



**RCP, Inc**

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Redacted

September 23, 2011

Pacific Gas and Electric Company  
350 N. Wiget  
Walnut Creek, CA 94598  
Attention: Redacted

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SEP 27 2011

**PG&E**

Test Contractor:	Milbar hydro-test inc. -- FY12-112
Asset Owner:	Pacific Gas and Electric Company -- 41497323 - T55
Construction Contractor:	Snelson -- 41474005 -T55
Test Section:	PG&E T-55 L-300A, MP 156.4 - 157.86
Test Date:	September 23, 2011
Certificate Number:	RCP 61362 - T-55, L-300A, MP 156.4 - 157.86

To whom it may concern,

This letter is to certify that the hydrostatic test performed on pipe owned by Pacific Gas and Electric Company and tested by Milbar hydro-test inc. met the requirements of the Code of Federal Regulations, Title 49, Part 192, Subpart J (Class 3).

The test segment was subjected to a spike pressure test of 1136 psig for 30 minutes, without observed leakage or yielding of the pipe segment. The 30 minute spike test and subsequent pressure reduction with volume bleed was included and is part of the 8.38 hour test duration period.

This hydrostatic test was completed successfully. Pressure was maintained on the test facilities in excess of 8.38 continuous hours without evidence of a leak failure. Water was the test medium. At the highest elevation point in the test section, the calculated test pressure was 1053 psig and the established MAOP is 702 psig.

Pressure decreased 82 psi during the test. 10,752.00 ounces of fluid was intentionally released from the test section. Net corrected volumetric change from beginning of the test to the end of the test is calculated to be 1,289.22 ounces, gain, which is equivalent to a 0.36 °F change in pipe temperature and within the error attributed to the temperature measurement instrumentation utilized.

Test pressure did not remain steady even though no leaks were observed. The volumetric gain is attributed to the error characteristic of the temperature measurement instrumentation utilized.

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### Hydrostatic Test Certification

Company	Pacific Gas and Electric Company	Job Number	41497323 - T55
Construction Co.	Snelson	Job Number	41474005 - T55
Hydro. Test Co.	Milbar hydro-test inc.	Project No.	FY12-112
Test Section	PG&E T-55 L-300A, MP 156.4 - 157.86		
File Name	RCP 61362 - T-55, L-300A, MP 156.4 - 157.86		

#### Hydrostatic Test Pressure

APPLICABLE CODE FOR CERTIFICATION: Code of Federal Regulations, Title 49, Part 192, Subpart J (Class 3) Test Date: 23-Sep-11

This is to certify that the pipeline or pipeline section(s) described below was hydrostatically pressure tested in accordance with the following procedure:

Pipeline: PG&E T-55 L-300A, MP 156.4 - 157.86  
 From: 0+00 To: 77+22

#### Pipe Data

Segment	Length	Diameter	Wall Thickness	Specification	100% SMYS
1	51 ft	26.000 in.	0.500 in.	API5L-X65, DSAW, Arc Weld, Steel	2,500 psi
2	7,657 ft	26.000 in.	0.500 in.	API5L-Grade B, SM, Arc Weld, Steel	1,346 psi
3	36 ft	26.000 in.	0.500 in.	API5L-X42, DSAW, Arc Weld, Steel	1,615 psi

#### Initial Test Conditions

Pressure at Test Point:	1,136 psig	Date/Time:	9/23/11 10:37 AM	Pipe Temperature	
Ambient Temperature:	78.0 °F	Elevation @ Test Point:	2,194.0 ft	Unrestrained:	79.0 °F
Pressure @ High Point (Cal/Measure):	1,135 psig	Elevation @ High Point:	2,196.0 ft	Restrained:	78.0 °F
Pressure @ Low Point (Cal/Measure):	1,137 psig	Elevation @ Low Point:	2,191.0 ft	Location:	0+00
				Location:	77+22
				Location:	39+52

#### Final Test Conditions

Pressure at Test Point:	1,054 psig	Date/Time:	9/23/11 7:00 PM	Pipe Temperature	
Ambient Temperature:	87.0 °F	Elevation @ Test Point:	2,194.0 ft	Unrestrained:	77.0 °F
Pressure @ High Point (Cal/Measure):	1,053 psig	Elevation @ High Point:	2,196.0 ft	Restrained:	78.0 °F
Pressure @ Low Point (Cal/Measure):	1,055 psig	Elevation @ Low Point:	2,191.0 ft	Location:	0+00
				Location:	77+22
				Location:	39+52

Total Fluid Injected:		Volume gain	
Total Fluid Withdrawn:	10752.00 fluid ounces		
Net Change in Volume of the Test Section ± (+ Gain, - Loss):	1,289.22 oz	gain	0.0051%
Test Duration:	8.38 hours		0.362 °F equivalent

Minimum Test Pressure:	1,040 psig	1,039 psig	1,041 psig
Maximum Test Pressure:	1,136 psig	1,135 psig	1,137 psig
% SMYS :		84.3%	84.5%
Test Segment Observed % SMYS :	Minimum	45.5%	Maximum
		84.5%	

Minimum Test Pressure (Calculated/Measured):		1,053 psig
DOT Part 192		Test Factor= 1.50
Maximum Allowable Operating Pressure:		702 psig

Were leaks observed?	No	Explain:
Acceptable Hydrostatic Test?	Yes	The test segment was subjected to a spike pressure test of 1136 psig for 30 minutes, without observed leakage or yielding of the pipe segment. The 30 minute spike test and subsequent pressure reduction with volume bleed was included and is part of the 8.38 hour test duration period.
		No leaks were observed during the test period. The test section included 7,657 feet of buried and 87 feet of exposed pipe. Pressure lost 82 psi during the test. The buried pipe segment fluid temperature remained steady and the exposed pipe segment lost 2°F.
		10,752.00 ounces of fluid was intentionally released from the test section. Net corrected volumetric change from beginning of the test to the end of the test is calculated to be 1,289.22 ounces, gain, which is equivalent to a 0.36 °F change in pipe temperature and within the error attributed to the temperature measurement instrumentation utilized.
		Test pressure did not remain steady even though no leaks were observed. The volumetric gain is attributed to the error characteristic of the temperature measurement instrumentation utilized.

Remarks

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# Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	41497323 - T55
Construction Co.	Snelson	Job Number	41474005 -T55
Testing Co.	Milbar hydro-test inc.	Project No.	FY12-112
Test Section	PG&E T-55 L-300A, MP 156.4 - 157.86		
File Name	RCP 61362 - T-55, L-300A, MP 156.4 - 157.86		

Date 23-Sep-11

## Test Log

Log No.	Test Period		Test Pressure	Temperature °F			Remarks		
	Date	Time		Ambient	Pipe		Comment	Bleed	Inject
					Unrestrained	Restrained			
1	9/23/11	9:53 AM	776 psig	78 °F	76 °F	78 °F	Start Spike		
2	9/23/11	9:54 AM	786 psig	78 °F	76 °F	78 °F	Inject		1,177 oz.
3	9/23/11	9:55 AM	796 psig	78 °F	76 °F	78 °F	Inject		1,115 oz.
4	9/23/11	9:56 AM	806 psig	78 °F	76 °F	78 °F	Inject		1,053 oz.
5	9/23/11	9:57 AM	816 psig	78 °F	76 °F	78 °F	Inject		1,053 oz.
6	9/23/11	9:58 AM	826 psig	78 °F	76 °F	78 °F	Inject		1,177 oz.
7	9/23/11	9:59 AM	836 psig	78 °F	76 °F	78 °F	Inject		1,053 oz.
8	9/23/11	10:00 AM	846 psig	78 °F	76 °F	78 °F	Inject		1,115 oz.
9	9/23/11	10:01 AM	856 psig	78 °F	76 °F	78 °F	Inject		1,115 oz.
10	9/23/11	10:02 AM	866 psig	78 °F	76 °F	78 °F	Inject		1,115 oz.
11	9/23/11	10:03 AM	876 psig	78 °F	76 °F	78 °F	Inject		1,115 oz.
12	9/23/11	10:04 AM	886 psig	78 °F	76 °F	78 °F	Inject		1,115 oz.
13	9/23/11	10:05 AM	896 psig	78 °F	76 °F	78 °F	Inject		1,115 oz.
14	9/23/11	10:06 AM	906 psig	78 °F	76 °F	78 °F	Inject		1,115 oz.
15	9/23/11	10:07 AM	916 psig	78 °F	76 °F	78 °F	Inject		1,053 oz.
16	9/23/11	10:08 AM	926 psig	78 °F	76 °F	78 °F	Inject		1,115 oz.
17	9/23/11	10:09 AM	936 psig	78 °F	76 °F	78 °F	Inject		1,115 oz.
18	9/23/11	10:10 AM	946 psig	78 °F	76 °F	78 °F	Inject		1,177 oz.
19	9/23/11	10:11 AM	956 psig	78 °F	76 °F	78 °F	Inject		1,115 oz.
20	9/23/11	10:12 AM	966 psig	78 °F	76 °F	78 °F	Inject		1,053 oz.
21	9/23/11	10:13 AM	976 psig	78 °F	76 °F	78 °F	Inject		1,115 oz.
22	9/23/11	10:14 AM	986 psig	78 °F	76 °F	78 °F	Inject		1,115 oz.
23	9/23/11	10:16 AM	996 psig	78 °F	76 °F	78 °F	Inject		1,177 oz.
24	9/23/11	10:17 AM	1,006 psig	78 °F	76 °F	78 °F	Inject		1,053 oz.
25	9/23/11	10:19 AM	1,016 psig	78 °F	76 °F	78 °F	Inject		1,177 oz.
26	9/23/11	10:20 AM	1,026 psig	78 °F	76 °F	78 °F	Inject		1,115 oz.
27	9/23/11	10:22 AM	1,036 psig	78 °F	76 °F	78 °F	Inject		1,115 oz.
28	9/23/11	10:23 AM	1,046 psig	78 °F	76 °F	78 °F	Inject		1,115 oz.
29	9/23/11	10:24 AM	1,056 psig	78 °F	76 °F	78 °F	Inject		1,115 oz.
30	9/23/11	10:25 AM	1,066 psig	78 °F	76 °F	78 °F	Inject		1,177 oz.
31	9/23/11	10:26 AM	1,076 psig	78 °F	76 °F	78 °F	Inject		1,115 oz.
32	9/23/11	10:28 AM	1,086 psig	78 °F	76 °F	78 °F	Inject		1,177 oz.
33	9/23/11	10:29 AM	1,096 psig	78 °F	77 °F	78 °F	Inject		1,115 oz.
34	9/23/11	10:31 AM	1,106 psig	78 °F	79 °F	78 °F	Inject		1,115 oz.
35	9/23/11	10:32 AM	1,116 psig	78 °F	79 °F	78 °F	Inject		1,177 oz.
36	9/23/11	10:34 AM	1,126 psig	78 °F	79 °F	78 °F	Inject		1,115 oz.
37	9/23/11	10:35 AM	1,136 psig	78 °F	79 °F	78 °F	Inject		1,177 oz.
38	9/23/11	10:37 AM	1,136 psig	78 °F	79 °F	78 °F	On Test		
39	9/23/11	10:47 AM	1,136 psig	78 °F	80 °F	78 °F			
40	9/23/11	10:57 AM	1,136 psig	79 °F	80 °F	78 °F			
41	9/23/11	11:07 AM	1,136 psig	79 °F	81 °F	78 °F	End Spike		
42	9/23/11	11:24 AM	1,040 psig	80 °F	81 °F	78 °F		10,752 oz.	
43	9/23/11	11:30 AM	1,040 psig	81 °F	81 °F	78 °F			



# Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	41497323 - T55
Construction Co.	Snelson	Job Number	41474005 -T55
Testing Co.	Milbar hydro-test inc.	Project No.	FY12-112
Test Section	PG&E T-55 L-300A, MP 156.4 - 157.86		
File Name	RCP 61362 - T-55, L-300A, MP 156.4 - 157.86		

Date 23-Sep-11

## Test Log

Log No.	Test Period		Test Pressure	Temperature °F			Remarks						
	Date	Time		Ambient	Pipe		Comment	Bleed	Inject				
					Unrestrained	Restrained							
44	9/23/11	11:45 AM	1,041 psig	82 °F	81 °F	78 °F	Warm						
45	9/23/11	12:00 PM	1,042 psig	84 °F	81 °F	78 °F							
46	9/23/11	12:15 PM	1,043 psig	86 °F	82 °F	78 °F							
47	9/23/11	12:30 PM	1,043 psig	89 °F	82 °F	78 °F							
48	9/23/11	12:45 PM	1,044 psig	92 °F	82 °F	78 °F							
49	9/23/11	1:00 PM	1,045 psig	94 °F	83 °F	78 °F	Clear						
50	9/23/11	1:15 PM	1,045 psig	95 °F	83 °F	78 °F							
51	9/23/11	1:30 PM	1,046 psig	96 °F	83 °F	78 °F							
52	9/23/11	1:45 PM	1,047 psig	97 °F	83 °F	78 °F							
53	9/23/11	2:00 PM	1,048 psig	96 °F	83 °F	78 °F							
54	9/23/11	2:15 PM	1,048 psig	96 °F	83 °F	78 °F							
55	9/23/11	2:30 PM	1,049 psig	96 °F	82 °F	78 °F							
56	9/23/11	2:45 PM	1,049 psig	96 °F	82 °F	78 °F							
57	9/23/11	3:00 PM	1,050 psig	96 °F	82 °F	78 °F	Warm						
58	9/23/11	3:15 PM	1,050 psig	98 °F	82 °F	78 °F							
59	9/23/11	3:30 PM	1,051 psig	99 °F	82 °F	78 °F	Hot						
60	9/23/11	3:45 PM	1,051 psig	99 °F	82 °F	78 °F	Partly Cloudy						
61	9/23/11	4:00 PM	1,052 psig	98 °F	83 °F	78 °F							
62	9/23/11	4:15 PM	1,052 psig	96 °F	82 °F	78 °F							
63	9/23/11	4:30 PM	1,052 psig	94 °F	81 °F	78 °F							
64	9/23/11	4:45 PM	1,052 psig	92 °F	80 °F	78 °F							
65	9/23/11	5:00 PM	1,053 psig	91 °F	79 °F	78 °F							
66	9/23/11	5:15 PM	1,053 psig	90 °F	79 °F	78 °F							
67	9/23/11	5:30 PM	1,053 psig	90 °F	78 °F	78 °F							
68	9/23/11	5:45 PM	1,054 psig	90 °F	78 °F	78 °F							
69	9/23/11	6:00 PM	1,054 psig	90 °F	78 °F	78 °F							
70	9/23/11	6:15 PM	1,054 psig	90 °F	78 °F	78 °F							
71	9/23/11	6:30 PM	1,054 psig	90 °F	78 °F	78 °F							
72	9/23/11	6:45 PM	1,054 psig	88 °F	78 °F	78 °F							
73	9/23/11	7:00 PM	1,054 psig	87 °F	77 °F	78 °F	End of Test						
							Spike Test		40,320.0 oz.				
							Hydrostatic Test	10,752.0 oz.					
Were leaks observed during the test period?				Exposed and buried pipe, no leaks observed.			<table border="1"> <tr><td>High Test Pressure:</td><td>1,136 psig</td></tr> <tr><td>Low Test Pressure:</td><td>1,040 psig</td></tr> </table>			High Test Pressure:	1,136 psig	Low Test Pressure:	1,040 psig
High Test Pressure:	1,136 psig												
Low Test Pressure:	1,040 psig												



## Pipe Segment Volume Calculations

Company	Pacific Gas and Electric Company	Job Number	41497323 - T55
Construction Co.	Snelson	Job Number	41474005 - T55
Hydro. Test Co.	Milbar hydro-test inc.	Project No.	FY12-112
Test Section	PG&E T-55 L-300A, MP 156.4 - 157.86	<b>WATER</b>	
File Name	RCP 61362 - T-55, L-300A, MP 156.4 - 157.86		

### General Pipe Data

Description	Segment									
	1	2	3							
Restrained or Unrestrained?	Unrestrained	Restrained	Unrestrained							
Outside Diameter	26.000 in.	26.000 in.	26.000 in.							
Wall Thickness	0.500 in.	0.500 in.	0.500 in.							
Inside Diameter	25.000 in.	25.000 in.	25.000 in.							
Spec./Grade	API5L-X65	API5L-Grade B	API5L-X42							
Length Unrestrained	51 ft		36 ft							
Length Restrained		7,657 ft								
Temperature - On Test	79 °F	78 °F	79.0 °F							
Temperature - End of Test	77 °F	78 °F	77.0 °F							
Pressure - On Test	1,136 psig	1,136 psig	1,136 psig							
Pressure - End of Test	1,054 psig	1,054 psig	1,054 psig							

### Unrestrained Pipe

Sum:	Vo	2,218.49 gal 283,967 oz.	Vtp1	2,227.24 gal 285,087 oz.	Vtp2	2,226.86 gal 285,038 oz.
Vo Unrestrained	1,300 gal			918 gal		
Fwp 1	1.003483			1.003483		
Fpp 1	1.002367			1.002367		
Fpt 1	1.000346			1.000346		
Fwt 1	1.002255			1.002255		
Fpwt 1 = Fpt/Fwt	0.998095			0.998095		
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	1,305.62 gal			921.62 gal		
Fwp 2	1.003230			1.003230		
Fpp 2	1.002196			1.002196		
Fpt 2	1.000309			1.000309		
Fwt 2	1.001966			1.001966		
Fpwt = Fpt/Fwt	0.998347			0.998347		
Vtp = Vo(Fwp)(Fpp)(Fpwt)	1,305.40 gal			921.46 gal		

### Restrained Pipe

Sum:	Vo	195,253.04 gal 24,992,390 oz.	Vtp1	195,910.29 gal 25,076,517 oz.	Vtp2	195,836.74 gal 25,067,102 oz.
Vo Unrestrained		195,253 gal				
Fwp 1		1.003483				
Fpp 1		1.001788				
Fpt 1		1.000218				
Fwt 1		1.002122				
Fpwt 1 = Fpt/Fwt		0.998100				
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)		195,910 gal				
Fwp 2		1.003230				
Fpp 2		1.001663				
Fpt 2		1.000218				
Fwt 2		1.002122				
Fpwt = Fpt/Fwt		0.998100				
Vtp = Vo(Fwp)(Fpp)(Fpwt)		195,837 gal				

### Combined Pipe

Sum:	Vo	197,471.54 gal 25,276,357 oz.	Vtp1	198,137.53 gal 25,361,603 oz.	Vtp2	198,063.60 gal 25,352,141 oz.
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## Pipe Segment Volume Allowance Calculations

Company	Pacific Gas and Electric Company	Job Number	41497323 - T55
Construction Co.	Snelson	Job Number	41474005 - T55
Hydro. Test Co.	Milbar hydro-test inc.	Project No.	FY12-112
Test Section	PG&E T-55 L-300A, MP 156.4 - 157.86	WATER	
File Name	RCP 61362 - T-55, L-300A, MP 156.4 - 157.86		

### General Pipe Data

Description	Segment								
	1	2	3						
Restrained or Unrestrained?	Unrestrained	Restrained	Unrestrained						
Outside Diameter	26.000 in.	26.000 in.	26.000 in.						
Wall Thickness	0.500 in.	0.500 in.	0.500 in.						
Inside Diameter	25.000 in.	25.000 in.	25.000 in.						
Spec./Grade	API5L-X65	API5L-Grade B	API5L-X42						
Length Unrestrained	51.00 ft		36.00 ft						
Length Restrained		7,657 ft							
Temperature - On Test	77 °F	77 °F	77 °F						
Temperature - End of Test	78 °F	78 °F	78 °F						
Pressure - On Test	1,095 psig	1,095 psig	1,095 psig						
Pressure - End of Test	1,095 psig	1,095 psig	1,095 psig						

### Unrestrained Pipe

Sum:	Vo	2,218.49 gal 283,967 oz.	Vtp1	2,227.33 gal 285,098 oz.	Vtp2	2,227.02 gal 285,059 oz.
Vo Unrestrained	1,300 gal					
Fwp 1	1.003356					
Fpp 1	1.002281					
Fpt 1	1.000309					
Fwt 1	1.001966					
Fpwt 1 = Fpt/Fwt	0.998347					
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	1,305.68 gal					
Fwp 2	1.003356					
Fpp 2	1.002281					
Fpt 2	1.000328					
Fwt 2	1.002122					
Fpwt = Fpt/Fwt	0.998209					
Vtp = Vo(Fwp)(Fpp)(Fpwt)	1,305.50 gal					

### Restrained Pipe

Sum:	Vo	195,253.04 gal 24,992,390 oz.	Vtp1	195,901.03 gal 25,075,332 oz.	Vtp2	195,873.51 gal 25,071,809 oz.
Vo Restrained		195,253 gal				
Fwp 1		1.003356				
Fpp 1		1.001722				
Fpt 1		1.000206				
Fwt 1		1.001966				
Fpwt 1 = Fpt/Fwt		0.998243				
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)		195,901 gal				
Fwp 2		1.003356				
Fpp 2		1.001726				
Fpt 2		1.000218				
Fwt 2		1.002122				
Fpwt = Fpt/Fwt		0.998100				
Vtp = Vo(Fwp)(Fpp)(Fpwt)		195,874 gal				

### Combined Pipe

Sum:	Vo	197,471.54 gal 25,276,357 oz.	Vtp1	198,128.36 gal 25,360,430 oz.	Vtp2	198,100.53 gal 25,356,868 oz.
1 °F Change	27.83 gal					3,561.91 oz.

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## Hydrostatic Test Pipe Data Table

Pipe Type	Length	Restrained / Unrestrained	Outside Diameter	Wall Thickness	Specification & Grade	Pipe Yield Pressure	Material	Joint Type	Seam Type
1	51 ft	Unrestrained	26.000 in.	0.5000 in.	API5L-X65	2,500 psig	Steel	Arc Weld	DSAW
2	7,657 ft	Restrained	26.000 in.	0.5000 in.	API5L-Grade B	1,346 psig	Steel	Arc Weld	SM
3	36 ft	Unrestrained	26.000 in.	0.5000 in.	API5L-X42	1,615 psig	Steel	Arc Weld	DSAW

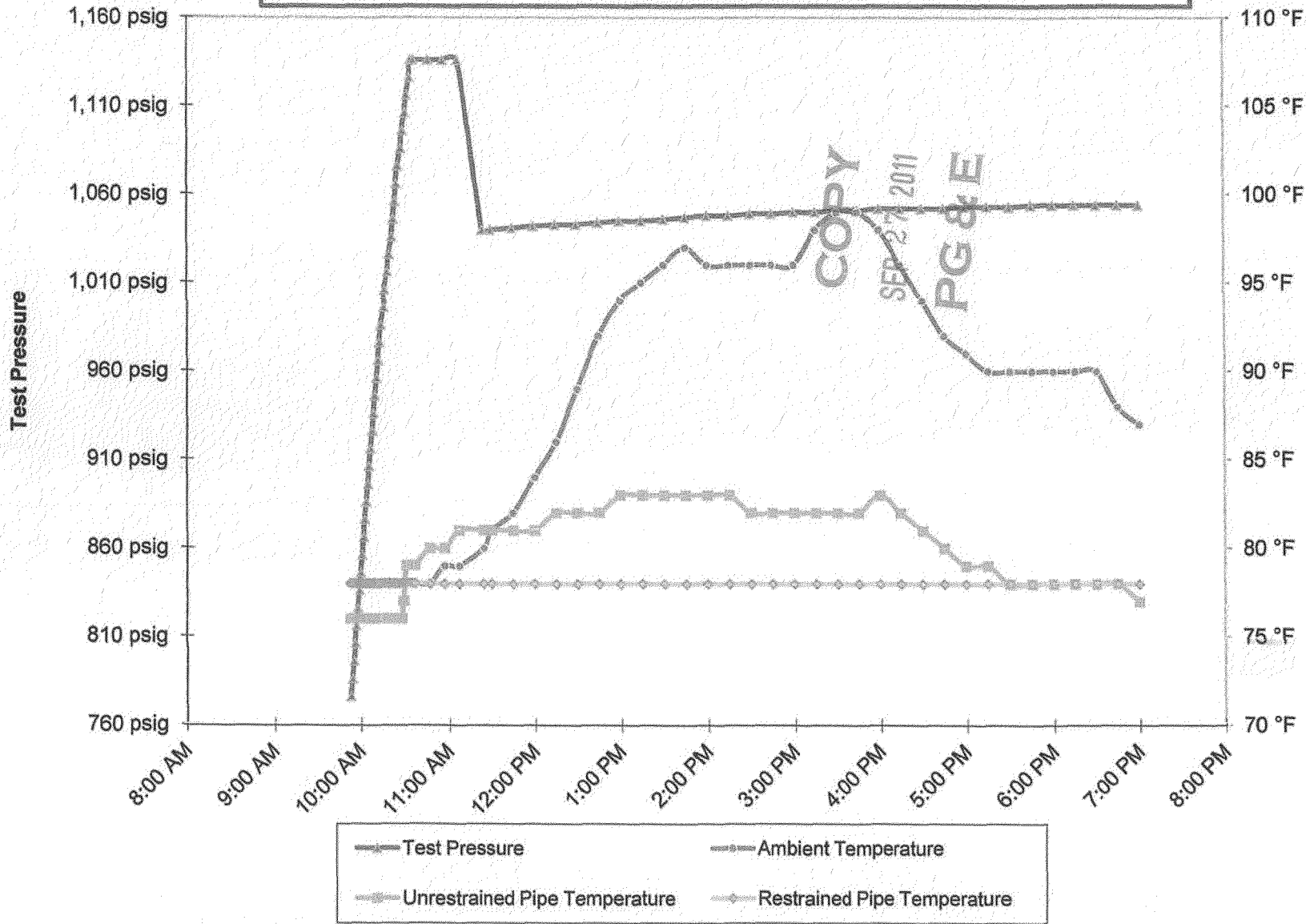
### Hydrostatic Test Project Owner & Participants

Owner Company	Pacific Gas and Electric Company	Job Number
Address	350 N. Wiget Walnut Creek, CA 94598 Attention: Redacted	41497323 - T55
Construction Company	Snelson	Job Number
Address	601 West State Street Sedro-Wooley, WA 98284 Attention: Redacted	41474005 - T55
Hydrostatic Test Co.	Milbar hydro-test inc.	Project No.
Address	P O Box 7701 Shreveport, La. 71137-7701	FY12-112
Test Section	PG&E T-55 L-300A, MP 156.4 - 157.86	
	From: 0+00	
	To: 77+22	
File Name	RCP 61362 - T-55, L-300A, MP 156.4 - 157.86	

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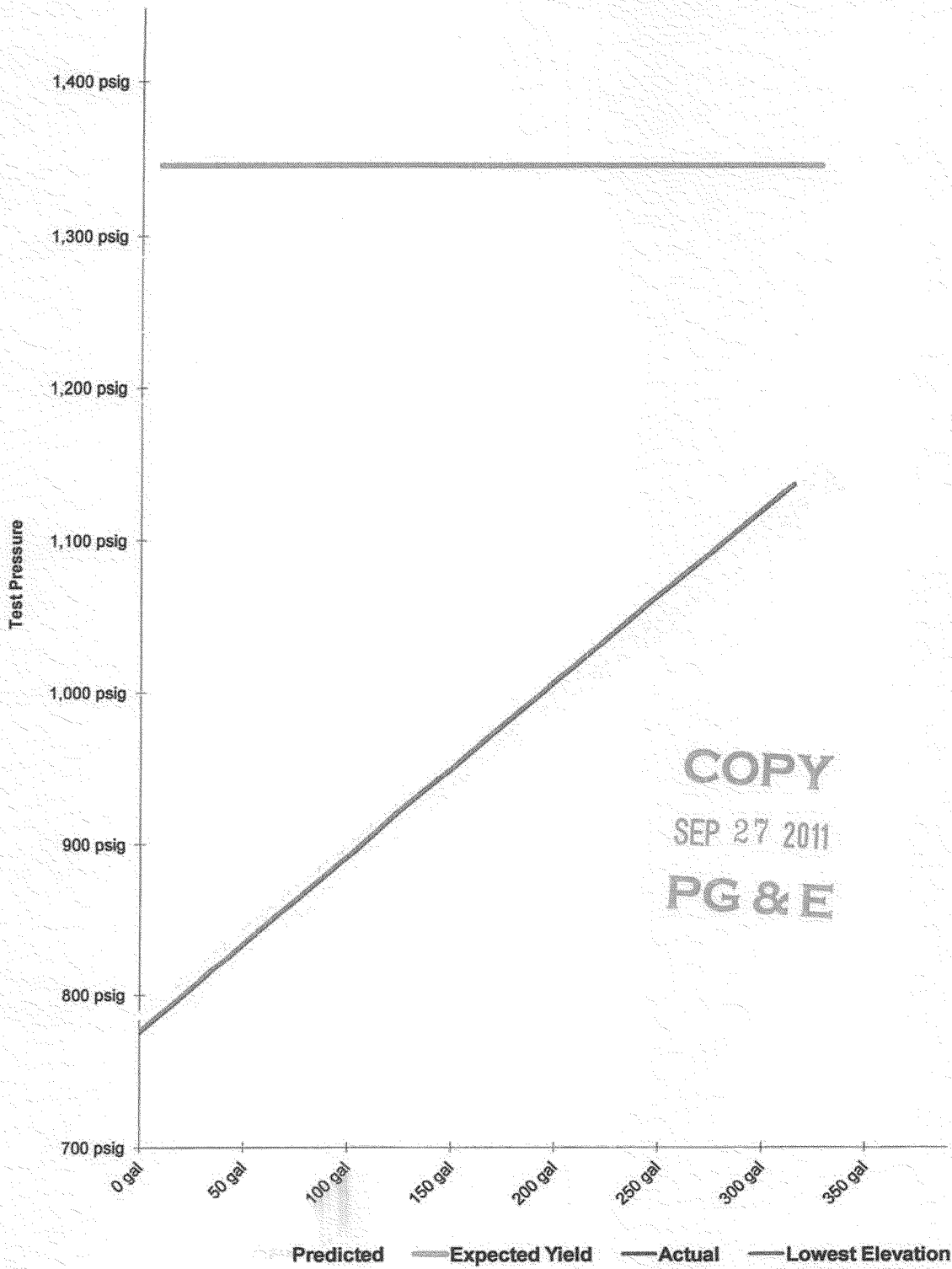
<b>Part II – Test Data (TO BE PREPARED BY PERSON SUPERVISING TEST AT TIME OF TEST)</b>				Note: Minimum test pressure and duration are not to be changed without written approval.			
Time and Date Test Pressure Reached	9/23/11 10:37 AM	Elevation at Test Point	2,194 ft	Min. Required Test Press At Test Point (1)	1,032.87 psig	Max. Allowable Test Press at Test Point (4)	1,138.70 psig
Time and Date Test Ended	9/23/11 7:00 PM	Max. Elevation in Test Section	2,196 ft	Min. Indicated Test Pressure (2)	1,040.00 psig	Max. Indicated Test Pressure (5)	1,136.00 psig
Actual Duration of Test	8 hours 23 minutes	Min. Elevation in Test Section	2,191 ft	Min. Test Pressure at Max. Elevation (3)	1,039.13 psig	Max. Test Pressure at Min. Elevation (6)	1,137.30 psig

PG&E T-55 L-300A, MP 156.4 - 157.86





**Spike Pressure Test**  
**Stress Strain Curve -- PG&E T-55 L-300A, MP 156.4 - 157.86**



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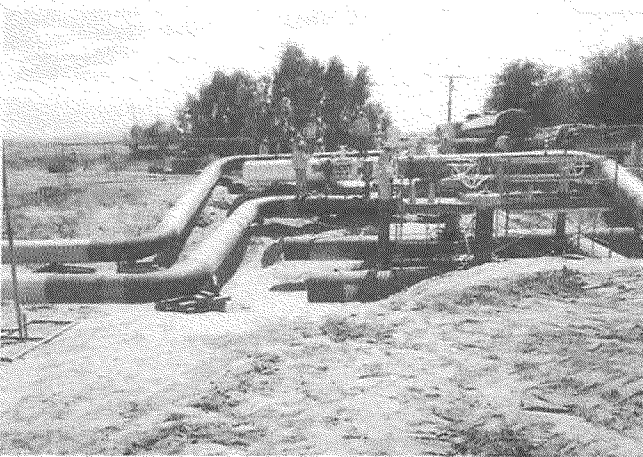
Actual Pressure Volume Plot Data			Predicted Pressure Volume Plot Data	Slope		Spike Pressure Test Stress Strain Curve -- PG&E T-55 L-300A, MP 156.4 - 157.86	
Pressure	Strokes	Gallons	Gallons	Actual	Predicted		
776 psig	0	0.00 gal		0	0.000	Pump gal per stroke	0.551 gal/stroke
786 psig	19	9.19 gal	9.08 gal	0.919	0.908	Pump Piston Diameter	3.000 in
796 psig	37	17.90 gal	18.17 gal	0.871	0.908	Pump Piston Stroke	6.00 in
806 psig	54	26.13 gal	27.25 gal	0.823	0.908	Pump Cylinders	3 ea
816 psig	71	34.35 gal	36.34 gal	0.823	0.908	Volume check gal per stroke	0.484 gal/stroke
826 psig	90	43.55 gal	45.42 gal	0.919	0.909	Volume Released (gallons)	8.75 gal
836 psig	107	51.77 gal	54.51 gal	0.823	0.909	Pressure Reduced (psi)	10 psi
846 psig	125	60.48 gal	63.59 gal	0.871	0.909	Maximum2	350 gal
856 psig	143	69.19 gal	72.68 gal	0.871	0.909	Minimum2	0 gal
866 psig	161	77.90 gal	81.77 gal	0.871	0.909	Maximum1	1,447 psig
876 psig	179	86.61 gal	90.85 gal	0.871	0.909	Minimum1	700 psig
886 psig	197	95.32 gal	99.94 gal	0.871	0.909	Gallons/Stroke Used	0.484 gal/stroke
896 psig	215	104.03 gal	109.03 gal	0.871	0.909	Predicted Gallons/Stroke	0.503 gal/stroke
906 psig	233	112.74 gal	118.12 gal	0.871	0.909	Pressure Increment	10 psi
916 psig	250	120.97 gal	127.21 gal	0.823	0.909	Max Pressure	1,136 psig
926 psig	268	129.68 gal	136.30 gal	0.871	0.909	Buried Pipe Temperature	78 °F
936 psig	286	138.39 gal	145.39 gal	0.871	0.909	Exposed Pipe Temperature	80 °F
946 psig	305	147.58 gal	154.49 gal	0.919	0.909	ASME B31.8 Appendix N-5	
956 psig	323	156.29 gal	163.58 gal	0.871	0.909		
966 psig	340	164.52 gal	172.67 gal	0.823	0.909	Average Actual Elastic Slope	0.875
976 psig	358	173.23 gal	181.76 gal	0.871	0.909	Average Predicted Elastic Slope	0.909
986 psig	376	181.94 gal	190.86 gal	0.871	0.909	Code Prescribed Minimum Yield Slope (less 10%) B31.8 N-5 (c)(2)	1.663
996 psig	395	191.13 gal	199.95 gal	0.919	0.909	Established Minimum Yield Pressure B31.8 N-5 (c)(2)	1,136 psig
1,006 psig	412	199.35 gal	209.05 gal	0.823	0.910	Maximum Allowed Volume (After Slope Deviation) B31.8 N-5 (c)(2)	418 gal
1,016 psig	431	208.55 gal	218.14 gal	0.919	0.910	Volume (After Slope Deviation) B31.8 N-5 (c)(2)	0 gal
1,026 psig	449	217.26 gal	227.24 gal	0.871	0.910	<div style="text-align: center;"> <p>PG &amp; E</p> <p>Redacted</p> <p>9/23/11 Date</p> </div>	
1,036 psig	467	225.97 gal	236.34 gal	0.871	0.910		
1,046 psig	485	234.68 gal	245.44 gal	0.871	0.910		
1,056 psig	503	243.39 gal	254.53 gal	0.871	0.910		
1,066 psig	522	252.58 gal	263.63 gal	0.919	0.910		
1,076 psig	540	261.29 gal	272.73 gal	0.871	0.910		
1,086 psig	559	270.48 gal	281.83 gal	0.919	0.910		
1,096 psig	577	279.19 gal	290.93 gal	0.871	0.910		
1,106 psig	595	287.90 gal	300.03 gal	0.871	0.910		
1,116 psig	614	297.10 gal	309.13 gal	0.919	0.910		
1,126 psig	632	305.81 gal	318.23 gal	0.871	0.910		
1,136 psig	651	315.00 gal	327.34 gal	0.919	0.910		
1,136 psig		315.00 gal	327.34 gal	0.000	0.000		
1,136 psig		315.00 gal	327.34 gal	0.000	0.000		
1,136 psig		315.00 gal	327.34 gal	0.000	0.000		
1,136 psig		315.00 gal	327.34 gal	0.000	0.000		
1,136 psig		315.00 gal	327.34 gal	0.000	0.000		
1,136 psig		315.00 gal	327.34 gal	0.000	0.000		
1,136 psig		315.00 gal	327.34 gal	0.000	0.000		



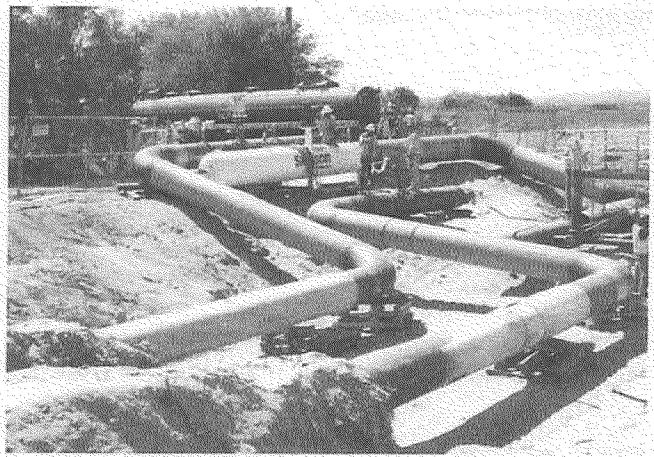
Test 55 test heads at location B



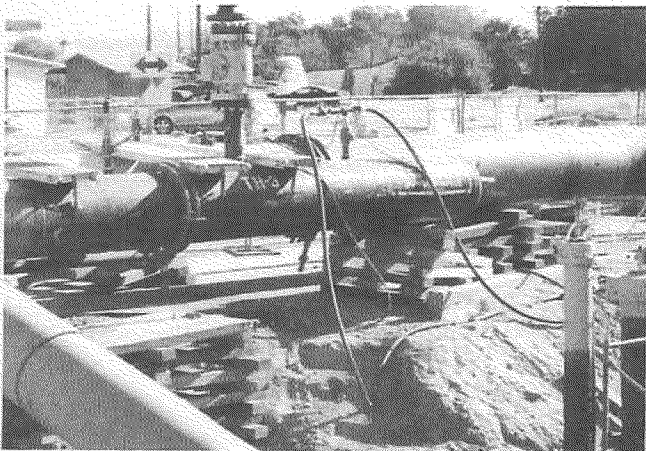
Test 55 test heads at location B



Test 55 test heads at location A



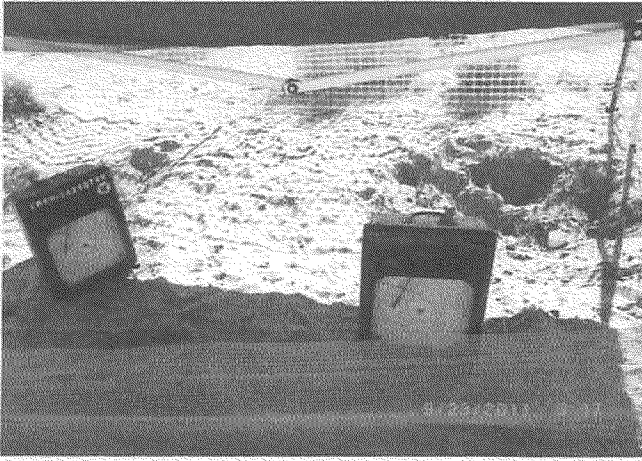
Test 55 test heads at location A



test 55 -test head with test manifold attached,loc.B



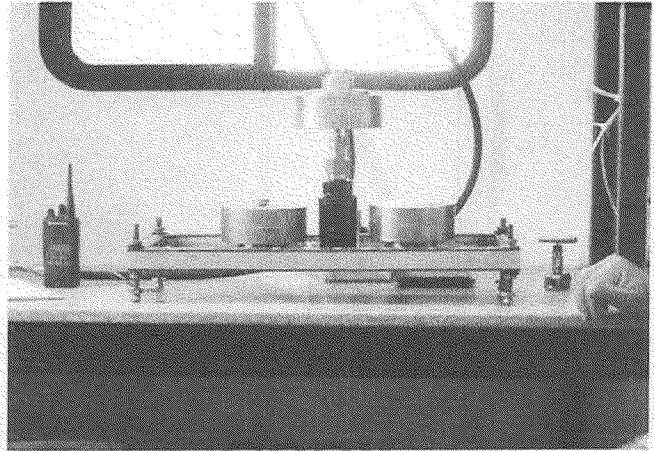
test 55 - dual temp. recorder at location B



test 55 remote temp. recorders at location A



test 55 location B- Milbar test pump truck



test 55 location B deadweights in service @ test

SEP 27 2011

PG & E