTACT ENGINEERING FOR APPROVAL ON FINAL LEAK/STRENGTH TEST ONLY) NA	DATE

REMARKS (NOTE LOCATION OF ALL LEAKS THAT WERE FOUND, INCLUDING THOSE THAT WERE REPAIRED DURING THE TEST)
NA

SIGNED
PRESSURE CONTROL

RETURN ORIGINAL WITH PRESSURE TEST SCHEMATIC AND CHART TO CONTRACTOR FOREMAN.
FOR FINAL LEAK/STRENGTH TEST, SEND COPIES OF ALL TEST DOCUMENTS TO ENGINEERING.

RS-0983 Met
Pg 2/2

READINGS

DATE	TIME	PRESSURE		TEMPERATURE			
		P1	P2 *	T1	T2	T3	T4
9/2/11	1055	472.5					
	1110	471.0					
	1125	472.5					
	1140	474.0					
	1155	471.5					

* IF REQUIRED BY WRITTEN PROCEDURE

PSE PUGET SOUND ENERGY
The Energy To Do Great Things

- RS1031 Inlet
Pg 1/3

PIPELINE PRESSURE TEST REPORT

GOS 2525.3300

JOB NO. 8810259162 | DATE 9/21/11

JOB LOCATION
E. M ST & HARRISON ST. TACOMA
DR#1031

NAME OF INDIVIDUAL RESPONSIBLE FOR PERFORMING TEST: MEDLEY, MARTIN
COMPANY (IF CONTRACTOR):

PROJECT ENGINEER: DEREK KOO

SECTION TESTED (NOTE SIZE AND LENGTH OF ALL PIPE TESTED): 3/4" PUNCHET TEE & ASSOCIATED WELDS

TEST INFORMATION

START TIME 0850 ☑ A.M. ☐ P.M. PRESSURE 464.0 PSIG DATE 9/21/11

STOP TIME 0950 ☑ A.M. ☐ P.M. PRESSURE 462.0 PSIG DATE 9/21/11

TYPE OF TEST
- ☐ PRELIMINARY LEAK TEST
- ☑ FINAL LEAK/STRENGTH TEST
- ☐ SOAP TEST (RATED PARTS NOT SUBJECTED TO PRESSURE TEST)

TEST MEDIUM
☐ AIR ☐ NITROGEN ☐ HYDROSTATIC *
CNG

* FOR HYDROSTATIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:
1. ☐ FILL MAIN
2. ☐ RAISE TO LEAK TEST PRESSURE
3. ☐ RAISE TO FINAL LEAK/STRENGTH TEST PRESSURE

TEST GAUGE(S)
- ☐ SPRING/DIGITAL SERIAL NO. ________ CALIBRATION DUE DATE (MM/DD/YY) ________
- ☑ RECORDING SERIAL NO. 08327769 CALIBRATION DUE DATE (MM/DD/YY) 1/4/2012
- ☐ DEAD WEIGHT SERIAL NO. ________ CALIBRATION DUE DATE (MM/DD/YY) ________

LOCATION OF TEMPERATURE PROBE(S)
T1 NA ☐ BURIED ☐ EXPOSED
T2 ☐ BURIED ☐ EXPOSED
T3 ☐ BURIED ☐ EXPOSED
T4 ☐ BURIED ☐ EXPOSED

PYROMETER SERIAL NO. NA
PYROMETER CALIBRATION DUE DATE (MM/DD/YY)

TEST RESULTS
☑ PASS ☐ FAIL

TEST CONFIRMATION NO. (CONTACT ENGINEERING FOR APPROVAL ON FINAL LEAK/STRENGTH TEST ONLY) NA
DATE

REMARKS (NOTE LOCATION OF ALL LEAKS THAT WERE FOUND, INCLUDING THOSE THAT WERE REPAIRED DURING THE TEST)
NA

SIGNED [signature]
PRESSURE CONTROL

RETURN ORIGINAL WITH PRESSURE TEST SCHEMATIC AND CHART TO CONTRACTOR FOREMAN.
FOR FINAL LEAK/STRENGTH TEST, SEND COPIES OF ALL TEST DOCUMENTS TO ENGINEERING.

RS1031 Weld
Pg 2/3

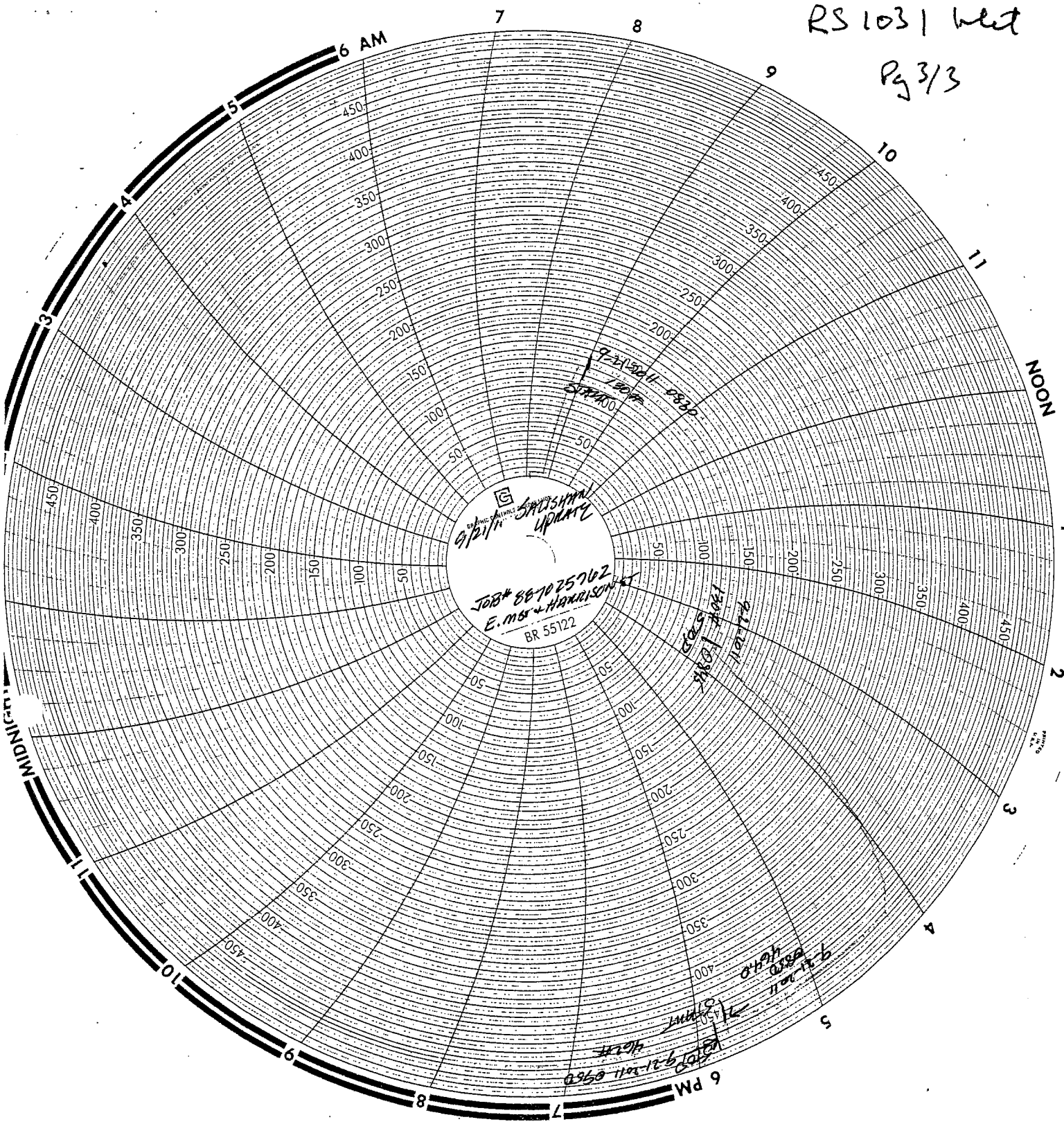
READINGS

DATE	TIME	PRESSURE		TEMPERATURE			
		P1	P2 *	T1	T2	T3	T4
9/21/11	0850	464.0					
	0905	463.0					
	0920	462.0					
	0935	462.0					
	0950	462.0					

* *IF REQUIRED BY WRITTEN PROCEDURE*

RS1031 Met

Pg 3/3



Paul Hoglund
RS-1220 Inlet

WASHINGTON NATURAL GAS COMPANY

REPORT OF PRESSURE TEST ON NEW MAIN

JOB NUMBER 69-5528A IR NUMBER 6508 DATE 6-24-70

JOB LOCATION East 72nd & Portland Ave

CONTRACTOR OR FITTER C. J. Rackey

DR #1220

INSPECTOR Don Lein

SECTION TESTED Regulator Inlet 6" STW

TEST INFORMATION

STARTED 1:45 (PM) AM PRESSURE 106 psig DATE June 24 1970

COMPLETED ____ AM PM PRESSURE ____ psig DATE ____

TYPE TEST: X LEAKAGE; ____ STRENGTH

TESTING MEDIUM: ____ AIR; X NITROGEN; ____ HYDROSTATIC

GAUGE: X SPRING; ____ RECORDING; ____ DEAD WEIGHT

READINGS:

DATE	TIME	PRESSURE	TEMPERATURE
6-24-70	2: PM	442 PSIG	
"	2: 20	442 PSIG	
"	2: 40	442 PSIG	
"	3: PM	442 PSIG	

RESULTS: X ACCEPTED, ____ REJECTED

REMARKS: 106 psig START - used 2 nitrogen 224 cylenders 43' of 6" STW

SIGNED [signature]

Form P.C. 14
1-1-62

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RR1306 Inlet
Pg 1/3

PIPELINE PRESSURE TEST REPORT

GOS 2525.3300

JOB NO.	DATE
887026103	12-14-11

JOB LOCATION: E 52 ST & PORTLAND AVE E

NAME OF INDIVIDUAL RESPONSIBLE FOR PERFORMING TEST	COMPANY (IF CONTRACTOR)
DENNIS DORAN	

PROJECT ENGINEER: DEREK KOO

SECTION TESTED (NOTE SIZE AND LENGTH OF ALL PIPE TESTED): PUNCH TEE CUT AND CAP 24"

TEST INFORMATION

START TIME: 11:45 ☒ A.M. ☐ P.M. PRESSURE 480.0 PSIG DATE 12-14-11

STOP TIME: 12:45 ☐ A.M. ☒ P.M. PRESSURE 478.0 PSIG DATE 12-14-11

TYPE OF TEST
- ☒ PRELIMINARY LEAK TEST
- ☒ FINAL LEAK/STRENGTH TEST
- ☒ SOAP TEST (RATED PARTS NOT SUBJECTED TO PRESSURE TEST)

TEST MEDIUM
☐ AIR ☐ NITROGEN ☐ HYDROSTATIC *
☒ CNG

* FOR HYDROSTATIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:
1. ☐ FILL MAIN
2. ☐ RAISE TO LEAK TEST PRESSURE
3. ☐ RAISE TO FINAL LEAK/STRENGTH TEST PRESSURE

TEST GAUGE(S)

☒ SPRING/DIGITAL	SERIAL NO. 537040	CALIBRATION DUE DATE (MM/DD/YY)	02 12 12
☒ RECORDING	SERIAL NO. 0832771 (01)	CALIBRATION DUE DATE (MM/DD/YY)	01 04 12
☐ DEAD WEIGHT	SERIAL NO.	CALIBRATION DUE DATE (MM/DD/YY)	

LOCATION OF TEMPERATURE PROBE(S)

T1	T2	T3	T4
☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED

PYROMETER SERIAL NO. | PYROMETER CALIBRATION DUE DATE (MM/DD/YY)

TEST RESULTS
☒ PASS ☐ FAIL

TEST CONFIRMATION NO. (CONTACT ENGINEERING FOR APPROVAL ON FINAL LEAK/STRENGTH TEST ONLY)	DATE
24514	12-14-11

REMARKS (NOTE LOCATION OF ALL LEAKS THAT WERE FOUND, INCLUDING THOSE THAT WERE REPAIRED DURING THE TEST)

SIGNED: Dennis Doran
PRESSURE CONTROL

RETURN ORIGINAL WITH PRESSURE TEST SCHEMATIC AND CHART TO CONTRACTOR FOREMAN.
FOR FINAL LEAK/STRENGTH TEST, SEND COPIES OF ALL TEST DOCUMENTS TO ENGINEERING.

RS1306 Wet

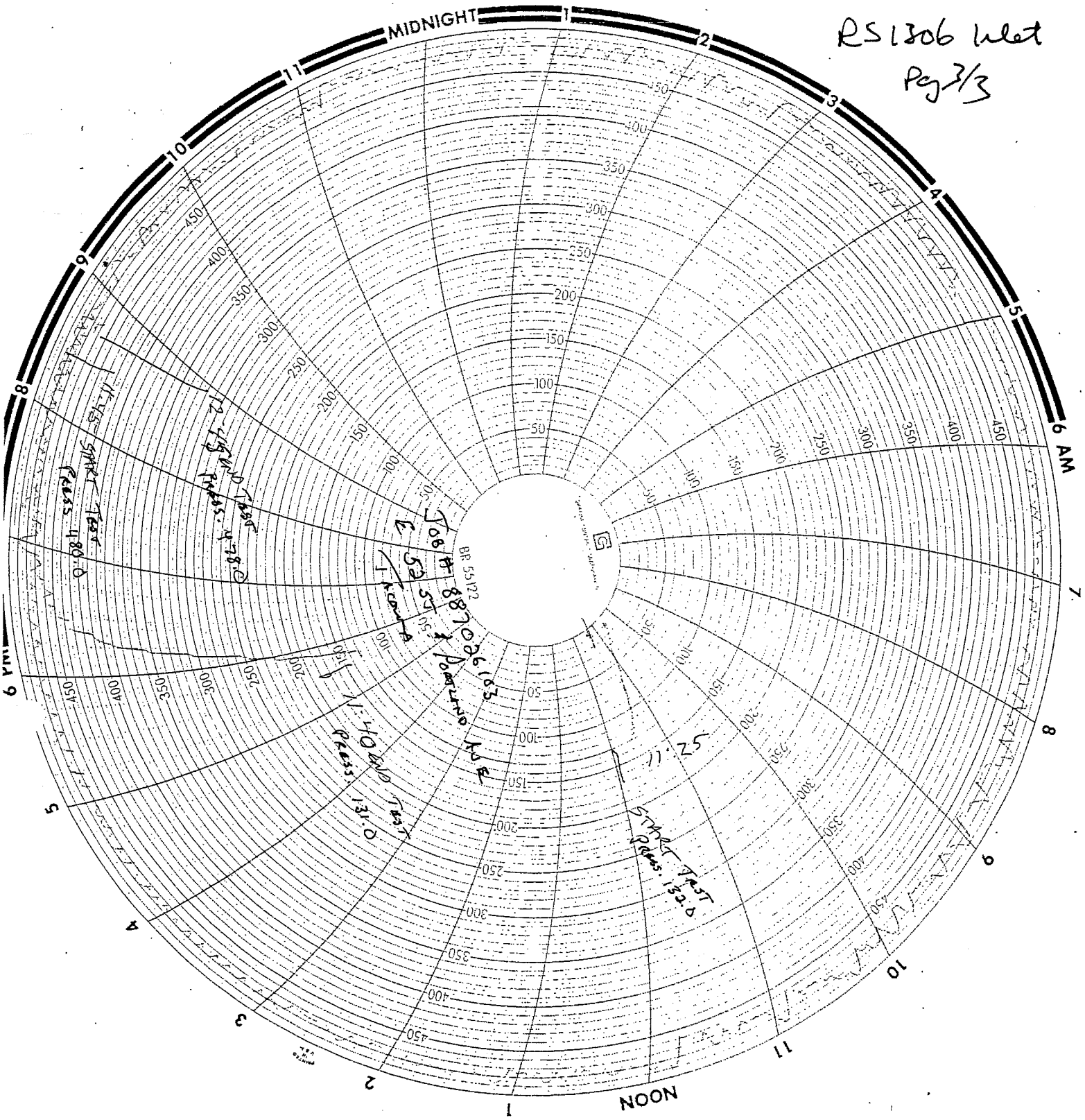
Pg 73

READINGS

DATE	TIME	PRESSURE		TEMPERATURE			
		P1	P2 *	T1	T2	T3	T4
12-14-11	11:45	480.0					
12-14-11	12:00	474.0					
12-14-11	12:15	475.0					
12-14-11	12:30	485.0					
12-14-11	12:45	478.0					

* IF REQUIRED BY WRITTEN PROCEDURE

RS1806 Inlet
Pg 3/3



WASHINGTON NATURAL GAS COMPANY RS-1327 Inlet

REPORT OF PRESSURE TEST ON NEW MAIN

JOB NUMBER 70S620 IR NUMBER 6733-1 DATE 9-25-70

JOB LOCATION 5604 PORTLAND AVE (TACOMA)

CONTRACTOR OR FITTER W.N.G. (EUSTACE)

INSPECTOR V. TROXEL

SECTION TESTED 24' OF 1/2" SERVICE TO FARM TAP.

TEST INFORMATION

STARTED 9 40 AM PM PRESSURE 443.0 psig DATE 9-25-70

COMPLETED 10 40 AM PM PRESSURE 445.0 psig DATE 9-25-70

TYPE TEST: ______ LEAKAGE; ✓ STRENGTH

TESTING MEDIUM: ______ AIR; ✓ NITROGEN; ______ HYDROSTATIC

GAUGE: ✓ SPRING; ______ RECORDING; ______ DEAD WEIGHT

READINGS:

DATE	TIME	PRESSURE	TEMPERATURE
9-25-70	940 AM	443.0	—
9-25-70	9:55 AM	444.0	—
9-25-70	10:25 AM	445.0	—
9-25-70	10:40 AM	445.0	—

RESULTS: ✓ ACCEPTED, ______ REJECTED

REMARKS:

SIGNED John H. [illegible] JR.

W. Ridgway Supervisor

Form P.C. 14
1-1-62

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RS 1371 Inlet
Pg 1/3

PIPELINE PRESSURE TEST REPORT

GOS 2525.3300

JOB NO.	DATE
E8T026105	9/27/11

JOB LOCATION: E. 63 ST & PORTLAND AV E. TACOMA DR# 1371

NAME OF INDIVIDUAL RESPONSIBLE FOR PERFORMING TEST	COMPANY (IF CONTRACTOR)
MARTIN MEDLEY	

PROJECT ENGINEER: DEREK KOO

SECTION TESTED (NOTE SIZE AND LENGTH OF ALL PIPE TESTED): 3/4" PUMPKETT TEE & ASSOCIATED WELDS

TEST INFORMATION

START TIME: 1120 ☒ A.M. ☐ P.M. PRESSURE 470.0 PSIG DATE 9/27/11

STOP TIME: 1220 ☐ A.M. ☒ P.M. PRESSURE 466.5 PSIG DATE

TYPE OF TEST
- ☐ PRELIMINARY LEAK TEST
- ☒ FINAL LEAK/STRENGTH TEST
- ☐ SOAP TEST (RATED PARTS NOT SUBJECTED TO PRESSURE TEST)

TEST MEDIUM
☐ AIR ☐ NITROGEN ☐ HYDROSTATIC *

CNG1

* FOR HYDROSTATIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:
1. ☐ FILL MAIN
2. ☐ RAISE TO LEAK TEST PRESSURE
3. ☐ RAISE TO FINAL LEAK/STRENGTH TEST PRESSURE

TEST GAUGE(S)

☐ SPRING/DIGITAL	SERIAL NO.	CALIBRATION DUE DATE (MM/DD/YY)
☒ RECORDING	SERIAL NO. 08327169	CALIBRATION DUE DATE (MM/DD/YY) 1/4/2012
☐ DEAD WEIGHT	SERIAL NO.	CALIBRATION DUE DATE (MM/DD/YY)

LOCATION OF TEMPERATURE PROBE(S)

T1 NA	T2	T3	T4
☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED

PYROMETER SERIAL NO.: NA

PYROMETER CALIBRATION DUE DATE (MM/DD/YY)

TEST RESULTS
☒ PASS ☐ FAIL

TEST CONFIRMATION NO. (CONTACT ENGINEERING FOR APPROVAL ON FINAL LEAK/STRENGTH TEST ONLY): NA

DATE

REMARKS (NOTE LOCATION OF ALL LEAKS THAT WERE FOUND, INCLUDING THOSE THAT WERE REPAIRED DURING THE TEST)
NA

SIGNED
PRESSURE CONTROL

RETURN ORIGINAL WITH PRESSURE TEST SCHEMATIC AND CHART TO CONTRACTOR FOREMAN.
FOR FINAL LEAK/STRENGTH TEST, SEND COPIES OF ALL TEST DOCUMENTS TO ENGINEERING.

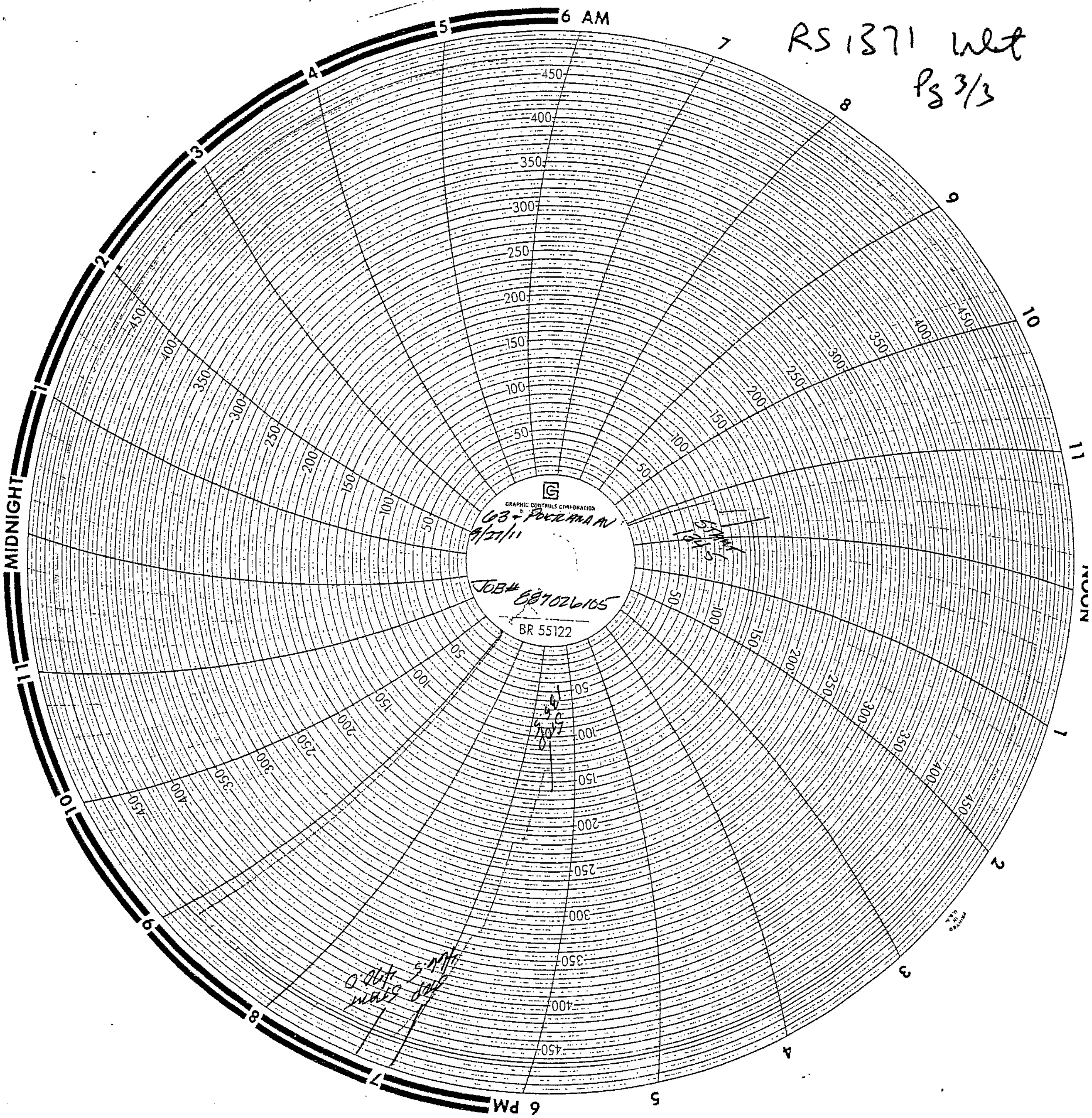
RS 1371 Wet
pg 2/3

READINGS

DATE	TIME	PRESSURE P1	PRESSURE P2 *	TEMPERATURE T1	TEMPERATURE T2	TEMPERATURE T3	TEMPERATURE T4
9/21/11	11:20	470.0					
	1135	467.5					
	1150	469.0					
	1205	465.5					
	1220	466.5					

** IF REQUIRED BY WRITTEN PROCEDURE*

RS 1371 Wet
Pg 3/3



RS1404 Inlet
Pg 1/3

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PIPELINE PRESSURE TEST REPORT

GOS 2525.3300

JOB NO. 88707[illegible]0099
DATE 9/27/11

JOB LOCATION 25th E. "M" St TACOMA DP# 1404

NAME OF INDIVIDUAL RESPONSIBLE FOR PERFORMING TEST [illegible]
COMPANY (IF CONTRACTOR)

PROJECT ENGINEER DEREK KOO

SECTION TESTED (NOTE SIZE AND LENGTH OF ALL PIPE TESTED) 3/4" PUNCHOUT TEE & ASSOCIATED WELDS

TEST INFORMATION

START TIME 0900 ☑ A.M. ☐ P.M. PRESSURE 464.5 PSIG DATE 9/27/11

STOP TIME 1000 ☑ A.M. ☐ P.M. PRESSURE 459.5 PSIG DATE 9/27/11

TYPE OF TEST
- ☐ PRELIMINARY LEAK TEST
- ☑ FINAL LEAK/STRENGTH TEST
- ☐ SOAP TEST (RATED PARTS NOT SUBJECTED TO PRESSURE TEST)

TEST MEDIUM
☐ AIR ☐ NITROGEN ☐ HYDROSTATIC *
CNG

* FOR HYDROSTATIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:
1. ☐ FILL MAIN
2. ☐ RAISE TO LEAK TEST PRESSURE
3. ☐ RAISE TO FINAL LEAK/STRENGTH TEST PRESSURE

TEST GAUGE(S)

☐ SPRING/DIGITAL	SERIAL NO.	CALIBRATION DUE DATE (MM/DD/YY)
☑ RECORDING	SERIAL NO. 0832769	CALIBRATION DUE DATE (MM/DD/YY) 1/4/2012
☐ DEAD WEIGHT	SERIAL NO.	CALIBRATION DUE DATE (MM/DD/YY)

LOCATION OF TEMPERATURE PROBE(S)
T1 N/A ☐ BURIED ☐ EXPOSED T2 ☐ BURIED ☐ EXPOSED T3 ☐ BURIED ☐ EXPOSED T4 ☐ BURIED ☐ EXPOSED

PYROMETER SERIAL NO. N/A
PYROMETER CALIBRATION DUE DATE (MM/DD/YY)

TEST RESULTS
☑ PASS ☐ FAIL

TEST CONFIRMATION NO. (CONTACT ENGINEERING FOR APPROVAL ON FINAL LEAK/STRENGTH TEST ONLY) N/A
DATE

REMARKS (NOTE LOCATION OF ALL LEAKS THAT WERE FOUND, INCLUDING THOSE THAT WERE REPAIRED DURING THE TEST)
N/A

SIGNED [signature]
PRESSURE CONTROL

RETURN ORIGINAL WITH PRESSURE TEST SCHEMATIC AND CHART TO CONTRACTOR FOREMAN.
FOR FINAL LEAK/STRENGTH TEST, SEND COPIES OF ALL TEST DOCUMENTS TO ENGINEERING.

1928 03/10

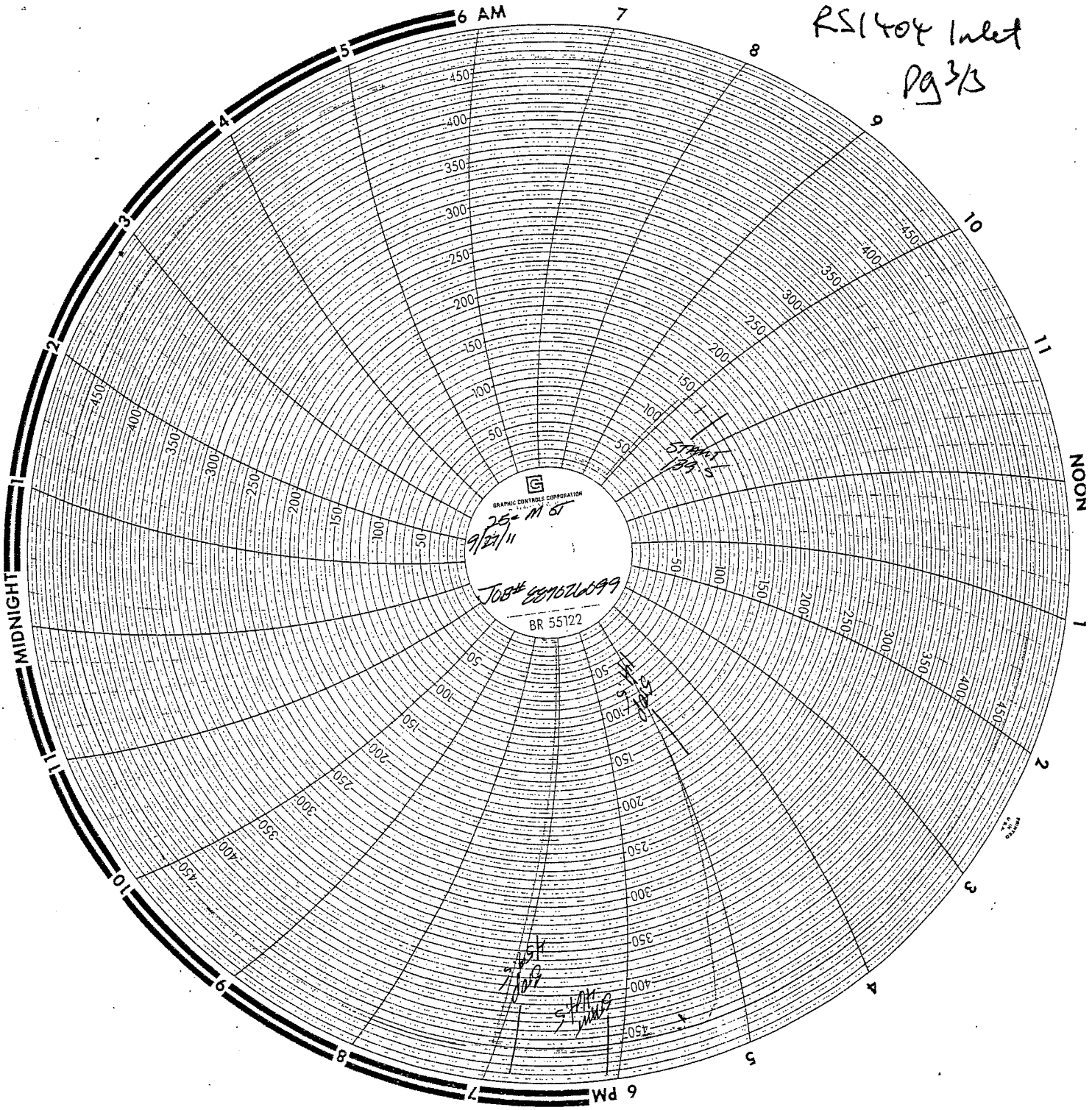
RS1404 Inlet
Pg 2/3

READINGS

DATE	TIME	PRESSURE		TEMPERATURE			
		P1	P2 *	T1	T2	T3	T4
9/27/11	0900	464.5					
	0915	461.0					
	0930	460.5					
	0945	460.0					
	1000	459.5					

* *IF REQUIRED BY WRITTEN PROCEDURE*

RS1404 Inlet
Pg 3/3



WASHINGTON NATURAL GAS COMPANY RS 1418 inlet

REPORT OF PRESSURE TEST ON NEW MAIN

JOB NUMBER 71-274 IR NUMBER 6050 DATE 6-18-71

JOB LOCATION District regulator # 1418 AT 26th + East N ST

Tacoma

CONTRACTOR OR FITTER Malyon / Haller

INSPECTOR Haller

SECTION TESTED 50' of 2" STW pipe inlet To STA. # 1418

TEST INFORMATION

STARTED Noon AM PM PRESSURE 470 psig DATE 6-18-71

COMPLETED 1:06 AM (PM) PRESSURE 470 psig DATE 6-18-71

TYPE TEST: _____ LEAKAGE; _____ STRENGTH

TESTING MEDIUM: _____ AIR; X NITROGEN; _____ HYDROSTATIC

GAUGE: _____ SPRING; _____ RECORDING; _____ DEAD WEIGHT

READINGS:

DATE	TIME	PRESSURE	TEMPERATURE
6-18-71	12:15	470 PSIG	
"	12:25	470 "	
"	12:35	470 "	
"	12:45	470 "	

RESULTS: X ACCEPTED; _____ REJECTED

REMARKS: Test good, 2nd Test,

SIGNED [signature]

W. Ridgway Supervisor

Form P.C. 14

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~~RH473~~ RS1472 Inlet
Pg 4/3

PIPELINE PRESSURE TEST REPORT

GOS 2525.3300

JOB NO.	DATE
887026102	12-14-11

JOB LOCATION
5002 PORTLAND AVE. E.
TACOMA

NAME OF INDIVIDUAL RESPONSIBLE FOR PERFORMING TEST	COMPANY (IF CONTRACTOR)
DENNIS DORAN	

PROJECT ENGINEER
DEREK KOO

SECTION TESTED (NOTE SIZE AND LENGTH OF ALL PIPE TESTED)
PUNCH TEE CUT AND CAP 12"

TEST INFORMATION

START TIME
0945 ☒ A.M. ☐ P.M. PRESSURE 483.0 PSIG DATE 12-14-11

STOP TIME
1045 ☒ A.M. ☐ P.M. PRESSURE 480.0 PSIG DATE 12-14-11

TYPE OF TEST
- ☒ PRELIMINARY LEAK TEST
- ☒ FINAL LEAK/STRENGTH TEST
- ☒ SOAP TEST (RATED PARTS NOT SUBJECTED TO PRESSURE TEST)

TEST MEDIUM
☐ AIR ☐ NITROGEN ☐ HYDROSTATIC *
☒ CNG

* FOR HYDROSTATIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:
1. ☐ FILL MAIN
2. ☐ RAISE TO LEAK TEST PRESSURE
3. ☐ RAISE TO FINAL LEAK/STRENGTH TEST PRESSURE

TEST GAUGE(S)

☒ SPRING/DIGITAL	SERIAL NO. 537040	CALIBRATION DUE DATE (MM/DD/YY)	02 12 12
☒ RECORDING	SERIAL NO. 0832771 (@1)	CALIBRATION DUE DATE (MM/DD/YY)	01 04 12
☐ DEAD WEIGHT	SERIAL NO.	CALIBRATION DUE DATE (MM/DD/YY)	

LOCATION OF TEMPERATURE PROBE(S)
T1 ☐ BURIED ☐ EXPOSED T2 ☐ BURIED ☐ EXPOSED T3 ☐ BURIED ☐ EXPOSED T4 ☐ BURIED ☐ EXPOSED

PYROMETER SERIAL NO. PYROMETER CALIBRATION DUE DATE (MM/DD/YY)

TEST RESULTS
☒ PASS ☐ FAIL

TEST CONFIRMATION NO. (CONTACT ENGINEERING FOR APPROVAL ON FINAL LEAK/STRENGTH TEST ONLY)	DATE
41902	12-14-11

REMARKS (NOTE LOCATION OF ALL LEAKS THAT WERE FOUND, INCLUDING THOSE THAT WERE REPAIRED DURING THE TEST)

SIGNED
Dennis Doran
PRESSURE CONTROL

RETURN ORIGINAL WITH PRESSURE TEST SCHEMATIC AND CHART TO CONTRACTOR FOREMAN.
FOR FINAL LEAK/STRENGTH TEST, SEND COPIES OF ALL TEST DOCUMENTS TO ENGINEERING.

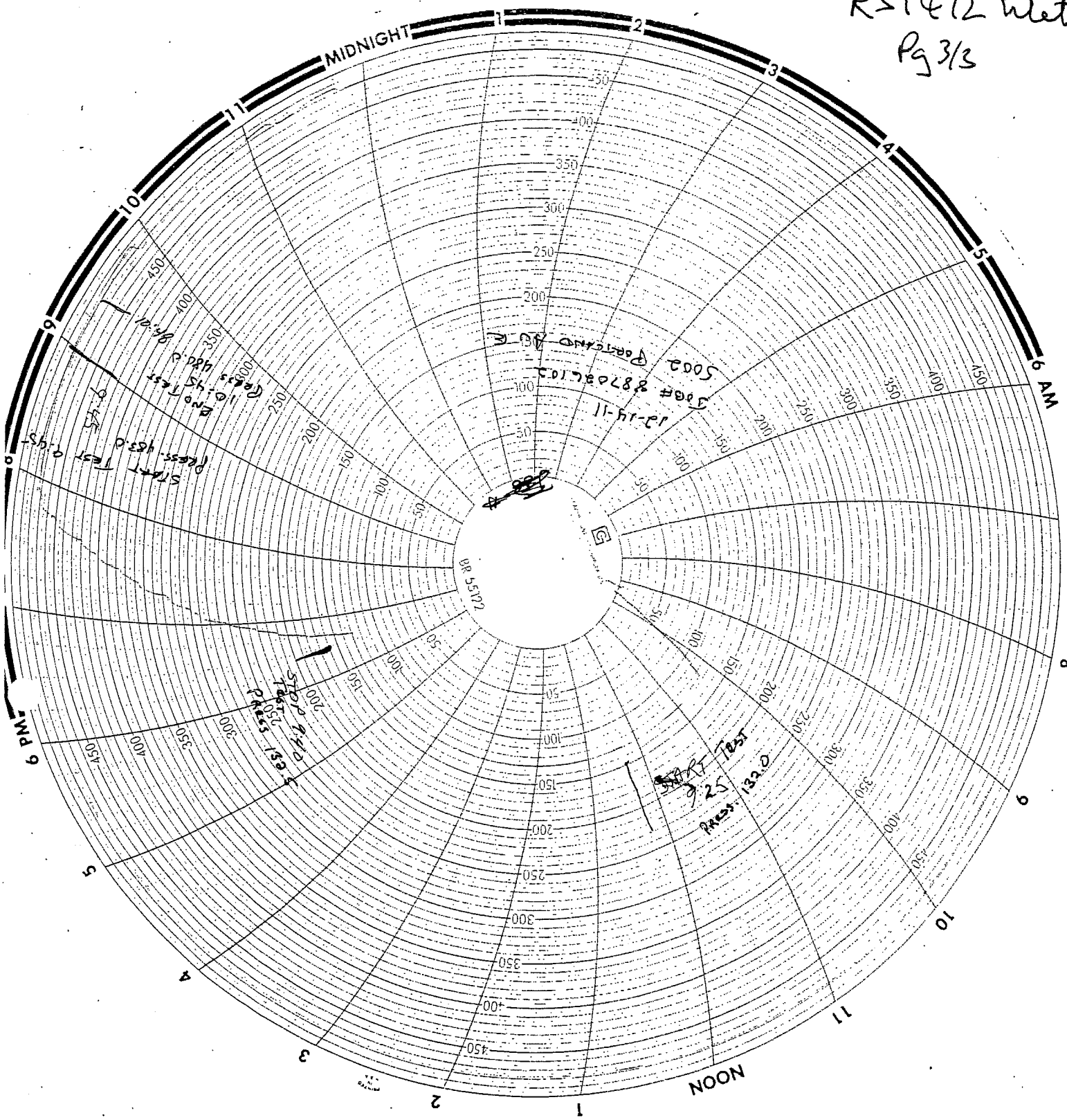
RS1472 Inlet
Pg 2/3

READINGS

DATE	TIME	PRESSURE		TEMPERATURE			
		P1	P2 *	T1	T2	T3	T4
12-14-11	0945	483.0					
12-14-11	1000	483.0					
12-14-11	1015	482.0					
12-14-11	1030	480.5					
12-14-11	1045	480.5					

* IF REQUIRED BY WRITTEN PROCEDURE

RS1472 Met
Pg 3/3



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~~RS1480~~ RS1480 Wet
Pg 1/3

PIPELINE PRESSURE TEST REPORT

GOS 2525.3300

JOB NO.	DATE
887025761	4-4-12

JOB LOCATION: 5314 PORTLAND AVE, TACOMA

NAME OF INDIVIDUAL RESPONSIBLE FOR PERFORMING TEST	COMPANY (IF CONTRACTOR)
TONY GARGIULO	N/A

PROJECT ENGINEER: DON FRIEZE

SECTION TESTED (NOTE SIZE AND LENGTH OF ALL PIPE TESTED): PUNCH TEE CUT AND CAP 12"

TEST INFORMATION

START TIME: 12:50 ☐ A.M. ☒ P.M. PRESSURE 470.5 PSIG DATE 4-4-12

STOP TIME: 13:50 ☐ A.M. ☒ P.M. PRESSURE 468.5 PSIG DATE 4-4-12

TYPE OF TEST
- ☐ PRELIMINARY LEAK TEST
- ☒ FINAL LEAK/STRENGTH TEST
- ☒ SOAP TEST (RATED PARTS NOT SUBJECTED TO PRESSURE TEST)

TEST MEDIUM
☐ AIR ☐ NITROGEN ☐ HYDROSTATIC *
☒ CNG

* FOR HYDROSTATIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:
1. ☐ FILL MAIN
2. ☐ RAISE TO LEAK TEST PRESSURE
3. ☐ RAISE TO FINAL LEAK/STRENGTH TEST PRESSURE

TEST GAUGE(S)

☒ SPRING/DIGITAL	SERIAL NO. 537040	CALIBRATION DUE DATE (MM/DD/YY)	8-1-12
☒ RECORDING	SERIAL NO. 0832771-01	CALIBRATION DUE DATE (MM/DD/YY)	1-1-13
☐ DEAD WEIGHT	SERIAL NO.	CALIBRATION DUE DATE (MM/DD/YY)	

LOCATION OF TEMPERATURE PROBE(S)

T1	T2	T3	T4
☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED

PYROMETER SERIAL NO.: N/A

PYROMETER CALIBRATION DUE DATE (MM/DD/YY):

TEST RESULTS
☒ PASS ☐ FAIL

TEST CONFIRMATION NO. (CONTACT ENGINEERING FOR APPROVAL ON FINAL LEAK/STRENGTH TEST ONLY): 84691

DATE: 4/4/12

REMARKS (NOTE LOCATION OF ALL LEAKS THAT WERE FOUND, INCLUDING THOSE THAT WERE REPAIRED DURING THE TEST)
Tested Existing 3/4" SVC Tee & Cut-N-Capped PUP
Final Test

SIGNED: Tony Gargiulo
PRESSURE CONTROL

RETURN ORIGINAL WITH PRESSURE TEST SCHEMATIC AND CHART TO CONTRACTOR FOREMAN.
FOR FINAL LEAK/STRENGTH TEST, SEND COPIES OF ALL TEST DOCUMENTS TO ENGINEERING.

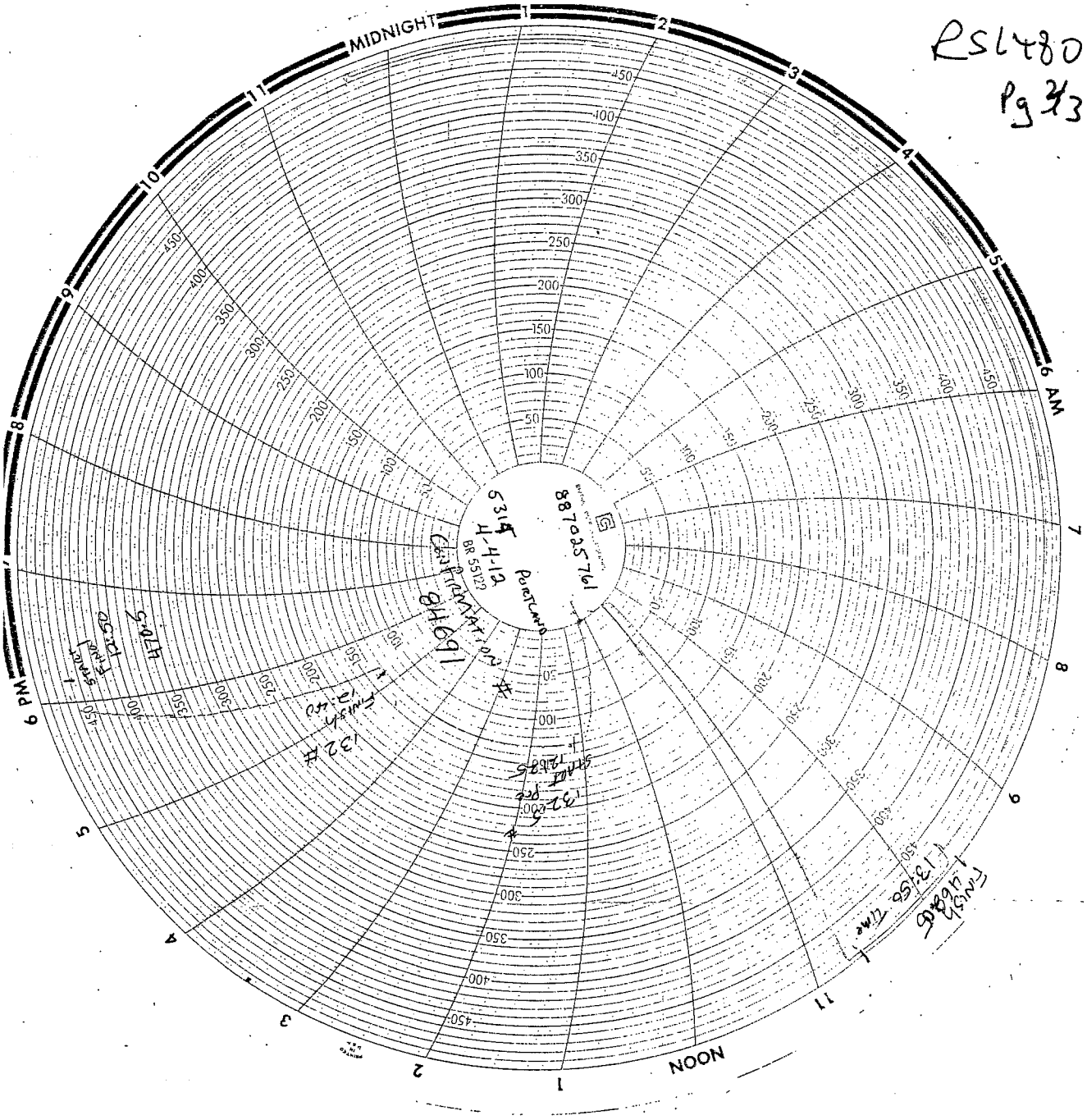
RS 1480 Inlet
Pg 2/3

READINGS

DATE	TIME	PRESSURE		TEMPERATURE			
		P1	P2 *	T1	T2	T3	T4
4-4-12	12:50	470.5					
4-4-12	13:05	480.0					
4-4-12	13:20	476.5					
4-4-12	13:35	477.0					
4-4-12	13:50	468.5					

** IF REQUIRED BY WRITTEN PROCEDURE*

RS1480 Wet
Pg 3/3



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RS1538 Inlet
Pg 1/3

PIPELINE PRESSURE TEST REPORT

GOS 2525.3300

JOB NO.	DATE
887026100	9/21/11

JOB LOCATION: E. M ST & E. 32 ST. TACOMA DR# 1538

NAME OF INDIVIDUAL RESPONSIBLE FOR PERFORMING TEST	COMPANY (IF CONTRACTOR)
MEDLEY, MARVIN	

PROJECT ENGINEER: DEREK KOO

SECTION TESTED (NOTE SIZE AND LENGTH OF ALL PIPE TESTED): 3/4" PANHEAT TEE & ASSOCIATED WELDS

TEST INFORMATION

START TIME: 1245 ☐ A.M. ☑ P.M. PRESSURE 477.0 PSIG DATE 9/21/11

STOP TIME: 1345 ☐ A.M. ☑ P.M. PRESSURE 475.5 PSIG DATE 9/21/11

TYPE OF TEST
- ☐ PRELIMINARY LEAK TEST
- ☑ FINAL LEAK/STRENGTH TEST
- ☐ SOAP TEST (RATED PARTS NOT SUBJECTED TO PRESSURE TEST)

TEST MEDIUM
- ☐ AIR ☐ NITROGEN ☐ HYDROSTATIC *
- CNG

* FOR HYDROSTATIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:
1. ☐ FILL MAIN
2. ☐ RAISE TO LEAK TEST PRESSURE
3. ☐ RAISE TO FINAL LEAK/STRENGTH TEST PRESSURE

TEST GAUGE(S)
- ☐ SPRING/DIGITAL SERIAL NO. _____ CALIBRATION DUE DATE (MM/DD/YY) _____
- ☑ RECORDING SERIAL NO. 08327169 CALIBRATION DUE DATE (MM/DD/YY) 1/4/2012
- ☐ DEAD WEIGHT SERIAL NO. _____ CALIBRATION DUE DATE (MM/DD/YY) _____

LOCATION OF TEMPERATURE PROBE(S)

T1 NA	T2	T3	T4
☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED

PYROMETER SERIAL NO.: NA

PYROMETER CALIBRATION DUE DATE (MM/DD/YY):

TEST RESULTS
- ☑ PASS ☐ FAIL

TEST CONFIRMATION NO. (CONTACT ENGINEERING FOR APPROVAL ON FINAL LEAK/STRENGTH TEST ONLY): NA

DATE:

REMARKS (NOTE LOCATION OF ALL LEAKS THAT WERE FOUND, INCLUDING THOSE THAT WERE REPAIRED DURING THE TEST)
NA

SIGNED

PRESSURE CONTROL

RETURN ORIGINAL WITH PRESSURE TEST SCHEMATIC AND CHART TO CONTRACTOR FOREMAN.
FOR FINAL LEAK/STRENGTH TEST, SEND COPIES OF ALL TEST DOCUMENTS TO ENGINEERING.

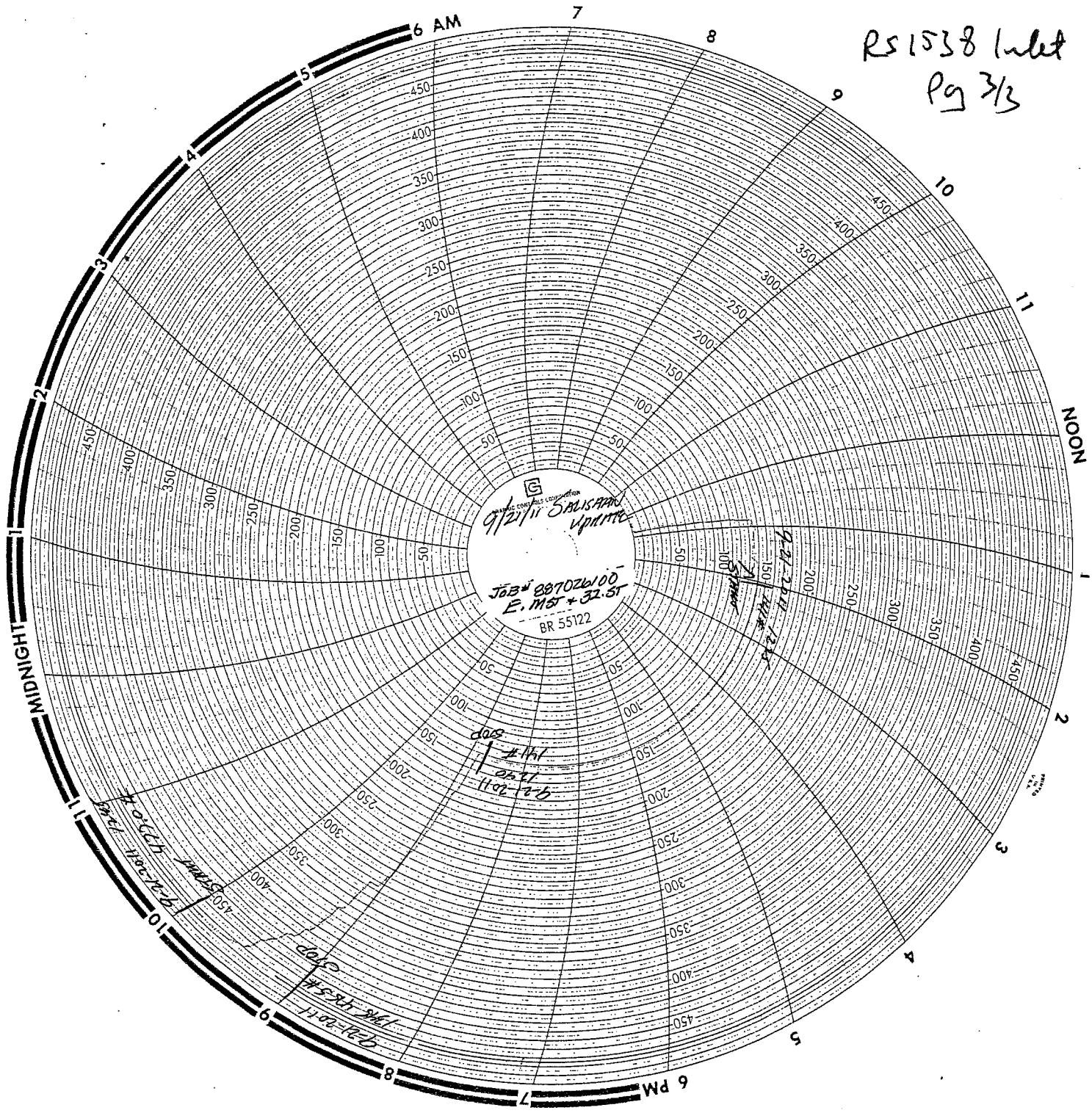
RS1538 Weld
Pg 2/3

READINGS

DATE	TIME	PRESSURE		TEMPERATURE			
		P1	P2 *	T1	T2	T3	T4
9/21/11	1245	477.0					
	1300	476.5					
	1315	476.5					
	1330	476.5					
	1345	475.5					

** IF REQUIRED BY WRITTEN PROCEDURE*

RS1538 Inlet
Pg 3/3



PUGET SOUND ENERGY
The Energy To Do Great Things

RS1877 Inlet
Pg 1/3

PIPELINE PRESSURE TEST REPORT

GOS 2525.3300

JOB NO.	DATE
EE702616106	9/27/11

JOB LOCATION: E 70 & PORTLAND AV E TACOMA DR# 1877

NAME OF INDIVIDUAL RESPONSIBLE FOR PERFORMING TEST	COMPANY (IF CONTRACTOR)
MARTIN MEDLEY	

PROJECT ENGINEER: DEREK KOO

SECTION TESTED (NOTE SIZE AND LENGTH OF ALL PIPE TESTED): 3/4" PANCAKE TEE & ASSOCIATED WELDS

TEST INFORMATION

START TIME: 1300 ☐ A.M. ☑ P.M. PRESSURE 473.0 PSIG DATE 9/27/11

STOP TIME: 1400 ☐ A.M. ☑ P.M. PRESSURE 473.0 PSIG DATE 9/27/11

TYPE OF TEST
- ☐ PRELIMINARY LEAK TEST
- ☑ FINAL LEAK/STRENGTH TEST
- ☐ SOAP TEST (RATED PARTS NOT SUBJECTED TO PRESSURE TEST)

TEST MEDIUM
☐ AIR ☐ NITROGEN ☐ HYDROSTATIC *

CNG

* FOR HYDROSTATIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:
1. ☐ FILL MAIN
2. ☐ RAISE TO LEAK TEST PRESSURE
3. ☐ RAISE TO FINAL LEAK/STRENGTH TEST PRESSURE

TEST GAUGE(S)

☐ SPRING/DIGITAL	SERIAL NO.	CALIBRATION DUE DATE (MM/DD/YY)
☑ RECORDING	SERIAL NO. 0832769	CALIBRATION DUE DATE (MM/DD/YY) 1/4/2012
☐ DEAD WEIGHT	SERIAL NO.	CALIBRATION DUE DATE (MM/DD/YY)

LOCATION OF TEMPERATURE PROBE(S)

T1 NA	T2	T3	T4
☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED

PYROMETER SERIAL NO.	PYROMETER CALIBRATION DUE DATE (MM/DD/YY)
NA	

TEST RESULTS
☑ PASS ☐ FAIL

TEST CONFIRMATION NO. (CONTACT ENGINEERING FOR APPROVAL ON FINAL LEAK/STRENGTH TEST ONLY)	DATE
NA	

REMARKS (NOTE LOCATION OF ALL LEAKS THAT WERE FOUND, INCLUDING THOSE THAT WERE REPAIRED DURING THE TEST)
NA

SIGNED
PRESSURE CONTROL

RETURN ORIGINAL WITH PRESSURE TEST SCHEMATIC AND CHART TO CONTRACTOR FOREMAN.
FOR FINAL LEAK/STRENGTH TEST, SEND COPIES OF ALL TEST DOCUMENTS TO ENGINEERING.

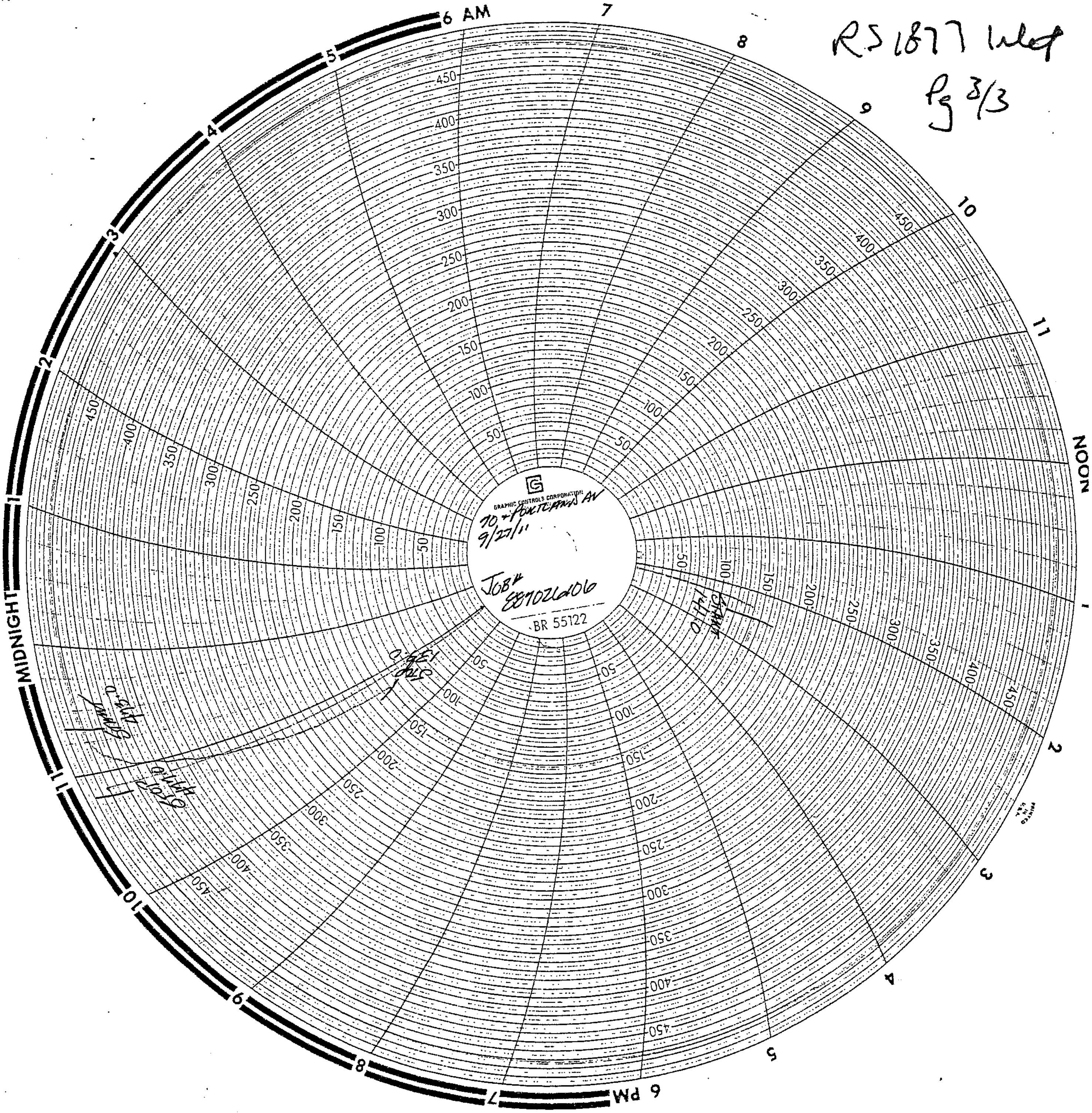
RS 1827 Inlet
Pg 2/3

READINGS

DATE	TIME	PRESSURE		TEMPERATURE			
		P1	P2 *	T1	T2	T3	T4
9/27/11	1300	473.0					
	1315	475.0					
	1330	474.5					
	1345	477.0					
	1400	477.0					

* IF REQUIRED BY WRITTEN PROCEDURE

RS 1877 Inlet
Pg 3/3



PUGET SOUND ENERGY
The Energy To Do Great Things

RS 1973 Inlet
Pg 4/3

PIPELINE PRESSURE TEST REPORT

GOS 2525.3300

JOB NO.	DATE
887026104	12-14-11

JOB LOCATION
1423 E 56 ST
TACOMA

NAME OF INDIVIDUAL RESPONSIBLE FOR PERFORMING TEST	COMPANY (IF CONTRACTOR)
DENNIS DORAN	

PROJECT ENGINEER
DEREK KOO

SECTION TESTED (NOTE SIZE AND LENGTH OF ALL PIPE TESTED)
PUNCH TEE CUT AND CAP 12"

TEST INFORMATION

START TIME 1350 ☐ A.M. ☒ P.M. PRESSURE 477.0 PSIG DATE 12-14-11

STOP TIME 1450 ☐ A.M. ☒ P.M. PRESSURE 476.0 PSIG DATE 12-14-11

TYPE OF TEST
- ☒ PRELIMINARY LEAK TEST
- ☒ FINAL LEAK/STRENGTH TEST
- ☒ SOAP TEST (RATED PARTS NOT SUBJECTED TO PRESSURE TEST)

TEST MEDIUM
☐ AIR ☐ NITROGEN ☐ HYDROSTATIC *
☒ CNG

* FOR HYDROSTATIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:
1. ☐ FILL MAIN
2. ☐ RAISE TO LEAK TEST PRESSURE
3. ☐ RAISE TO FINAL LEAK/STRENGTH TEST PRESSURE

TEST GAUGE(S)

☒ SPRING/DIGITAL	SERIAL NO. 537040	CALIBRATION DUE DATE (MM/DD/YY)	02 12 12
☒ RECORDING	SERIAL NO. 0832771 (01)	CALIBRATION DUE DATE (MM/DD/YY)	01 04 12
☐ DEAD WEIGHT	SERIAL NO.	CALIBRATION DUE DATE (MM/DD/YY)	

LOCATION OF TEMPERATURE PROBE(S)

T1	T2	T3	T4
☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED

PYROMETER SERIAL NO. | PYROMETER CALIBRATION DUE DATE (MM/DD/YY)

TEST RESULTS
☒ PASS ☐ FAIL

TEST CONFIRMATION NO. (CONTACT ENGINEERING FOR APPROVAL ON FINAL LEAK/STRENGTH TEST ONLY)	DATE
45055	12-14-11

REMARKS (NOTE LOCATION OF ALL LEAKS THAT WERE FOUND, INCLUDING THOSE THAT WERE REPAIRED DURING THE TEST)

SIGNED
Dennis Doran
PRESSURE CONTROL

RETURN ORIGINAL WITH PRESSURE TEST SCHEMATIC AND CHART TO CONTRACTOR FOREMAN.
FOR FINAL LEAK/STRENGTH TEST, SEND COPIES OF ALL TEST DOCUMENTS TO ENGINEERING.

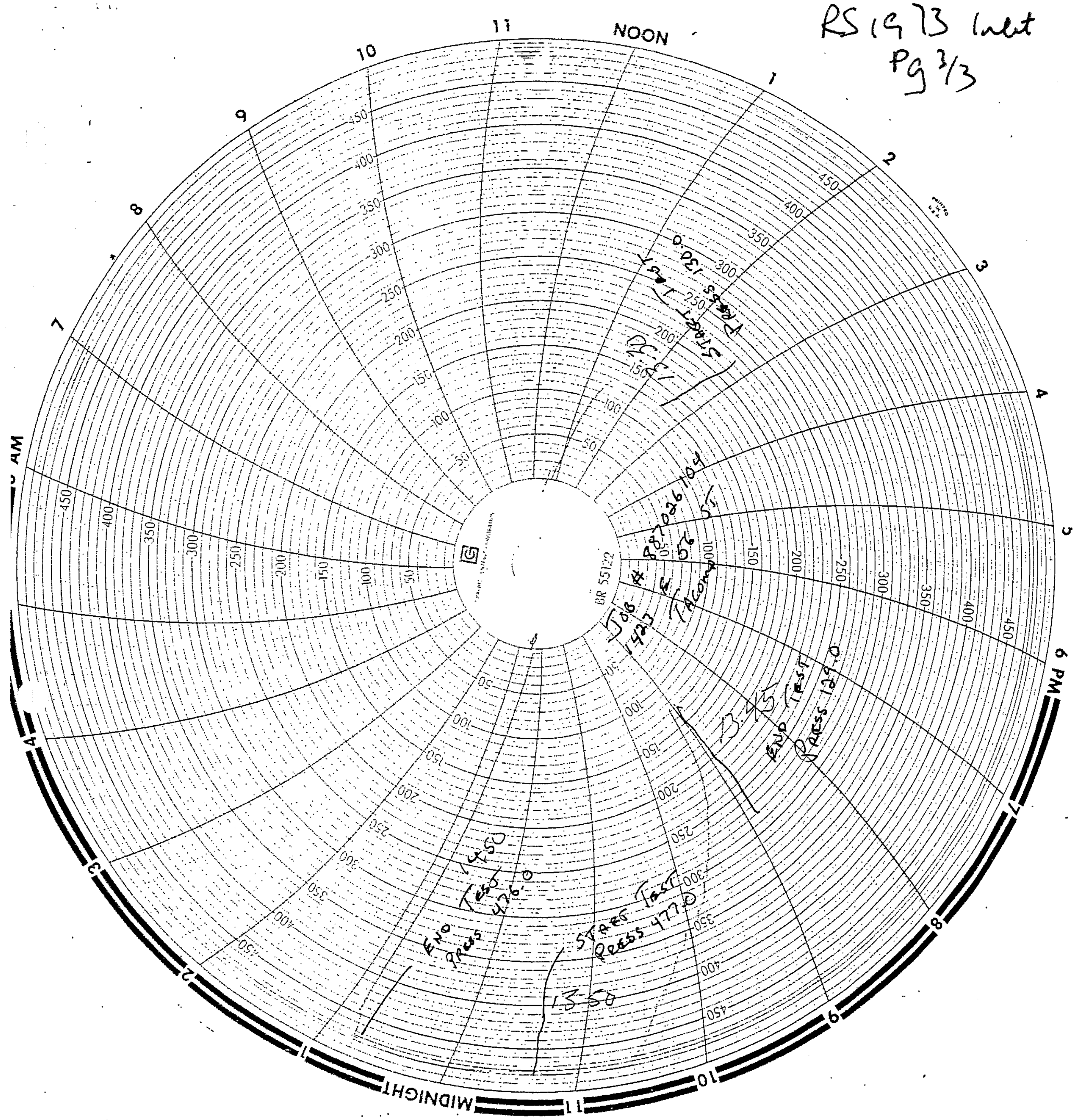
RS 1973 Inlet
Pg 2/3

READINGS

DATE	TIME	PRESSURE		TEMPERATURE			
		P1	P2 *	T1	T2	T3	T4
12-14-11	1350	477.0					
12-14-11	1405	479.5					
12-14-11	1420	479.0					
12-14-11	1435	478.0					
12-14-11	1450	476.0					

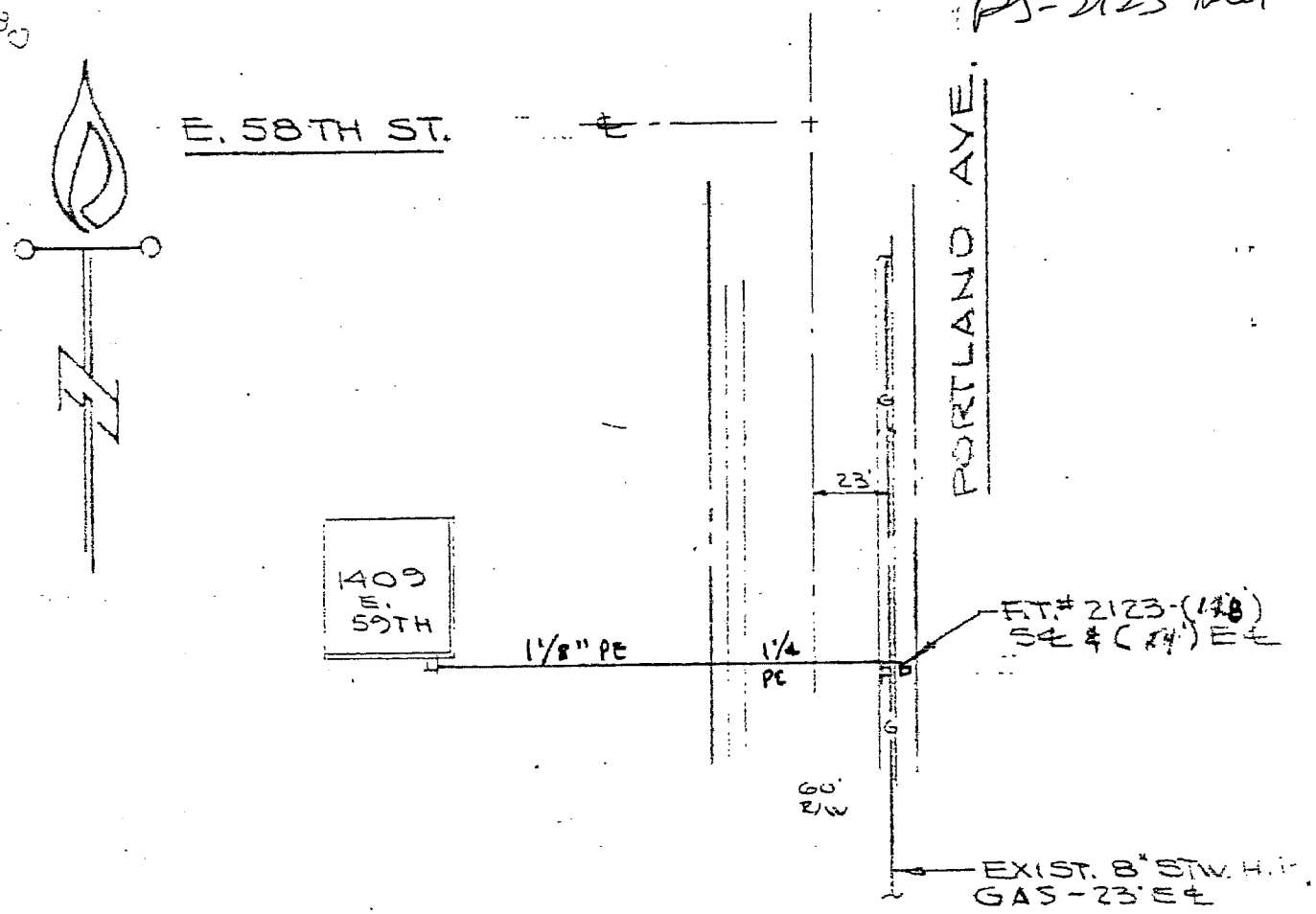
* IF REQUIRED BY WRITTEN PROCEDURE

RS 1973 Inlet
Pg 3/3



25-30

PS-2123 Met



JOB #: 845-282
I.R #: 6FG5
INSTALLED:
EM SECT.#: 41
PLAT # 247063
¼ SECT S.E. 22
OPS. MAP # 20-3-D

1" "621" REG. 3/32" ORIFICE - SET AT 45# SPR. # ID 7455-1"
RK I.P.H. SET AT 51#

CONSTRUCTION PRINT

AS ☒ INSTALLED ☐ RETIRED
(MAIN • SVC • MSA • REG • ETC)
DATE COMPL 7-19-84
100 % COMPLETED
FITTER OR CONTR: PIPELINE
FIELD REP OR SUPV HALLER
TYPE OF TEST NIT.
PRESSURE 462 #
DESCRIPTION (SIZE-LENGTH)
1 5' 1" STW PIPING
2 (1ea) F.621 REG 1" W/ASO
3
4
5

ENG POSTING	
COMPL RPT	✓
CORROSION	6-22
PLATS	1
OPS	✓
TAX	✓
MMOS	
AREA	✓
CooK	

DWN JG	5/31/84	APP.	
CHKD RJW	6/8/84	SCALE NONE	

WASHINGTON NATURAL GAS COMPANY
FARM TAP # 2123
1409 EAST 59TH ST.

DWG. NO. 2123

RS-2695 Pg 1/2

PUGET SOUND ENERGY

REPORT OF PRESSURE TEST ON NEW MAIN

JOB NUMBER	IR NUMBER	DATE
109023562		12-22-2005

JOB LOCATION: E. 40th + M ST TACOMA DR# 2695

CONTRACTOR OR FITTER: Pilchuck INSPECTOR: Jim Cargill

SECTION TESTED: DR piping From b/o Line stopper To outlet valve. (See Attached sheet)

TEST INFORMATION

STARTED 1430 AM/PM PRESSURE 477.7 PSIG DATE 12-22-2005

COMPLETED 1530 AM/PM PRESSURE 477.2 PSIG DATE 12-22-2005

TYPE OF TEST: ☒ LEAK ☐ STRENGTH

TEST MEDIUM: ☐ AIR ☒ NITROGEN ☐ HYDROSTATIC*

GAUGE: ☒ ~~SPRING~~ Digital ☒ RECORDING ☒ DEAD WEIGHT

LOCATION OF TEMPERATURE PROBE:

T1	T2	T3	T4
☐ BURIED	☐ BURIED	☐ BURIED	☐ BURIED
☒ EXPOSED	☒ EXPOSED	☐ EXPOSED	☐ EXPOSED

***FOR HYDROSTIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:**

1) FILL MAIN _____ 2) RAISE TO LEAK TEST PRESSURE _____

3) RAISE TO STRENGTH TEST PRESSURE _____

RESULTS: ☒ ACCEPTED ☐ REJECTED BY: Jeff Webb

☒ PHONE ☐ IN PERSON DATE: 12-22-2005

REMARKS: _____

SIGNED: Paul A. Bench
PRESSURE CONTROL

1928 (3/97)

NOTE: *RETURN ORIGINAL TO MANAGER OF ENGINEERING DESIGN*

RS-2695 Pg 2/2

READINGS

DATE	TIME	PRESSURE		TEMPERATURE			
		P 1	P 2*	T 1	T 2	T 3	T 4
12-22-2005	1430	477.7		49.7	49.9		
	1445	477.7		49.1	49.3		
	1500	477.4		48.7	49.0		
	1515	477.3		49.3	49.1		
12-22-2005	1530	477.2		48.8	49.0		

*IF REQUIRED BY THE WRITTEN PROCEDURE

RS-2696 Pg 1/2

PUGET SOUND ENERGY

REPORT OF PRESSURE TEST ON NEW MAIN

JOB NUMBER	IR NUMBER	DATE
109025042		11-14-2006

JOB LOCATION: E. 48th & Portland Av RS#2696

CONTRACTOR OR FITTER: Pilchuck INSPECTOR: Dave Lockhart

SECTION TESTED: Station Piping (See Attached)

STARTED 1400 AM/PM PRESSURE 487.1 PSIG DATE 11-14-2006

COMPLETED 1500 AM/PM PRESSURE 487.1 PSIG DATE 11-14-2006

TYPE OF TEST: ☒ LEAK ☐ STRENGTH

TEST MEDIUM: ☐ AIR ☒ NITROGEN ☐ HYDROSTATIC*

GAUGE: ☒ ~~SPRING~~ Digital ☒ RECORDING ☒ DEAD WEIGHT

LOCATION OF TEMPERATURE PROBE:

T1	☒ BURIED ☐ EXPOSED	T2	☒ BURIED ☐ EXPOSED	T3	☐ BURIED ☐ EXPOSED	T4	☐ BURIED ☐ EXPOSED

***FOR HYDROSTIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:**

1) FILL MAIN _____ 2) RAISE TO LEAK TEST PRESSURE _____

3) RAISE TO STRENGTH TEST PRESSURE _____

RESULTS: ☒ ACCEPTED ☐ REJECTED BY: Jeff Webb

☒ PHONE ☐ IN PERSON DATE: 11-14-2006

REMARKS: _____

SIGNED: Paul A. Bench
PRESSURE CONTROL

1928 (3/97)

NOTE: RETURN ORIGINAL TO MANAGER OF ENGINEERING DESIGN

RS-2696 Pg 2/2

READINGS

DATE	TIME	PRESSURE		TEMPERATURE			
		P 1	P 2*	T 1	T 2	T 3	T 4
11-14-2006	1400	487.1		53.0	50.0		
"	1415	487.1		52.8	49.8		
"	1430	487.1		52.8	49.8		
"	1445	487.1		52.8	49.8		
11-14-2006	1500	487.1		52.6	49.8		

*IF REQUIRED BY THE WRITTEN PROCEDURE

RS-2697 Pg 1/2

1

PUGET SOUND ENERGY

REPORT OF PRESSURE TEST ON NEW MAIN

JOB NUMBER	IR NUMBER	DATE
109025043		2-16-2007

JOB LOCATION: RS # 2697 E 72nd & Portland Av

CONTRACTOR OR FITTER: Pilchuck INSPECTOR: Dave Lockhart

SECTION TESTED: Station Piping
Parts Listed on separate Sheet

STARTED 1300 AM PM PRESSURE 477.0 PSIG DATE 2-16-2007

COMPLETED 1400 AM PM PRESSURE 476.4 PSIG DATE 2-16-2007

TYPE OF TEST: ☒ LEAK ☐ STRENGTH

TEST MEDIUM: ☐ AIR ☒ NITROGEN ☐ HYDROSTATIC*

GAUGE: Digital ☒ ~~SPRING~~ ☒ RECORDING ☒ DEAD WEIGHT

LOCATION OF TEMPERATURE PROBE:

T 1	T 2	T 3	T 4
☒ BURIED	☒ BURIED	☐ BURIED	☐ BURIED
☐ EXPOSED	☐ EXPOSED	☒ EXPOSED	☐ EXPOSED

***FOR HYDROSTIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:**

1) FILL MAIN _____ 2) RAISE TO LEAK TEST PRESSURE _____

3) RAISE TO STRENGTH TEST PRESSURE _____

RESULTS: ☒ ACCEPTED ☐ REJECTED BY: Jeff Webb

☒ PHONE ☐ IN PERSON DATE: 2-16-2007

REMARKS: Soaped all Exposed piping

SIGNED: Paul A. Bench
PRESSURE CONTROL

1928 (3/97)

NOTE: RETURN ORIGINAL TO MANAGER OF ENGINEERING DESIGN

Pg-2697 Pg 2/2

READINGS

DATE	TIME	PRESSURE		TEMPERATURE			
		P 1	P 2*	T 1	T 2	T 3	T 4
2-16-2007	1300	477.0		46.5	50.2	56.1	
	1315	476.9		46.5	49.9	55.5	
	1330	476.6		46.4	49.7	55.0	
	1345	476.5		46.4	49.5	54.8	
2-16-2007	1400	476.4		46.4	49.5	54.6	

*IF REQUIRED BY THE WRITTEN PROCEDURE

RS-2698 Pg 1/2

PUGET SOUND ENERGY

REPORT OF PRESSURE TEST ON NEW MAIN

JOB NUMBER	IR NUMBER	DATE
109023568		12-27-05

JOB LOCATION: E. 26th + M ST DR # 2698

CONTRACTOR OR FITTER: Pilchuck INSPECTOR: Dave Lockhart

SECTION TESTED: DR Piping see Attached

STARTED 1015 (AM) PM PRESSURE 481.0 PSIG DATE 12-27-05

COMPLETED 1115 (AM) PM PRESSURE 481.4 PSIG DATE 12-27-05

TYPE OF TEST: ☒ LEAK ☐ STRENGTH

TEST MEDIUM: ☐ AIR ☒ NITROGEN ☐ HYDROSTATIC*

GAUGE: Digital ~~☒ SPRING~~ ☒ RECORDING ☒ DEAD WEIGHT

LOCATION OF TEMPERATURE PROBE:

T 1	☒ BURIED ☐ EXPOSED	T 2	☐ BURIED ☒ EXPOSED	T 3	☐ BURIED ☐ EXPOSED	T 4	☐ BURIED ☐ EXPOSED

***FOR HYDROSTIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:**

1) FILL MAIN _____ 2) RAISE TO LEAK TEST PRESSURE _____

3) RAISE TO STRENGTH TEST PRESSURE _____

RESULTS: ☒ ACCEPTED ☐ REJECTED BY: Jeff Webb

☒ PHONE ☐ IN PERSON DATE: 12-27-05

REMARKS: _____

SIGNED: Paul A. Bench
PRESSURE CONTROL

1928 (3/97)

NOTE: *RETURN ORIGINAL TO MANAGER OF ENGINEERING DESIGN*

RS-2698 Rev 2

READINGS

DATE	TIME	PRESSURE		TEMPERATURE			
		P1	P2*	T1	T2	T3	T4
12-27-05	1015	481.0		50.8	52.6		
〃	1030	480.9		50.8	52.2		
〃	1045	480.9		50.8	52.0		
〃	1100	481.2		50.8	52.4		
12-27-05	1115	481.4		50.8	52.8		

*IF REQUIRED BY THE WRITTEN PROCEDURE

RS-2723 Pg 1/2

PUGET SOUND ENERGY

REPORT OF PRESSURE TEST ON NEW MAIN

JOB NUMBER	IR NUMBER	DATE
109031159		7-25-2007

JOB LOCATION: OR-2723 PORTLAND RTE. 4' E. 72 ST.

CONTRACTOR OR FITTER: Pilchuck INSPECTOR:

SECTION TESTED: FROM 6" BOTTOM OUT LINESTOPPER "M" TO UPSTREAM SIDE OF OUTLET VALVE "N" INCLUDING 3/4" CONTROL & 12TH LINES. SEE ATTACHED COPY FOR FITTINGS. (10' 6" STL. 280 WALL & (2) 6" WELD CAPS)

STARTED 1200 AM (PM) PRESSURE 444.3 PSIG DATE 7-25-2007

COMPLETED 1400 AM (PM) PRESSURE 447.5 PSIG DATE 7-25-2007

TYPE OF TEST: ☒ LEAK ☐ STRENGTH

TEST MEDIUM: ☐ AIR ☒ NITROGEN ☐ HYDROSTATIC*

GAUGE: ☒ ~~SPRING~~ DIGITAL ☒ RECORDING ☒ DEAD WEIGHT

LOCATION OF TEMPERATURE PROBE:

T 1	☒ BURIED ☐ EXPOSED	T 2	☒ BURIED ☐ EXPOSED	T 3	☐ BURIED ☐ EXPOSED	T 4	☐ BURIED ☐ EXPOSED

***FOR HYDROSTIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:**

1) FILL MAIN _____ 2) RAISE TO LEAK TEST PRESSURE _____

3) RAISE TO STRENGTH TEST PRESSURE _____

RESULTS: ☒ ACCEPTED ☐ REJECTED BY: JUSTIN WAMBOLDT

☒ PHONE ☐ IN PERSON DATE: 7-25-2007

REMARKS: _____

SIGNED: W. J. Myhre
PRESSURE CONTROL

1926 (3/97)

NOTE: RETURN ORIGINAL TO MANAGER OF ENGINEERING DESIGN

RS-2723 Pg 42

READINGS

DATE	TIME	PRESSURE		TEMPERATURE			
		P1	P2*	T1	T2	T3	T4
7-25-2007	1200	464.3		67.6	76.0		
	1215	465.0		68.2	76.6		
	1230	465.5		68.8	77.0		
	1245	466.0		68.4	78.0		
	1300	466.5		69.4	78.2		
	1315	466.5		69.4	78.6		
	1330	467.0		69.6	79.6		
	1345	467.2		69.2	80.4		
7-25-2007	1400	467.5		68.8	80.6		

*IF REQUIRED BY THE WRITTEN PROCEDURE

287-3868

RS-2311

WASHINGTON NATURAL GAS COMPANY

REPORT OF PRESSURE TEST ON NEW MAIN

JOB NUMBER 905-504 IR NUMBER 6523-2 DATE 7-2-91

JOB LOCATION MID-MOUNTAIN YARD - BELLEVUE

CONTRACTOR OR FITTER MID-MTN

INSPECTOR BILL DODSON

SECTION TESTED ≈ 90' OF 8" STW PIPE, ≈ 80' OF 6" STW PIPE, ALL INLET & INTERSTAGE PIPING & RELATED VALVES AND FITTINGS FOR NEW DR #2311

TEST INFORMATION

STARTED 0900 (AM) PM PRESSURE 469# PSIG 64°F DATE 7-2-91

COMPLETED 1700 AM (PM) PRESSURE 508.4 PSIG 86°F DATE 7-2-91

TYPE TEST: _____ LEAKAGE _____ STRENGTH ✓

TESTING MEDIUM: _____ AIR: ✓ NITROGEN: ✓ HYDROSTATIC: _____

GAUGE: _____ SPRING: ✓ RECORDING: _____ DEAD WEIGHT: ✓

READINGS:

DATE	TIME	PRESSURE	TEMPERATURE
7-2-91	1600	509.3	87°
7-2-91	1000	481.8	72°
"	1100	498.0	78°
"	1200	505.3	81°
"	1300	507.3	82°
"	1400	508.7	85°
"	1500	508.2	85°

RESULTS: _____ ACCEPTED: _____ REJECTED _____

REMARKS: ALL PIPING ABOVE GROUND & EXPOSED TO DIRECT SUNLIGHT DURING TESTING (MID-MTN BELLEVUE YD.)

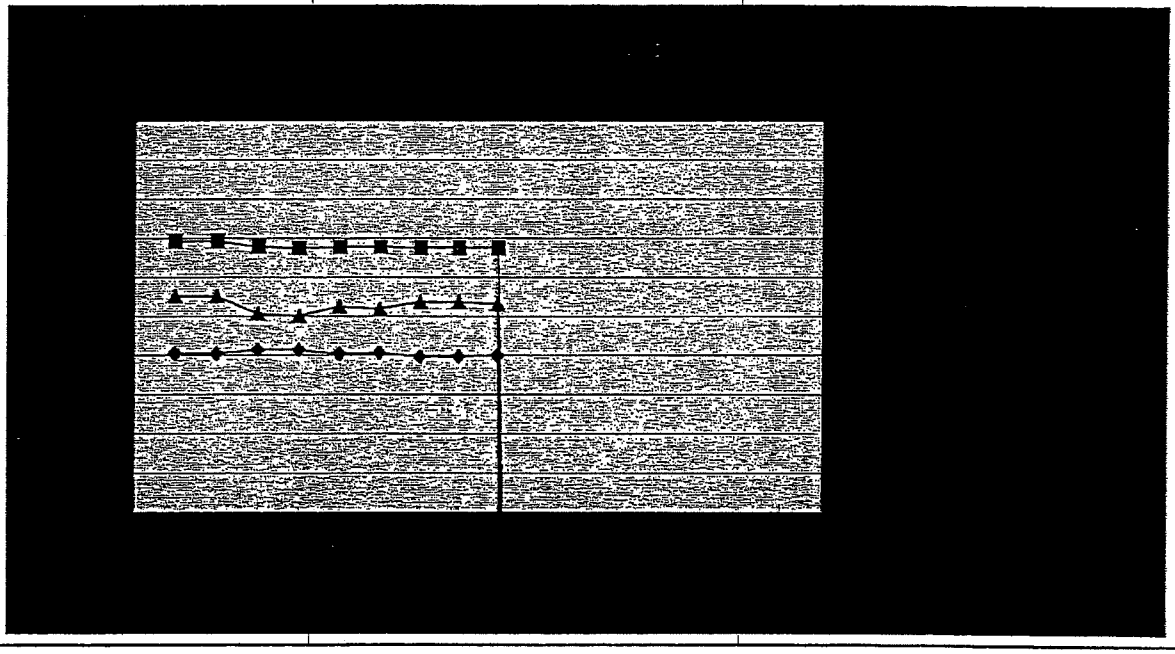
SIGNED: Vinaya

Form PC 14

020.X-01
020.X-02

Job Number: 9705121
Job Description: Installation of 6" STW "bypass"
Location: E. 96th Street & Golden Givens Avenue, Pierce County, WA
Date: 5-20-1998
Pressure Control Personnel: Estle Ratliff
Field Rep: Don Bain
Result: Passed

Time 24 hour clock	Pressure (psig)	exposed T1 (deg F)	T2 (deg F)	T3 (deg F)	Tabs (deg R)	Pabs (psia)	P/T (Pabs/Tabs)
1400	534.5	62.4	59.2		520.50	549.23	1.05520
1430	534.5	62.4	59.2		520.50	549.23	1.05520
1500	533.1	64.8	58.6		521.40	547.83	1.05069
1530	532.8	64.8	58.6		521.40	547.53	1.05012
1600	533.0	63.6	57.8		520.40	547.73	1.05252
1630	533.0	63.8	58.2		520.70	547.73	1.05191
1700	532.9	62.4	57.6		519.70	547.63	1.05374
1730	532.9	62.4	57.6		519.70	547.63	1.05374
1800	532.9	62.6	58.0		520.00	547.63	1.05313
1830					#DIV/0!	14.73	#DIV/0!
1900					#DIV/0!	14.73	#DIV/0!
1930					#DIV/0!	14.73	#DIV/0!
2000					#DIV/0!	14.73	#DIV/0!
2030					#DIV/0!	14.73	#DIV/0!
2100					#DIV/0!	14.73	#DIV/0!
2130					#DIV/0!	14.73	#DIV/0!
2200					#DIV/0!	14.73	#DIV/0!



REPORT OF PRESSURE TEST ON NEW MAIN

WNG 746.2 S (7/93) O.P.S. 6.14

020.T-01
020.Z-01
020.Z-01B
020.Z-01C
020.Z-01D
020.Z-01G
020.AA-01
020.AA-01.A
020.AB-01.
020.AC-01
020.AS-01
020.AT-01
020.AU-01
020.AW-01
HPS-0001-
HPS-0021
HPS-0023-
HPS-0030

JOB NUMBER	IR NUMBER	DATE
10700 8109	0021	11-20-99

JOB LOCATION: South Tacoma & 96th - Pierce Transit upRate

CONTRACTOR OR FITTER: Pilchuck INSPECTOR: Don Bain

SECTION TESTED: 6" HP SIW main from 96th & Golden Givens to Pierce Transit at 96th & South Tacoma Way. This test includes all fitting, valves and pipe up to MSA Resek valves.

TEST INFORMATION

STARTED 20:00 / 2300 AM (PM) PRESSURE 125.5# / 403.5# PSIG DATE 11-20-99

COMPLETED 24:00 / 0700 AM PM PRESSURE 125.5# / 403.5# PSIG DATE 11-20 / 11/21

TYPE OF TEST: [X] LEAK [X] STRENGTH

TEST MEDIUM: [ ] AIR [X] NITROGEN [ ] HYDROSTATIC*

GAUGE: [X] ~~SPRING~~ ELECTRONIC [X] RECORDING [X] DEAD WEIGHT

LOCATION OF TEMPERATURE PROBE:

T 1	[X] BURIED [ ] EXPOSED	T 2	[X] BURIED [ ] EXPOSED	T 3	[X] BURIED [ ] EXPOSED	T 4	[ ] BURIED [ ] EXPOSED

*FOR HYDROSTIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:

1) FILL MAIN _____ 2) RAISE TO LEAK TEST PRESSURE _____

3) RAISE TO STRENGTH TEST PRESSURE _____

RESULTS: [X] ACCEPTED [ ] REJECTED BY: Clay LOFTHUS

[X] PHONE [ ] IN PERSON DATE: 11/21/99

REMARKS: _____

SIGNED: E. Ramos
PRESSURE CONTROL

NOTE: RETURN ORIGINAL TO MANAGER OF ENGINEERING DESIGN

READINGS

Handwritten notes across the top of the table: "GAUGE", "DEAD WEIGHTS", "PIERCE TRANSIT", "9th & WOSMER", "26th & GOLDEN GT."

DATE	TIME	PRESSURE (GAUGE) P 1	PRESSURE (DEAD WEIGHTS) P 2*	TEMPERATURE WEST	TEMPERATURE MIDDLE	TEMPERATURE EAST	T 4
11-20-99	20:00	125.5#	—	55.6°	50.2°	52.8°	
LEAK	20:30	125.5#	—	55.8°	50.2°	53.4°	
	21:00	125.5#	—	54.8°	52.4°	53.8°	
11-20-99							
	21:30	252.5#	—	55.6#	50.2°	50.6°	
INTERMEDIATE	22:00	252.5#		55.4#	47.8°	53.0°	
	22:30	252.5#		55.6#	47.8°	53.6°	
STRENGTH							
TEST							
11-20-99	23:00	404.5#	403.5#	55.4°	48.0°	51.4°	
	23:30	404.5#	403.5#	53.2°	48.0	53.2°	
FULL	24:00	404.0#	403.3#	52.8°	48.2°	53.8°	
STRENGTH	00:30	404.0#	403.3#	52.4°	49.6°	53.6°	CALLED
	01:00	404.0#	403.3#	52.4°	49.8°	53.8°	
TEST	01:30	404.0#	403.3#	52.4°	49.8°	54.2°	
	02:00	404.0#	403.3#	52.3°	50.1°	53.8°	
	02:30	403.5#	403.3#	52.1°	50.1°	53.8°	
	03:00	403.5#	403.2#	52.0°	50.1°	53.2°	
	03:30	403.5#	403.2#	52.1°	49.8°	53.4	
	04:00	403.5#	403.2#	52.1°	50.1°	53.8°	
	04:30	403.5#	403.3#	52.0°	50.1°	53.8°	
	05:00	403.5#	403.3#	52.0°	50.2°	53.8°	CALLED
	05:30	403.5#	403.3#	52.1°	50.2°	54.0°	
	06:00	403.5#	403.3#	52.2°	50.2°	54.8°	CALLED
	06:30	403.5#	403.3#	52.2°	50.4	54.4	
	07:00	403.5#	403.3#	52.4	50.4	54.8°	
	07:30	403.5#	403.3#	52.4	50.4	54.8°	
	08:00						
	08:30						

* REQUIRED BY THE WRITTEN PROCEDURE

020.2-1A
020.2-1
(Added Fittings)

PSE PUGET SOUND ENERGY
The Energy To Do Great Things

PIPELINE PRESSURE TEST REPORT

GOS 2525.3300

Pg 43

JOB NO.	DATE
887026762	4-16-12

JOB LOCATION
PARK AVE & S. 96TH ST
TACOMA

NAME OF INDIVIDUAL RESPONSIBLE FOR PERFORMING TEST	COMPANY (IF CONTRACTOR)
D. DORAN	

PROJECT ENGINEER
DON FRIEZE

SECTION TESTED (NOTE SIZE AND LENGTH OF ALL PIPE TESTED)
8" OF 2" SAVE-A-VALVE & 6" OF 4" SAVE-A-VALVE

TEST INFORMATION

START TIME 11:05 ☒ A.M. ☐ P.M. PRESSURE 471.0 PSIG DATE 4-16-12

STOP TIME 12:05 ☐ A.M. ☒ P.M. PRESSURE 474.5 PSIG DATE 4-16-12

TYPE OF TEST
- ☐ PRELIMINARY LEAK TEST
- ☒ FINAL LEAK/STRENGTH TEST
- ☒ SOAP TEST (RATED PARTS NOT SUBJECTED TO PRESSURE TEST)

TEST MEDIUM
☐ AIR ☐ NITROGEN ☐ HYDROSTATIC *
☒ CNG

* FOR HYDROSTATIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:
1. ☐ FILL MAIN
2. ☐ RAISE TO LEAK TEST PRESSURE
3. ☐ RAISE TO FINAL LEAK/STRENGTH TEST PRESSURE

TEST GAUGE(S)

☒ SPRING/DIGITAL	SERIAL NO. 830893	CALIBRATION DUE DATE (MM/DD/YY)	8-1-12
☒ RECORDING	SERIAL NO. 0832771-01	CALIBRATION DUE DATE (MM/DD/YY)	1-1-13
☐ DEAD WEIGHT	SERIAL NO.	CALIBRATION DUE DATE (MM/DD/YY)	

LOCATION OF TEMPERATURE PROBE(S)

T1	T2	T3	T4
☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED	☐ BURIED ☐ EXPOSED

PYROMETER SERIAL NO. | PYROMETER CALIBRATION DUE DATE (MM/DD/YY)

TEST RESULTS
☒ PASS ☐ FAIL

TEST CONFIRMATION NO. (CONTACT ENGINEERING FOR APPROVAL ON FINAL LEAK/STRENGTH TEST ONLY)	DATE
11845	4-16-12

REMARKS (NOTE LOCATION OF ALL LEAKS THAT WERE FOUND, INCLUDING THOSE THAT WERE REPAIRED DURING THE TEST)

SIGNED
D. Doran
PRESSURE CONTROL

RETURN ORIGINAL WITH PRESSURE TEST SCHEMATIC AND CHART TO CONTRACTOR FOREMAN.
FOR FINAL LEAK/STRENGTH TEST, SEND COPIES OF ALL TEST DOCUMENTS TO ENGINEERING.

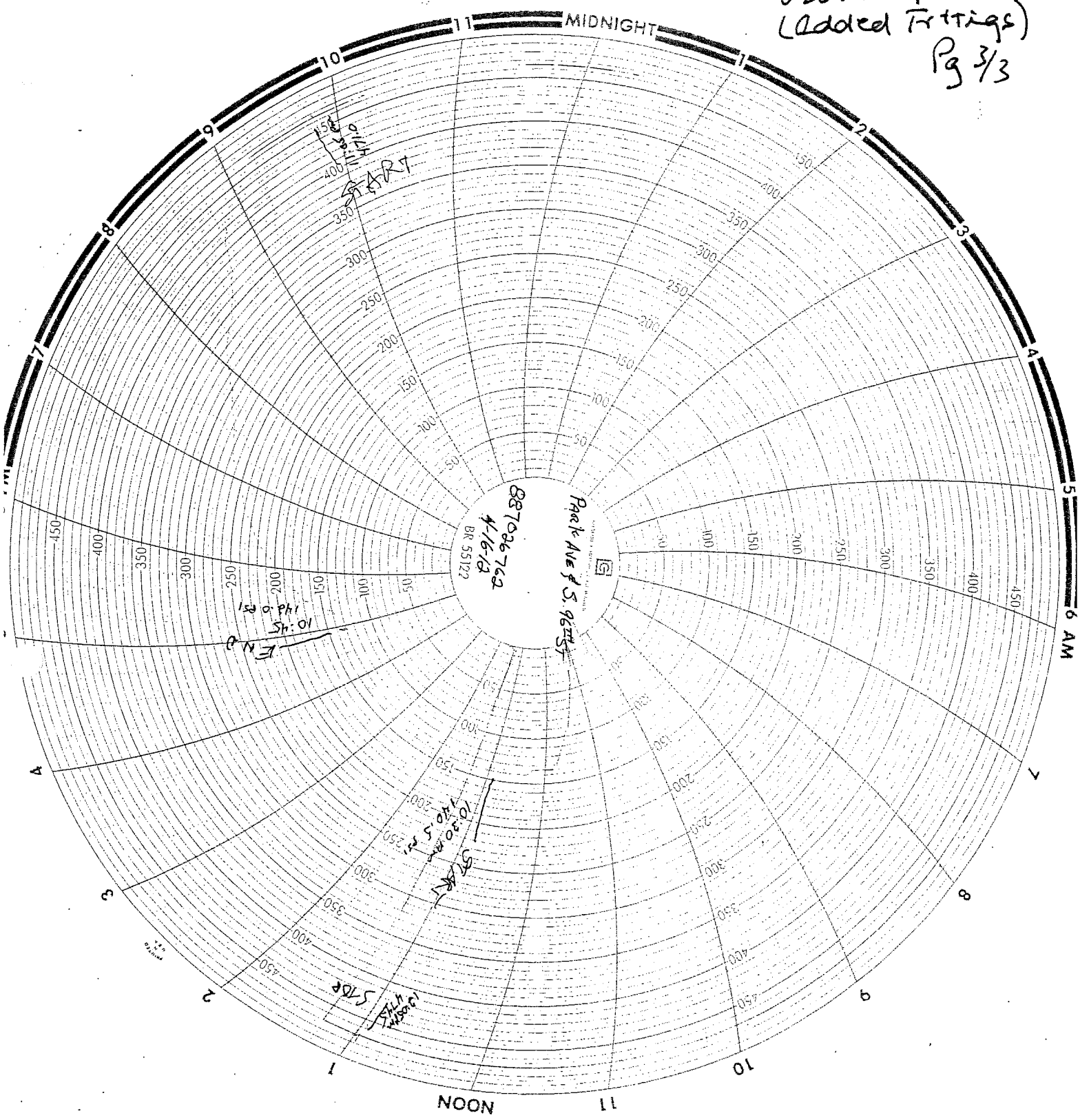
OZW.2-1A
OZW.2-1
(Added Fittings)
Pg 3/3

READINGS

DATE	TIME	PRESSURE		TEMPERATURE			
		P1	P2 *	T1	T2	T3	T4
4-16-12	11:05	471.0					
4-16-12	11:20	473.0					
4-16-12	11:35	476.0					
4-16-12	11:50	476.0					

** IF REQUIRED BY WRITTEN PROCEDURE*

0.20.2-1A
020.2-1
(Added Fittings)
Pg 3/3



020Y-01.A PS 1/2

REPORT OF PRESSURE TEST ON NEW MAIN

WNG 7462 S (7/93) O.P.S. 6.14

JOB NUMBER	IR NUMBER	DATE
97051 71	001-01	6-11-98

JOB LOCATION: 96th ST E & EAST "E" ST. TACOMA

CONTRACTOR OR FITTER: P.L Chuck Constr. INSPECTOR: M. PARAS

SECTION TESTED: NEW 6" By-PASS STW H.P. - INCLUDING B/outs - VALVES And ALL ASSOC. FITTINGS

TEST INFORMATION

STARTED LEAK 0800 / STRENGTH 0900 (AM) PM PRESSURE 196# / 532.7# PSIG DATE 6-11-98

COMPLETED LEAK 0900 / STRENGTH 1300 (AM) PM PRESSURE 196# / 533.1# PSIG DATE 6-11-98

TYPE OF TEST: [X] LEAK [X] STRENGTH

TEST MEDIUM: [ ] AIR [X] NITROGEN [ ] HYDROSTATIC*

GAUGE: [X] SPRING [X] RECORDING [X] DEAD WEIGHT

LOCATION OF TEMPERATURE PROBE:

T1	T2	T3	T4
[ ] BURIED	[ ] BURIED	[ ] BURIED	[ ] BURIED
[X] EXPOSED	[ ] EXPOSED	[ ] EXPOSED	[ ] EXPOSED

***FOR HYDROSTIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:**

1) FILL MAIN _____ 2) RAISE TO LEAK TEST PRESSURE _____

3) RAISE TO STRENGTH TEST PRESSURE _____

RESULTS: [X] ACCEPTED [ ] REJECTED BY: A.J. RITTER

[ ] PHONE [X] IN PERSON DATE: 6-11-98

REMARKS: _____

SIGNED: E. RATLIFF
PRESSURE CONTROL

NOTE: *RETURN ORIGINAL TO MANAGER OF ENGINEERING DESIGN*

READINGS

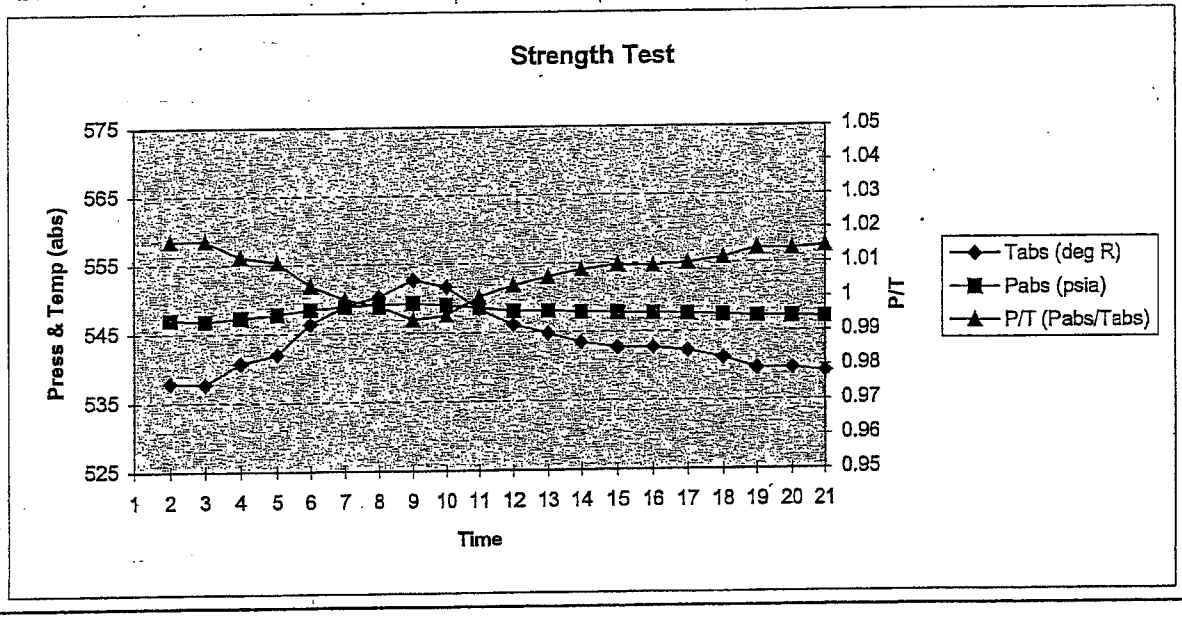
DATE	TIME	PRESSURE GAUGE P1	PRESSURE GAUGE P2*	TEMPERATURE T1	T2	T3	T4
6-11-98	0800	196#					
	0815	196#					
	0830	196#	& Leak				
	0845	196#					
6-11-98	0900	196#					
6-11-98	0900	532.7#	533#	60.8°			
	0930	531.2#	532#	58.6°			
* CALLED	1000	531.0#	532#	57.4°			
	1030	530.8#	531#	56.3°			
	1100	531.0#	531#	57.8°			
	1130	531.3#	532#	58.4°			
CALLED	1200	531.3#	532#	58.6°			
	1230	532.4#	533#	59.2°			
	1300	533.1#	534#	60.1°			
	1330						
* CALLED	1400						
6-11-98	1430						

0204-01.B

Job Number: 9705121
Job Description: Installation of 6" STW "bypass"
Location: E. 96th Street & Park Avenue, Pierce County, WA
Date: 8-12-1998
Pressure Control Personnel: Lee Otto
Field Rep: Dick Smith
Result: Passed 8/14/98

Note: Approx. 57' of 6" all buried except for ends, ends exposed with thermocouples - difficult to analyze test - poor test set up. Okay results.

Time 24 hour clock	Pressure (psig)	exposed T1 (deg F)	exposed T2 (deg F)	T3 (deg F)	Tabs (deg R)	Pabs (psia)	P/T (Pabs/Tabs)
1030	532.3	76.6	79.8		537.90	547.03	1.01697
1100	532.1	76.4	79.6		537.70	546.83	1.01698
1130	532.6	81.6	80.4		540.70	547.33	1.01226
1200	533.1	84.6	80.0		542.00	547.83	1.01076
1230	533.8	89.2	84.2		546.40	548.53	1.00390
1300	534.2	92.6	86.0		549.00	548.93	0.99987
1330	534.5	93.6	87.8		550.40	549.23	0.99787
1400	534.6	96.8	89.2		552.70	549.33	0.99390
1430	534.3	95.6	88.4		551.70	549.03	0.99516
1500	533.9	92.6	84.8		548.40	548.63	1.00042
1530	533.4	90.0	82.8		546.10	548.13	1.00372
1600	533.4	87.2	83.0		544.80	548.13	1.00611
1630	533.2	86.6	81.0		543.50	547.93	1.00815
1700	533.1	85.6	80.4		542.70	547.83	1.00945
1730	533.0	85.2	80.8		542.70	547.73	1.00927
1800	532.9	84.0	81.0		542.20	547.63	1.01001
1830	532.7	82.4	80.6		541.20	547.43	1.01151
1900	532.5	80.8	79.0		539.60	547.23	1.01414
1930	532.4	80.4	79.4		539.60	547.13	1.01395
2000	532.3	79.8	79.0		539.10	547.03	1.01471

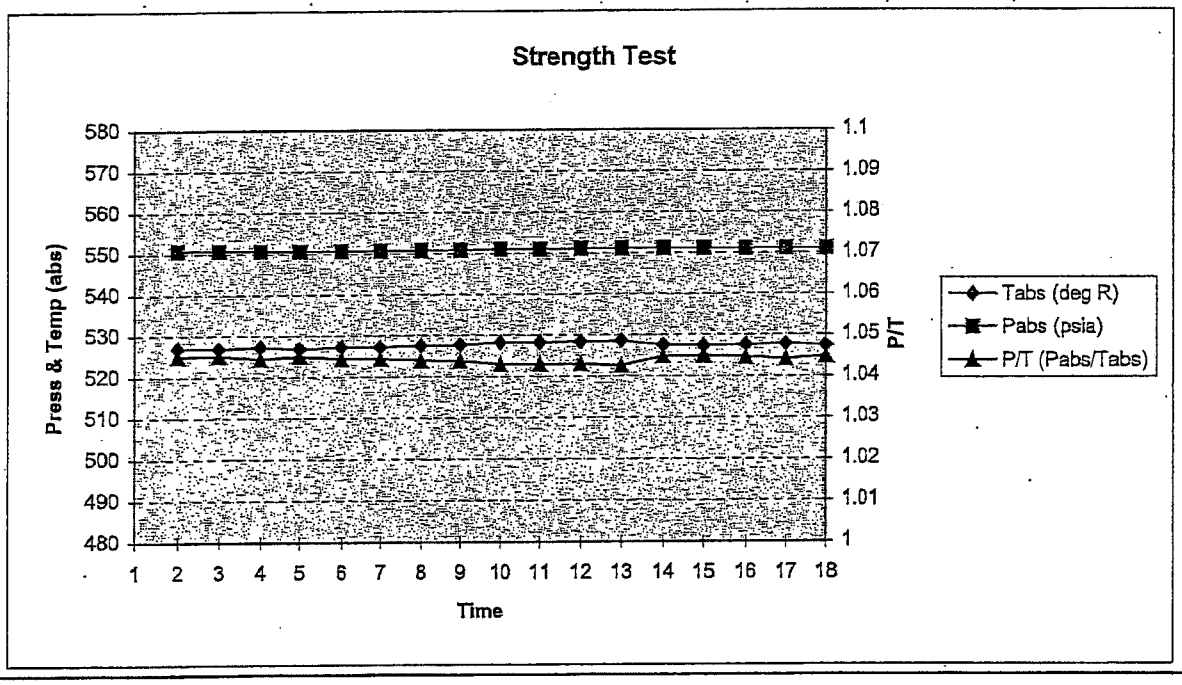


 020.Z-01.E

Job Number: 9705121
Job Description: Installation of 6" STW "bypass"
Location: E. 96th Street & Sheridan, Pierce County, WA
Date: 8-4-1998
Pressure Control Personnel: Estle Ratliff
Field Rep: Don Bain
Result: Passed 8/5/98

Note: Approx. 387' of 6" pipe w/ bottom-outs.

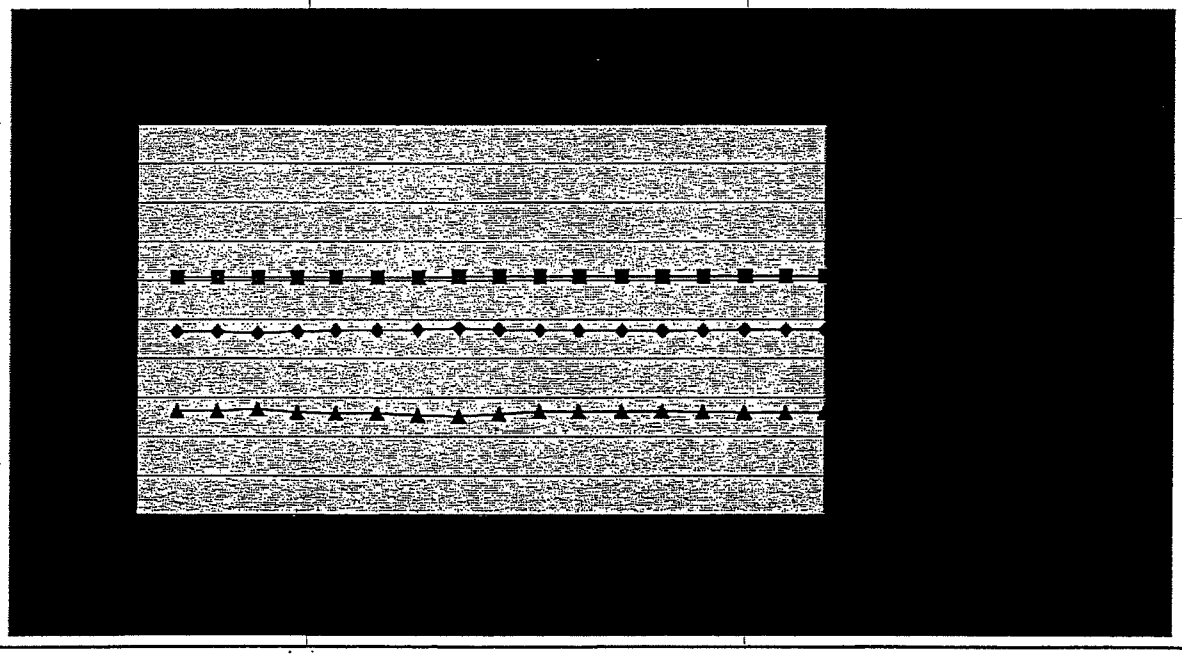
Time 24 hour clock	Pressure (psig)	exp./buried T1 (deg F)	exp./buried T2 (deg F)	T3 (deg F)	Tabs (deg R)	Pabs (psia)	P/T (Pabs/Tabs)
1000	536.1	64.6	70.2		527.10	550.83	1.04502
1030	536.1	64.6	70.0		527.00	550.83	1.04522
1100	536.0	65.4	69.8		527.30	550.73	1.04443
1130	535.9	65.4	69.0		526.90	550.63	1.04504
1200	536.0	65.6	69.6		527.30	550.73	1.04443
1230	536.0	65.6	69.6		527.30	550.73	1.04443
1300	536.1	65.8	70.0		527.60	550.83	1.04403
1330	536.1	66.0	70.0		527.70	550.83	1.04383
1400	536.3	66.2	71.0		528.30	551.03	1.04302
1430	536.3	66.2	71.0		528.30	551.03	1.04302
1500	536.4	66.2	71.2		528.40	551.13	1.04302
1530	536.4	66.6	71.2		528.60	551.13	1.04262
1600	536.4	65.6	70.0		527.50	551.13	1.04480
1630	536.4	65.4	70.0		527.40	551.13	1.04499
1700	536.4	65.6	70.2		527.60	551.13	1.04460
1730	536.4	65.6	70.6		527.80	551.13	1.04420
1800	536.4	65.4	70.2		527.50	551.13	1.04480



020.2-01.F

Job Number: 9705121
Job Description: Installation of 6" STW "bypass"
Location: E. 96th Street & Hosmer Avenue, Pierce County, WA
Date: 7-22-1998
Pressure Control Personnel: Estle Ratliff
Field Rep: Don Bain
Result: Passed

Time 24 hour clock	Pressure (psig)	exposed T1 (deg F)	T2 (deg F)	T3 (deg F)	Tabs (deg R)	Pabs (psia)	P/T (Pabs/Tabs)
1030	526.1	66.0	68.3		526.85	540.83	1.02654
1100	526.1	66.0	68.3		526.85	540.83	1.02654
1130	526.0	66.0	67.6		526.50	540.73	1.02703
1200	526.0	66.4	68.0		526.90	540.73	1.02625
1230	526.1	66.4	68.4		527.10	540.83	1.02605
1300	526.1	66.4	68.4		527.10	540.83	1.02605
1330	526.1	66.6	68.8		527.40	540.83	1.02546
1400	526.3	66.9	69.2		527.75	541.03	1.02516
1430	526.3	66.6	68.8		527.40	541.03	1.02584
1500	526.3	66.4	68.4		527.10	541.03	1.02643
1530	526.3	66.4	68.4		527.10	541.03	1.02643
1600	526.3	66.4	68.4		527.10	541.03	1.02643
1630	526.3	66.4	68.3		527.05	541.03	1.02652
1700	526.3	66.5	68.4		527.15	541.03	1.02633
1730	526.4	66.6	68.7		527.35	541.13	1.02613
1800	526.4	66.6	68.7		527.35	541.13	1.02613
1830	526.4	66.7	68.6		527.35	541.13	1.02613

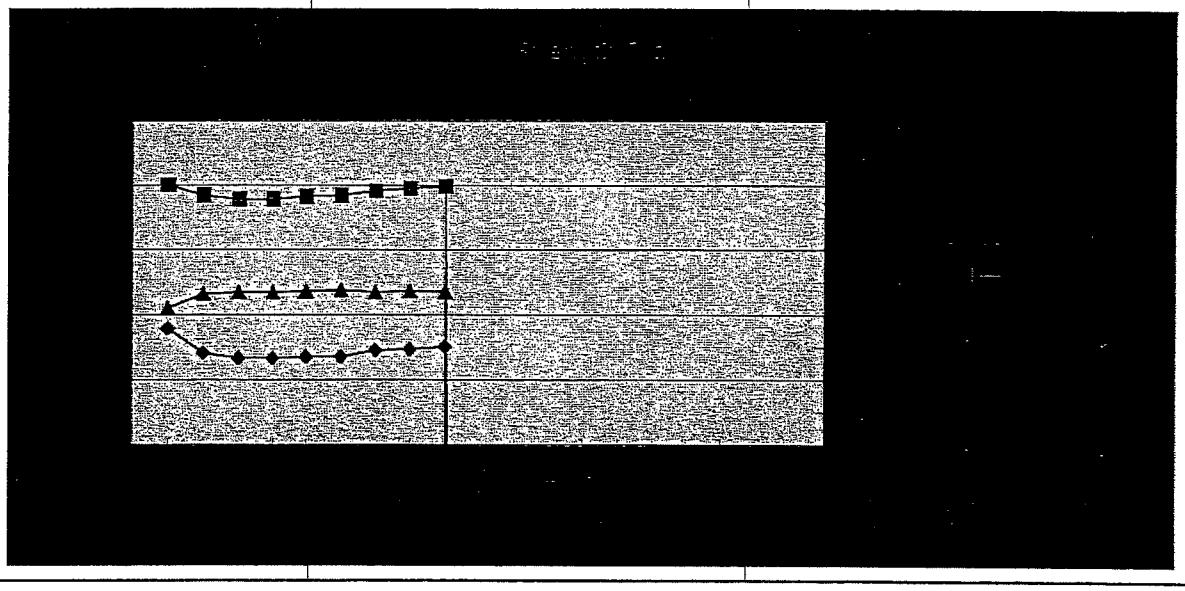


020, AC-01.A

Job Number: 9705121
Job Description: Installation of 6" STW "bypass"
Location: E. 96th Street & Steele Street, Pierce County, WA
Date: 8-19-1998
Pressure Control Personnel: Dale Milsap
Field Rep: ??
Result: Passed

Note: Approx. 12' of 6" pipe w/ valve & 2 B/O L/S
4 hour test.

Time 24 hour clock	Pressure (psig)	exposed T1 (deg F)	T2 (deg F)	T3 (deg F)	Tabs (deg R)	Pabs (psia)	P/T (Pabs/Tabs)
1120	535.3	68.2			527.90	550.03	1.04192
1150	533.7	64.4			524.10	548.43	1.04642
1220	533.1	63.6			523.30	547.83	1.04688
1250	533.1	63.6			523.30	547.83	1.04688
1320	533.5	63.8			523.50	548.23	1.04724
1350	533.7	63.8			523.50	548.43	1.04762
1420	534.4	64.8			524.50	549.13	1.04696
1450	534.8	65.0			524.70	549.53	1.04732
1520	535.1	65.4			525.10	549.83	1.04710
					#DIV/0!	14.73	#DIV/0!
					#DIV/0!	14.73	#DIV/0!
					#DIV/0!	14.73	#DIV/0!
					#DIV/0!	14.73	#DIV/0!
					#DIV/0!	14.73	#DIV/0!
					#DIV/0!	14.73	#DIV/0!
					#DIV/0!	14.73	#DIV/0!
					#DIV/0!	14.73	#DIV/0!
					#DIV/0!	14.73	#DIV/0!
					#DIV/0!	14.73	#DIV/0!

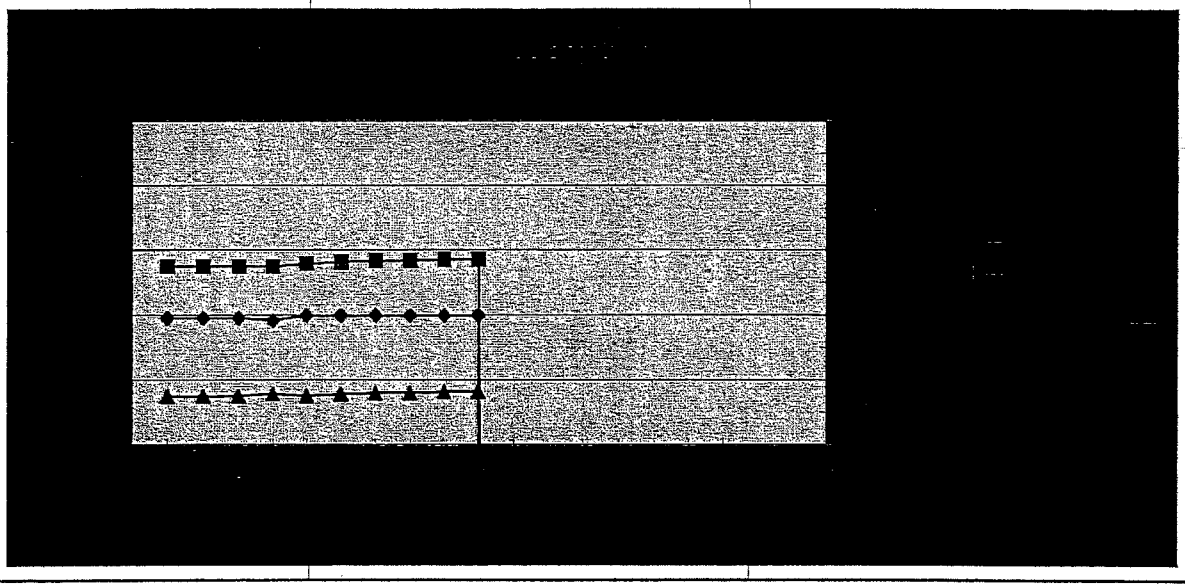


020, AL-01-B

Job Number: 9705121
Job Description: Installation of 6" STW "bypass"
Location: E. 94th Street & South Tacoma Way, Pierce County, WA
Date: 8-28-1998
Pressure Control Personnel: Estle Ratliff
Field Rep: ??
Result: Passed

Note: Approx. 6' of 6" pipe w/ valve & 2 B/O L/S and miscellaneous small caps for future use.

Time 24 hour clock	Pressure (psig)	exposed T1 (deg F)	T2 (deg F)	T3 (deg F)	Tabs (deg R)	Pabs (psia)	P/T (Pabs/Tabs)
915	522.7	69.8			529.50	537.43	1.01498
930	522.7	69.8			529.50	537.43	1.01498
1000	522.7	69.8			529.50	537.43	1.01498
1030	522.7	69.4			529.10	537.43	1.01574
1100	523.1	70.2			529.90	537.83	1.01497
1130	523.4	70.2			529.90	538.13	1.01553
1200	523.6	70.2			529.90	538.33	1.01591
1230	523.6	70.2			529.90	538.33	1.01591
1300	523.8	70.2			529.90	538.53	1.01629
1315	523.8	70.2			529.90	538.53	1.01629
					#DIV/0!	14.73	#DIV/0!
					#DIV/0!	14.73	#DIV/0!
					#DIV/0!	14.73	#DIV/0!
					#DIV/0!	14.73	#DIV/0!
					#DIV/0!	14.73	#DIV/0!
					#DIV/0!	14.73	#DIV/0!
					#DIV/0!	14.73	#DIV/0!
					#DIV/0!	14.73	#DIV/0!
					#DIV/0!	14.73	#DIV/0!
					#DIV/0!	14.73	#DIV/0!



Test Procedure for 020AV1

PUGET SOUND ENERGY

Date: June 18th, 2012

To: Job 109068555

From: Don Frieze, Project Engineer

Subject: 6" Weld Plug Retirement – Pierce Transit Supply (Salishan Supply Uprate) - Update

Scope

Construction records indicate that a pair of weld plugs was installed in 1979 during a pipeline relocation project when the 6" Pierce Transit Supply operated at IP pressure. Although the supply has since been retested to 400 psig as part of the Pierce Transit Supply uprate in 1997, the weld plugs shall be removed in order to comply with Gas Operating Standards 2575.2500 for uprating the Salishan/Pierce Transit supplies from 150 psig and 250 psig. The weld plugs will be retired using two independent bottom-out relocations. The MAOP of the new pipes and fittings shall be 300 psig.

A. Tools/Material/Equipment/Etc.

The following items are used to perform the procedure:

- Tapping and stopping equipment
- Arc Welding equipment
- Test medium (two bottles of nitrogen for purging, three bottles of nitrogen for testing)
- Pressure gauge (dead weights, spring gauges, recording charts), hoses, and test connections
- Manometer (0-28" w.c. minimum)
- Combustible gas indicator (CGI)
- At least two thermocouples (refer to GFP 4700.1800 when selecting thermocouple locations)

B. Safety Precautions, Preliminary Work and Notifications

This field procedure is intended for the 6" Weld Plug Retirement – Pierce Transit Supply (Salishan Supply Uprate) project and should be used in conjunction with applicable existing Puget Sound Energy Gas Operating Standards and Gas Field Procedures.

Refer to Drawing 795-373 and attached testing schematic.

- Recognize and control potential ignition sources.
- Direct venting of gas up and away from people, buildings, and traffic.
- Any exposed sections of HP main shall be covered with steel plates during testing.
- Notify the Gas Control (425) 882-4622 at least 24 hours prior to beginning any tapping or stopping operations.
- Notify PSE Construction Coordinator (or PSE Q/A inspector) two days before beginning the job.
- Notify the Project Engineer (Don Frieze @ 425-462-3862) and Pressure Control two days before beginning any of the pressure tests.
- Notify System Planning (Dana Kaul @ 425-462-3994) two days before beginning the procedure.
- Notify the proper Fire, Police Departments of venting of the gas.

C. West Bottom-Out Relocation Installation and Testing

1. Prepare to install bottom-outs 1 and 2 on the existing main. Notify Q/A to check for loss of wall thickness from corrosion, ovality, or any other imperfections of the existing pipe. The existing pipe wall thickness should be 0.188."
2. Install the section of replacement main, bottom-outs 1 and 2, and purge points 1 and 2.
3. Install purge points 3 and 4 and monitor points 1 and 2 on the existing 6" HP main.
4. Tap out purge points 1 and 2. Do not tap out purge points 3 and 4 and monitor points 1 and 2.
5. Select and place a pressure gauge at either purge point 1 or 2.
6. Leak test the section of replacement main, bottom-outs 1 and 2, and purge points 1 and 2 at 101 psig for 15 minutes using air or nitrogen. Soap test all exposed piping during the test. Pressure Control shall approve the preliminary leak test.
7. Increase the test pressure and test at a minimum of 450 psig for one hour, using nitrogen. Record the dead weight pressure and the pipe temperature readings at 15 minute intervals during the test. The Project Engineer shall approve the test before blowing down the test pressure.

8. After the test has been approved by the Project Engineer, blow down the test medium in the replacement main through a purge point at the opposite end of the one that was used to introduce the test medium. Leave 60 psig of nitrogen pressure in the replacement main if there is to be a delay in the tapping and stopping operation.

9. Leak test purge points 3 and 4 and monitor points 1 and 2 at 101 psig for 15 minutes using air or nitrogen. Soap test all exposed piping during the test. Pressure Control shall approve the preliminary leak test.

10. Increase the test pressure and test at a minimum of 450 psig for one hour, using nitrogen. Record the pressure and the pipe temperature readings at 15 minute intervals during the test. The Project Engineer shall approve the test before blowing down the test pressure.

11. Tap out purge points 3 and 4 and monitor points 1 and 2.

12. Fabricate two 6" pipe/cap assemblies to be installed on the existing main.

13. Leak test the pipe/cap assemblies at 101 psig for 15 minutes using air or nitrogen. Soap test all exposed piping during the test. Pressure Control shall approve the preliminary leak test.

14. Increase the test pressure and test at a minimum of 450 psig for one hour, using nitrogen. Record the dead weight pressure and the pipe temperature readings at 15 minute intervals during the test. The Project Engineer shall approve the test before blowing down the test pressure.

D. West Bottom-Out Relocation Purging and Stopping

1. Tap out bottom-out 1 and purge the replacement main to 100% gas. Continue purging until there is 100% gas at purge point 2. Close purge point 2.

2. Tap out bottom-out 2.

3. Stop off bottom-outs 1 and 2 such that flow is allowed through the replacement main, but not through the existing main.

4. Verify that the pressure at monitor points 1 and 2 is no more than 5 psig different (using standard spring gauges). Monitor pressure at monitor points 1 and 2 for a minimum of 5 minutes to ensure pressure reads stabilize. If there is a larger pressure difference, reposition the stoppers and check for obstructions before continuing. If an acceptable pressure drop is not maintained, retract the stoppers and immediately contact System Planning and Engineering.

5. Blow down the existing main using purge points 3 and 4.

6. Close purge points 3 and 4.

7. Observe the pressure in the existing main with a manometer at purge point 3 or 4. If the pressure does not rise more than 20 inches of water column within 2 minutes, continue on to the next step.

Note: If the pressure rises more than the acceptable amount, retighten/reposition the stoppers. Repeat steps D.4, D.5, D.6, and D.7 until there is no rise in pressure. If any of the bottoms-outs have been adjusted, verify that the pressure difference between monitor points 1 and 2 is less than 5 psig and maintaining pressure.

8. With purge point 3 open, inject one bottle of nitrogen and purge through purge point 4 until 0% gas is obtained.

9. While continuously monitoring for 0% gas with a CGI at purge points 3 and 4, cut and cap both connections to the existing main using the pipe/cap assemblies. Purge points 3 and 4 are to remain in place.

   Note: If gas is detected at purge point 3 during the welding process, cease welding, insert a hose from a nitrogen cylinder into purge point 3 towards bottom-out 1, and slowly inject nitrogen until 0% gas is obtained at purge point 3. Repeat the process at the other bottom-out and corresponding purge point if necessary.

10. X-ray the tie-in welds for the pipe/cap assemblies.

11. Bleed gas from the stopping machine on bottom-out 1 through purge point 3 until pressures on both sides of the bottom-out are equal. Close purge point 3.

12. Remove the stopping machine and complete bottom-out 1.

13. Complete purge point 3.

14. Repeat steps D.11, D.12, and D.13 on bottom-out 2 (using purge point 4).

15. Complete purge points 1 and 2 and monitor points 1 and 2.

E. East Bottom-Out Relocation Installation and Testing

1. Prepare to install bottom-outs 3 and 4 on the existing main. Notify Q/A to check for loss of wall thickness from corrosion, ovality, or any other imperfections of the existing pipe. The existing pipe wall thickness should be 0.188."

2. Install the section of replacement main, bottom-outs 3 and 4, and purge points 5 and 6.

3. Install purge points 7 and 8 and monitor points 3 and 4 on the existing 6" HP main.

4. Tap out purge points 5 and 6. Do not tap out purge points 7 and 8 and monitor points 3 and 4.

5. Select and place a pressure gauge at either purge point 5 or 6.

6. Leak test the section of replacement main, bottom-outs 3 and 4, and purge points 5 and 6 at 101 psig for 15 minutes using air or nitrogen. Soap test all exposed piping during the test. Pressure Control shall approve the preliminary leak test.

7. Increase the test pressure and test at a minimum of 450 psig for one hour, using nitrogen. Record the dead weight pressure and the pipe temperature readings at 15 minute intervals during the test. The Project Engineer shall approve the test before blowing down the test pressure.

8. After the test has been approved by the Project Engineer, blow down the test medium in the replacement main through a purge point at the opposite end of the one that was used to introduce the test medium. Leave 60 psig of nitrogen pressure in the replacement main if there is to be a delay in the tapping and stopping operation.

9. Leak test purge points 7 and 8 and monitor points 3 and 4 at 101 psig for 15 minutes using air or nitrogen. Soap test all exposed piping during the test. Pressure Control shall approve the preliminary leak test.

10. Increase the test pressure and test at a minimum of 450 psig for one hour, using nitrogen. Record the pressure and the pipe temperature readings at 15 minute intervals during the test. The Project Engineer shall approve the test before blowing down the test pressure.

11. Tap out purge points 7 and 8 and monitor points 3 and 4.

12. Fabricate two 6" pipe/cap assemblies to be installed on the existing main.

13. Leak test the pipe/cap assemblies at 101 psig for 15 minutes using air or nitrogen. Soap test all exposed piping during the test. Pressure Control shall approve the preliminary leak test.

14. Increase the test pressure and test at a minimum of 450 psig for one hour, using nitrogen. Record the dead weight pressure and the pipe temperature readings at 15 minute intervals during the test. The Project Engineer shall approve the test before blowing down the test pressure.

F. East Bottom-Out Relocation Purging and Stopping

1. Tap out bottom-out 3 and purge the replacement main to 100% gas. Continue purging until there is 100% gas at purge point 6. Close purge point 6.

2. Tap out bottom-out 4.

3. Stop off bottom-outs 3 and 4 such that flow is allowed through the replacement main, but not through the existing main.

4. Verify that the pressure at monitor points 3 and 4 is no more than 5 psig different (using standard spring gauges). Monitor pressure at monitor points 3 and 4 for a minimum of 5 minutes to ensure pressure reads stabilize. If there is a larger pressure difference, reposition the stoppers and check for obstructions before continuing. If an acceptable pressure drop is not maintained, retract the stoppers and immediately contact System Planning and Engineering.

5. Blow down the existing main using purge points 7 and 8.

6. Close purge points 7 and 8.

7. Observe the pressure in the existing main with a manometer at purge point 7 or 8. If the pressure does not rise more than 20 inches of water column within 2 minutes, continue on to the next step.

   Note: If the pressure rises more than the acceptable amount, retighten/reposition the stoppers. Repeat steps F.4, F.5, F.6, and F.7 until there is no rise in pressure. If any of the bottoms-outs have been adjusted, verify that the pressure difference between monitor points 3 and 4 is less than 5 psig and maintaining pressure.

8. With purge point 7 open, inject one bottle of nitrogen and purge through purge point 8 until 0% gas is obtained.

9. While continuously monitoring for 0% gas with a CGI at purge points 7 and 8, cut and cap both connections to the existing main using the pipe/cap assemblies. Purge points 7 and 8 are to remain in place.

   Note: If gas is detected at purge point 7 during the welding process, cease welding, insert a hose from a nitrogen cylinder into purge point 7 towards bottom-out 3, and slowly inject nitrogen until 0% gas is obtained at purge point 7. Repeat the process at the other bottom-out and corresponding purge point if necessary.

10. X-ray the tie-in welds for the pipe/cap assemblies.

11. Bleed gas from the stopping machine on bottom-out 3 through purge point 7 until pressures on both sides of the bottom-out are equal. Close purge point 7.

12. Remove the stopping machine and complete bottom-out 3.

13. Complete purge point 7.

14. Repeat steps F.11, F.12, and F.13 on bottom-out 4 (using purge point 8).

15. Complete purge points 5 and 6 and monitor points 3 and 4.

G. Documentation

- Complete forms: "Report Pressure Test on New main" for each leak test.
- Obtain signatures from those PSE representatives who approved each test.
- Field Personnel shall send all completed test records and a copy of the As-built to Project Manager as soon as possible.
- Project Manager shall forward a copy of the test records and the As-built to the Project Engineer as soon as possible. These paper works are needed for concluding the Salishan HP supply Uprate Research.
- The Project Engineer shall make copies for the MAOP files, and put the original forms in the job folder.

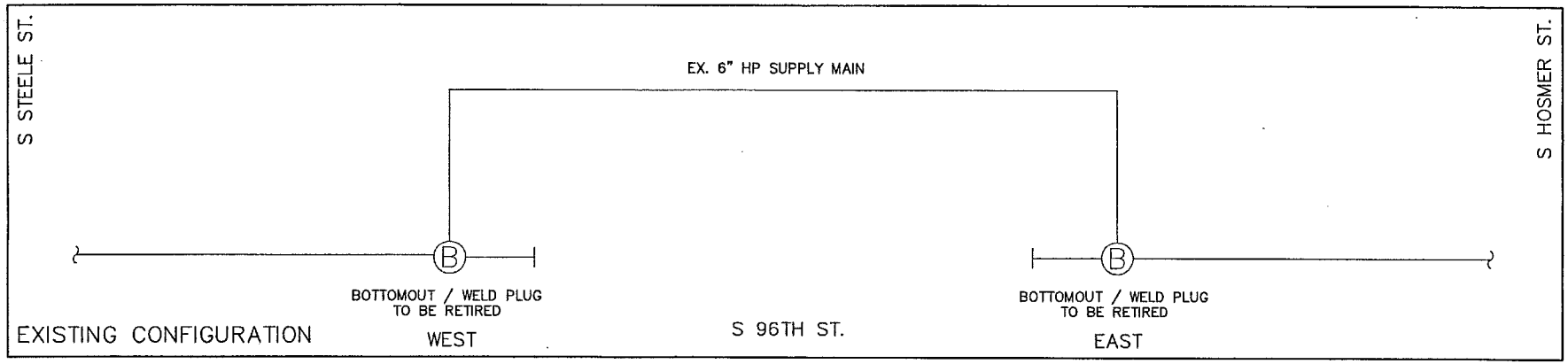
H. Gas System Engineering Approval

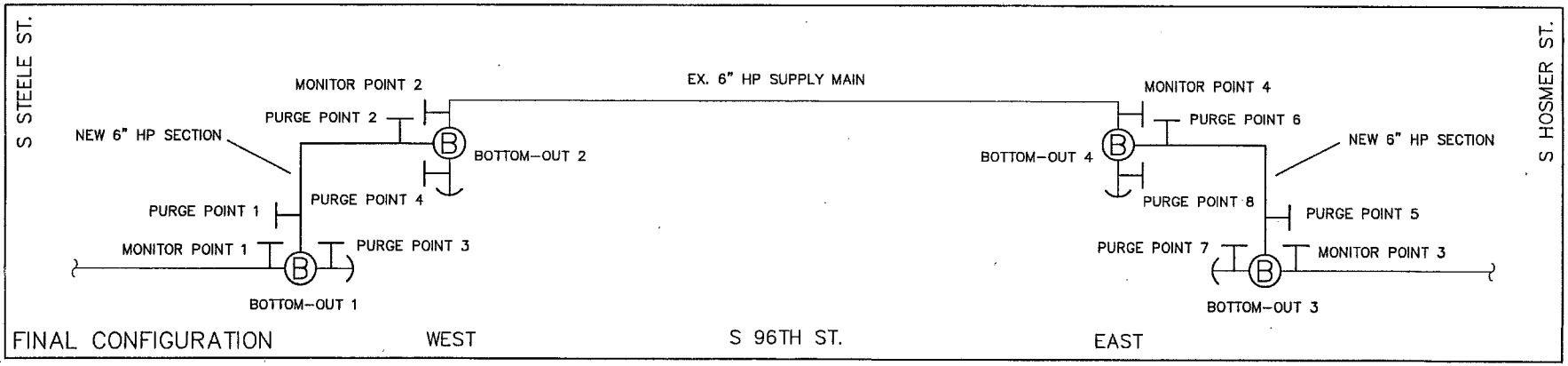
Prepared by:	Checked by:	Approved by:
June 18, 2012 (Date)	6-18-12 (Date)	6-18-2012 (Date)
Don Frieze Senior Engineer Gas System Engineering	Larry Anderson Supervisor Engineering System Planning	Joe Ewing Consulting Engineer Gas System Engineering

Project Phone List			
Title	**Name**	**Office**	**Mobile**
Project Manager	Molly Reed	425-250-1544	206-396-6832
Project Engineer	Don Frieze	425-462-3862	206-604-3946
TES Planning Engineer	Dana Kaul	425-462-3994	206-396-1084
Gas Control	N/A	425-882-4622	N/A
Pressure Control	Jim Chartrey	N/A	206-571-2476
Corrosion Engineer	Michelle Gallardo	425-462-3859	425-749-9500
Corrosion Technician	Jim Oliver	NA	253-405-3637

PRESSURE TEST SCHEMATIC		JOB NUMBER: 109068555	DATE: June 18th, 2012
PRESSURE CONTROL TECH:		PROJECT ENGINEER:	DON FRIEZE
TEST DATE: / /		ENGINEER PHONE:	425-462-3862
TEST CONFIRMATION NUM:		TEST PROCEDURE: 6" WELD PLUG RETIREMENT – PIERCE TRANSIT SUPPLY (SALISHAN SUPPLY UPRATE) – UPDATE	
TEST NUM:	OF:		

PRESSURE CONTROL SHALL USE THE PRESSURE TEST SCHEMATIC TO SHOW THE EXTENTS OF EACH HP TEST. RETURN ONE COPY OF THE TESTING SCHEMATIC, FORM 1928, AND CHARTS FOR EACH HP TEST PERFORMED. PLEASE SEND A COPY OF ALL DOCUMENTS TO ENGEERING AND INCLUDE ORIGINALS IN CONSTRUCTION JOB FOLDER





RS 2311 Pg 1/4

REPORT OF PRESSURE TEST ON NEW MAIN

WNG 746.2 S (7/93) O.P.S. 6.14

JOB NUMBER	IR NUMBER	DATE
9705121	001 01	8-24-98

JOB LOCATION: S. 96 ST. & HOSMER
new regulator station & piping

CONTRACTOR OR FITTER: PILCHUCK INSPECTOR: DICK SMITH

SECTION TESTED: approx 45' of 4" ST. W. pipe
including inlet & outlet valves, regs & strainers,
upstream valve, bottom out

TEST INFORMATION

STARTED 11:30 (AM) PM PRESSURE 522.3 PSIG DATE 8-24-98

COMPLETED 19:30 AM (PM) PRESSURE 521.8 PSIG DATE 8-24-98

TYPE OF TEST: ☐ LEAK ☑ STRENGTH

TEST MEDIUM: ☐ AIR ☑ NITROGEN ☐ HYDROSTATIC*

GAUGE: ☑ SPRING ☑ RECORDING ☑ DEAD WEIGHT

LOCATION OF TEMPERATURE PROBE:

T 1	☐ BURIED ☐ EXPOSED	**T 2**	☐ BURIED ☐ EXPOSED	**T 3**	☐ BURIED ☐ EXPOSED	**T 4**	☐ BURIED ☐ EXPOSED

***FOR HYDROSTIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:**

1) FILL MAIN _____ 2) RAISE TO LEAK TEST PRESSURE _____

3) RAISE TO STRENGTH TEST PRESSURE _____ JBE 8-28-98

RESULTS: ☑ ACCEPTED ☐ REJECTED BY: Joe Curnig

☑ PHONE ☐ IN PERSON DATE: 8-24-98

REMARKS: _____

SIGNED: Dale Millsap
PRESSURE CONTROL

NOTE: *RETURN ORIGINAL TO MANAGER OF ENGINEERING DESIGN*

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READINGS

DATE	TIME	PRESSURE P1	PRESSURE P2*	TEMPERATURE (WEST) T1	TEMPERATURE (EAST) T2	T3	T4
~~Leak Test~~							
8-24-98	10:00 AM	119 #					
8-24-98	11:10 AM	120 #					
STRENGTH							
8-24-98	11:30 AM	522.3	525	68.4	69.4		
	12:00	521.3	524	67.0	68.8		
	12:30 PM	521.3	524	68.2	73.2		
	13:00	521.3	524	68.4	72.6		
	13:30	521.6	525	69.4	70.8		
	14:00	522.1	525	69.0	70.4		
	14:30	523.0	526.5	71.2	71.4		
	15:00	523.7	527	71.0	72.6		
	15:30	524.3	528	70.2	75.4		
	16:00	524.3	528	70.2	77.8		
	16:30	524.0	528	70.6	76.2		
	17:00	523.7	528	70.2	75.4		
	17:30	523.5	527.5	70.4	74.4		
	18:00	523.2	527	70.6	73.6		
	18:30	522.9	526	70.4	73.2		
	19:00	522.5	524	70.0	72.2		
	19:30	521.8	523	69.2	71.6		

*IF REQUIRED BY THE WRITTEN PROCEDURE

RS 2311 Pg 74

REPORT OF PRESSURE TEST ON NEW MAIN

WNG 746.2 S (7/93) O.P.S. 6.14

JOB NUMBER	IR NUMBER	DATE
9705121	001 01	6-15-98

JOB LOCATION: S. 96 & HOSMER

CONTRACTOR OR FITTER: PILCHUCK INSPECTOR: MARK PARAS

SECTION TESTED: (2) - 6" BOTTOM OUTS & 10' of 6" STW. PIPE

TEST INFORMATION

STARTED 10:10 (AM) PM PRESSURE 521 PSIG DATE 6-15-98

COMPLETED 14:10 AM (PM) PRESSURE 523.0 PSIG DATE 6-15-98

TYPE OF TEST: ☐ LEAK ☑ STRENGTH

TEST MEDIUM: ☐ AIR ☑ NITROGEN ☐ HYDROSTATIC*

GAUGE: ☑ SPRING ☑ RECORDING ☑ DEAD WEIGHT

LOCATION OF TEMPERATURE PROBE:

T 1	☒ BURIED ☐ EXPOSED	T 2 ☐ BURIED ☐ EXPOSED	T 3 ☐ BURIED ☐ EXPOSED	T 4 ☐ BURIED ☐ EXPOSED

***FOR HYDROSTIC TEST ONLY, THE AMOUNT OF WATER REQUIRED TO:**

1) FILL MAIN _____ 2) RAISE TO LEAK TEST PRESSURE _____

3) RAISE TO STRENGTH TEST PRESSURE _____

RESULTS: ☒ ACCEPTED ☐ REJECTED BY: A. J. RITTER

☒ PHONE ☐ IN PERSON DATE 6-15-98

REMARKS: _____

SIGNED: Dale Millsap
PRESSURE CONTROL

NOTE: *RETURN ORIGINAL TO MANAGER OF ENGINEERING DESIGN*

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READINGS

DATE	TIME	PRESSURE (DEAD WTS) P1	PRESSURE (SPRING GAGE) P2*	TEMPERATURE T1	T2	T3	T4
6-15-98	10:10 AM	521.0	521.5	66.2			
	10:40	520.7	521.0	65.6			
	11:10	521.0	521.5	66.0			
	11:40	521.6	522.0	67.2			
	12:10	521.8	523.0	68.8			
	12:40	522.2	523.0	68.			
	13:10	521.6	522.0	66.8			
	13:40	521.9	523.0	69.6			
	14:10	523.0	523.0	72.0			

*IF REQUIRED BY THE WRITTEN PROCEDURE