



RCP, Inc

801 Louisiana, Ste.200
Houston, Texas 77002

Redacted

8/24/2011

Pacific Gas and Electric Company

350 N. Wiget

Walnut Creek, CA 94598

Attention: Redacted

Test Contractor:

Milbar hydro-test inc -- FY12-112

Asset Owner:

Pacific Gas and Electric Company -- 414197338-T82

Construction Contractor:

Snelson -- 41474005 -T82

Test Section:

PG&E T-82 L-300B, MP 263.46 - 264.64

Test Date:

8/23/2011

Certificate Number:

RCP 61362 - T-82, L-300B, MP 263.46 - 264.64

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 1).

The test segment was subjected to a spike pressure test of 1030 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 971 psig and the established MAOP is 882 psig.

Pressure decreased 54 psi during the test. 12,480.00 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 4,935.43 ounces, loss, which is equivalent to a 0.92 °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 loss is attributed to the error characteristic of the temperature measurement instrumentation utilized.

Sincerely,

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Hydrostatic Test Plan Test T-82Flashdrive.xls

Letter

Page 1 of 12

8/24/2011

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Hydrostatic Test Certification

Company	Pacific Gas and Electric Company	Job Number	414197338-T82
Construction Co.	Snelson	Job Number	41474005-T82
Hydro. Test Co.	Milbar hydro-test inc	Project No.	FY12-112
Test Section	PG&E T-82 L-300B, MP 263.46 - 264.64		
File Name	RCP 61362 - T-82, L-300B, MP 263.46 - 264.64		

Hydrostatic Test Pressure

APPLICABLE CODE FOR CERTIFICATION:	Test Date:	23-Aug-11
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Code of Federal Regulations, Title 49, Part 192, Subpart J (Class 1)

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-82 L-300B, MP 263.46 - 264.64

From: 61+95

To: 0+00

Pipe Data

Segment	Length	Diameter	Wall Thickness	Specification	100% SMYS
1	61 ft	34.000 in.	0.505 in.	API5L-X60, DSAW, Arc Weld, Steel	1,782 psi
2	35 ft	34.000 in.	0.375 in.	API5L-X65, DSAW, Arc Weld, Steel	1,434 psi
3	6,210 ft	34.000 in.	0.344 in.	API5L-X52, DSAW, Arc Weld, Steel	1,052 psi
4	40 ft	34.000 in.	0.500 in.	API5L-X65, DSAW, Arc Weld, Steel	1,912 psi
5	5 ft	34.000 in.	0.500 in.	API5L-X65, DSAW, Arc Weld, Steel	1,912 psi

Initial Test Conditions

Pressure at Test Point:	1,030 psig	Date/Time:	10:52:26 AM	Pipe Temperature	
				Unrestrained:	85.0 °F
Ambient Temperature:	80.0 °F	Elevation @ Test Point:	352.0 ft	Restrained:	89.0 °F
Pressure @ High Point (Cal/Measure):	1,025 psig	Elevation @ High Point:	363.0 ft	Location:	0+00
Pressure @ Low Point (Cal/Measure):	1,030 psig	Elevation @ Low Point:	352.0 ft	Location:	61+95

Final Test Conditions

Pressure at Test Point:	976 psig	Date/Time:	7:15:26 PM	Pipe Temperature	
				Unrestrained:	87.0 °F
Ambient Temperature:	92.0 °F	Elevation @ Test Point:	352.0 ft	Restrained:	90.0 °F
Pressure @ High Point (Cal/Measure):	971 psig	Elevation @ High Point:	363.0 ft	Location:	61+95
Pressure @ Low Point (Cal/Measure):	976 psig	Elevation @ Low Point:	352.0 ft	Location:	0+00
Total Fluid Injected:				Volume loss	
Total Fluid Withdrawn:	12480.00 fluid ounces				
Net Change in Volume of the Test Section ± (+ Gain, - Loss):	(4,935.43) oz	loss	(0.0134)%	(0.924) °F equivalent	

Test Duration: 8.38 hours

Minimum Test Pressure:	Test Point	965 psig	Max Elevation	960 psig	965 psig	
					Min Elevation	1,030 psig
					53.6%	97.9%
% SMYS :					Maximum	97%

Test Segment Observed % SMYS

Minimum

53.6%

Minimum Test Pressure (Calculated/Measured):

971 psig

Maximum Allowable Operating Pressure:		DOT Part 192	Test Factor= 1.10	882 psig
Were leaks observed?	No	Explain:		

Acceptable Hydrostatic Test?	Yes	The test segment was subjected to a spike pressure test of 1030 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 6,210 feet of buried and 141 feet of exposed pipe. Pressure lost 54 psi during the test. The buried pipe segment gained 1°F fluid temperature and the exposed pipe segment gained 2°F. 12,480.00 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 4,935.43 ounces, loss, which is equivalent to a 0.92 °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 loss is attributed to the error characteristic of the temperature measurement instrumentation utilized.
Remarks		

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8/24/2011

RCP

Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	414197338-T82
Construction Co.	Snelson	Job Number	41474005 -T82
Testing Co.	Milbar hydro-test inc	Project No.	FY12-112
Test Section	PG&E T-82 L-300B, MP 263.46 - 264.64		
File Name	RCP 61362 - T-82, L-300B, MP 263.46 - 264.64		

Log No.	Test Period		Test Pressure	Temperature °F			Remarks			
	Date	Time		Ambient	Pipe					
				Unrestrained	Restrained	Comment	Bleed	Inject		
1	8/23/11	10:20 AM	714 psig	77 °F	84 °F	88 °F	Start Spike			
2	8/23/11	10:21 AM	724 psig	77 °F	84 °F	88 °F	Inject		2,256 oz.	
3	8/23/11	10:22 AM	734 psig	77 °F	84 °F	88 °F	Inject		2,397 oz.	
4	8/23/11	10:23 AM	744 psig	77 °F	84 °F	88 °F	Inject		2,397 oz.	
5	8/23/11	10:24 AM	754 psig	77 °F	84 °F	88 °F	Inject		2,538 oz.	
6	8/23/11	10:25 AM	764 psig	77 °F	84 °F	88 °F	Inject		2,397 oz.	
7	8/23/11	10:26 AM	774 psig	77 °F	84 °F	88 °F	Inject		2,397 oz.	
8	8/23/11	10:27 AM	784 psig	77 °F	84 °F	88 °F	Inject		2,468 oz.	
9	8/23/11	10:28 AM	794 psig	77 °F	84 °F	88 °F	Inject		2,327 oz.	
10	8/23/11	10:29 AM	804 psig	77 °F	84 °F	88 °F	Inject		2,538 oz.	
11	8/23/11	10:30 AM	814 psig	77 °F	84 °F	88 °F	Inject		2,397 oz.	
12	8/23/11	10:31 AM	824 psig	77 °F	84 °F	88 °F	Inject		2,397 oz.	
13	8/23/11	10:32 AM	834 psig	77 °F	84 °F	88 °F	Inject		2,397 oz.	
14	8/23/11	10:33 AM	844 psig	77 °F	84 °F	88 °F	Inject		2,538 oz.	
15	8/23/11	10:34 AM	854 psig	77 °F	84 °F	88 °F	Inject		2,397 oz.	
16	8/23/11	10:35 AM	864 psig	77 °F	84 °F	88 °F	Inject		2,397 oz.	
17	8/23/11	10:36 AM	874 psig	77 °F	84 °F	88 °F	Inject		2,397 oz.	
18	8/23/11	10:37 AM	884 psig	77 °F	84 °F	88 °F	Inject		2,468 oz.	
19	8/23/11	10:38 AM	894 psig	77 °F	84 °F	88 °F	Inject		2,468 oz.	
20	8/23/11	10:39 AM	904 psig	77 °F	84 °F	88 °F	Inject		2,327 oz.	
21	8/23/11	10:40 AM	914 psig	77 °F	84 °F	88 °F	Inject		2,468 oz.	
22	8/23/11	10:41 AM	924 psig	77 °F	84 °F	88 °F	Inject		2,468 oz.	
23	8/23/11	10:42 AM	934 psig	77 °F	84 °F	88 °F	Inject		2,397 oz.	
24	8/23/11	10:43 AM	944 psig	77 °F	84 °F	88 °F	Inject		2,468 oz.	
25	8/23/11	10:44 AM	954 psig	77 °F	84 °F	88 °F	Inject		2,397 oz.	
26	8/23/11	10:45 AM	964 psig	77 °F	84 °F	88 °F	Inject		2,397 oz.	
27	8/23/11	10:46 AM	974 psig	77 °F	84 °F	88 °F	Inject		2,468 oz.	
28	8/23/11	10:47 AM	984 psig	77 °F	84 °F	88 °F	Inject		2,468 oz.	
29	8/23/11	10:48 AM	994 psig	77 °F	84 °F	88 °F	Inject		2,397 oz.	
30	8/23/11	10:49 AM	1,004 psig	77 °F	84 °F	88 °F	Inject		2,468 oz.	
31	8/23/11	10:49 AM	1,014 psig	77 °F	84 °F	88 °F	Inject		2,397 oz.	
32	8/23/11	10:50 AM	1,024 psig	77 °F	84 °F	88 °F	Inject		2,468 oz.	
33	8/23/11	10:51 AM	1,030 psig	77 °F	84 °F	88 °F	Inject		1,410 oz.	
34	8/23/11	10:52 AM	1,030 psig	80 °F	85 °F	89 °F	On Test			
35	8/23/11	11:02 AM	1,030 psig	80 °F	85 °F	89 °F				
36	8/23/11	11:12 AM	1,030 psig	81 °F	85 °F	89 °F				
37	8/23/11	11:22 AM	1,030 psig	82 °F	85 °F	89 °F	End Spike			
38	8/23/11	11:23 AM	1,020 psig	82 °F	85 °F	89 °F	Bleed	1,920 oz.		
39	8/23/11	11:24 AM	1,010 psig	83 °F	85 °F	89 °F	Bleed	1,920 oz.		
40	8/23/11	11:25 AM	1,000 psig	83 °F	85 °F	89 °F	Bleed	1,920 oz.		
41	8/23/11	11:26 AM	990 psig	83 °F	85 °F	89 °F	Bleed	1,920 oz.		
42	8/23/11	11:27 AM	980 psig	83 °F	85 °F	89 °F	Bleed	1,920 oz.		
43	8/23/11	11:28 AM	970 psig	83 °F	85 °F	89 °F	Bleed	1,920 oz.		

RCP**Dead Weight Log Sheet**

Owner Company	Pacific Gas and Electric Company	Job Number	414197338-T82
Construction Co.	Snelson	Job Number	41474005 -T82
Testing Co.	Milbar hydro-test inc	Project No.	FY12-112
Test Section	PG&E T-82 L-300B, MP 263.46 - 264.64		
File Name	RCP 61362 - T-82, L-300B, MP 263.46 - 264.64		

Date 8/23/2011

Test Log

Log No.	Test Period		Test Pressure	Temperature °F			Remarks						
	Date	Time		Ambient	Pipe		Comment	Bleed	Inject				
					Unrestrained	Restrained							
44	8/23/11	11:30 AM	965 psig	83 °F	86 °F	89 °F	Bleed	960 oz.					
45	8/23/11	11:45 AM	965 psig	84 °F	86 °F	89 °F							
46	8/23/11	12:00 PM	966 psig	86 °F	87 °F	89 °F							
47	8/23/11	12:15 PM	966 psig	86 °F	87 °F	90 °F							
48	8/23/11	12:30 PM	967 psig	88 °F	87 °F	90 °F							
49	8/23/11	12:45 PM	968 psig	89 °F	87 °F	90 °F							
50	8/23/11	1:00 PM	968 psig	90 °F	87 °F	90 °F							
51	8/23/11	1:15 PM	969 psig	92 °F	88 °F	89 °F							
52	8/23/11	1:30 PM	969 psig	92 °F	88 °F	89 °F							
53	8/23/11	1:45 PM	969 psig	94 °F	88 °F	89 °F							
54	8/23/11	2:00 PM	970 psig	95 °F	88 °F	89 °F							
55	8/23/11	2:15 PM	970 psig	95 °F	88 °F	89 °F							
56	8/23/11	2:30 PM	971 psig	97 °F	88 °F	90 °F							
57	8/23/11	2:45 PM	971 psig	97 °F	88 °F	90 °F							
58	8/23/11	3:00 PM	972 psig	97 °F	88 °F	90 °F							
59	8/23/11	3:15 PM	972 psig	98 °F	88 °F	90 °F							
60	8/23/11	3:30 PM	973 psig	99 °F	88 °F	90 °F							
61	8/23/11	3:45 PM	973 psig	100 °F	88 °F	90 °F							
62	8/23/11	4:00 PM	974 psig	102 °F	88 °F	90 °F							
63	8/23/11	4:15 PM	974 psig	102 °F	88 °F	90 °F							
64	8/23/11	4:30 PM	974 psig	102 °F	88 °F	90 °F							
65	8/23/11	4:45 PM	975 psig	102 °F	88 °F	90 °F							
66	8/23/11	5:00 PM	975 psig	102 °F	88 °F	90 °F							
67	8/23/11	5:15 PM	975 psig	101 °F	87 °F	90 °F							
68	8/23/11	5:30 PM	976 psig	100 °F	87 °F	90 °F							
69	8/23/11	5:45 PM	976 psig	100 °F	87 °F	90 °F							
70	8/23/11	6:00 PM	976 psig	100 °F	87 °F	90 °F							
71	8/23/11	6:15 PM	976 psig	100 °F	87 °F	90 °F							
72	8/23/11	6:30 PM	976 psig	98 °F	87 °F	90 °F							
73	8/23/11	6:45 PM	976 psig	96 °F	87 °F	90 °F							
74	8/23/11	7:00 PM	976 psig	94 °F	87 °F	90 °F							
75	8/23/11	7:15 PM	976 psig	92 °F	87 °F	90 °F	End of Test						
							Spike Test		76,565.4 oz.				
							Hydrostatic Test	12,480.0 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>1,030 psig</td> </tr> <tr> <td>Low Test Pressure:</td> <td>965 psig</td> </tr> </table>				High Test Pressure:	1,030 psig	Low Test Pressure:	965 psig
High Test Pressure:	1,030 psig												
Low Test Pressure:	965 psig												

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Pipe Segment Volume Calculations

Company	Pacific Gas and Electric Company	Job Number	414197338-T82
Construction Co.	Snelson	Job Number	41474005 -T82
Hydro. Test Co.	Milbar hydro-test inc	Project No.	FY12-112
Test Section	PG&E T-82 L-300B, MP 263.46 - 264.64		
File Name	RCP 61362 - T-82, L-300B, MP 263.46 - 264.64		WATER

General Pipe Data

Description	Segment					
	1	2	3	4	5	
Restrained or Unrestrained?	Unrestrained	Unrestrained	Restrained	Unrestrained	Unrestrained	
Outside Diameter	34.000 in.	34.000 in.	34.000 in.	34.000 in.	34.000 in.	
Wall Thickness	0.505 in.	0.375 in.	0.344 in.	0.500 in.	0.500 in.	
Inside Diameter	32.990 in.	33.250 in.	33.312 in.	33.000 in.	33.000 in.	
Spec./Grade	API5L-X60	API5L-X65	API5L-X52	API5L-X65	API5L-X65	
Length Unrestrained	61 ft	35 ft		40 ft	5 ft	
Length Restrained			6,210 ft			
Temperature - On Test	85 °F	85 °F	89.0 °F	85.0 °F	85.0 °F	
Temperature - End of Test	87 °F	87 °F	90.0 °F	87.0 °F	87.0 °F	
Pressure -- On Test	1,030 psig	1,030 psig	1,030 psig	1,030 psig	1,030 psig	
Pressure -- End of Test	976 psig	976 psig	976 psig	976 psig	976 psig	

Unrestrained Pipe

Sum:	Vo	6,286.79 gal	Vtp1	6,308.71 gal	Vtp2	6,304.58 gal
		804,710 oz.		807,514 oz.		806,987 oz.
Vo Unrestrained	2,708 gal	1,579 gal		1,777 gal	222 gal	
Fwp 1	1.003157	1.003157		1.003157	1.003157	
Fpp 1	1.002804	1.003805		1.002833	1.002833	
Fpt 1	1.000455	1.000455		1.000455	1.000455	
Fwt 1	1.003192	1.003192		1.003192	1.003192	
Fpwt 1 = Fpt/Fwt	0.997272	0.997272		0.997272	0.997272	
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	2,717.39 gal	1,585.41 gal		1,783.03 gal	222.88 gal	
Fwp 2	1.002991	1.002991		1.002991	1.002991	
Fpp 2	1.002657	1.003606		1.002684	1.002684	
Fpt 2	1.000491	1.000491		1.000491	1.000491	
Fwt 2	1.003557	1.003557		1.003557	1.003557	
Fpwt 2 = Fpt/Fwt	0.996945	0.996945		0.996945	0.996945	
Vtp = Vo(Fwp)(Fpp)(Fpwt)	2,715.65 gal	1,584.32 gal		1,781.88 gal	222.74 gal	

Restrained Pipe

Sum:	Vo	281,159.11 gal	Vtp1	281,928.20 gal	Vtp2	281,796.26 gal
		35,988,366 oz.		36,086,809 oz.		36,069,921 oz.
Vo Unrestrained		281,159 gal				
Fwp 1		1.003157				
Fpp 1		1.003130				
Fpt 1		1.000351				
Fwt 1		1.003903				
Fpwt 1 = Fpt/Fwt		0.996461				
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)		281,928 gal				
Fwp 2		1.002991				
Fpp 2		1.002975				
Fpt 2		1.000363				
Fwt 2		1.004064				
Fpwt 2 = Fpt/Fwt		0.996314				
Vtp = Vo(Fwp)(Fpp)(Fpwt)		281,796 gal				

Combined Pipe

Sum:	Vo	287,445.91 gal	Vtp1	288,236.90 gal	Vtp2	288,100.84 gal
		36,793,076 oz.		36,894,323 oz.		36,876,908 oz.

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Pipe Segment Volume Allowance Calculations

Company	Pacific Gas and Electric Company					Job Number	414197338-T82				
Construction Co.	Snelson					Job Number	41474005-T82				
Hydro. Test Co.	Milbar hydro-test inc					Project No.	FY12-112				
Test Section	PG&E T-82 L-300B, MP 263.46 - 264.64						WATER				
File Name	RCP 61362 - T-82, L-300B, MP 263.46 - 264.64										
General Pipe Data											
Description	Segment										
	1	2	3	4	5						
Restrained or Unrestrained?	Unrestrained	Unrestrained	Restrained	Unrestrained	Unrestrained						
Outside Diameter	34.000 in.	34.000 in.	34.000 in.	34.000 in.	34.000 in.						
Wall Thickness	0.505 in.	0.375 in.	0.344 in.	0.500 in.	0.500 in.						
Inside Diameter	32.990 in.	33.250 in.	33.312 in.	33.000 in.	33.000 in.						
Spec./Grade	API5L-X60	API5L-X65	API5L-X52	API5L-X65	API5L-X65						
Length Unstrained	61.00 ft	35.00 ft		40 ft	5 ft						
Length Restrained			6,210 ft								
Temperature – On Test	85 °F	85 °F	89 °F	85 °F	85 °F						
Temperature – End of Test	86 °F	86 °F	90 °F	86 °F	86 °F						
Pressure – On Test	1,003 psig	1,003 psig	1,003 psig	1,003 psig	1,003 psig						
Pressure – End of Test	1,003 psig	1,003 psig	1,003 psig	1,003 psig	1,003 psig						
Unrestrained Pipe											
Sum:	Vo	6,286.79 gal 804,710 oz.		Vtp1	6,307.68 gal 807,383 oz.		Vtp2	6,306.65 gal 807,252 oz.			
Vo Unrestrained		2,709 gal	1,579 gal		1,777 gal	222 gal					
Fwp 1		1.003074	1.003074		1.003074	1.003074					
Fpp 1		1.002730	1.003706		1.002758	1.002758					
Fpt 1		1.000455	1.000455		1.000455	1.000455					
Fwt 1		1.003192	1.003192		1.003192	1.003192					
Fpwt 1 = Fpt/Fwt		0.997272	0.997272		0.997272	0.997272					
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)		2,716.96 gal	1,585.12 gal		1,782.75 gal	222.84 gal					
Fwp 2		1.003074	1.003074		1.003074	1.003074					
Fpp 2		1.002730	1.003706		1.002758	1.002758					
Fpt 2		1.000473	1.000473		1.000473	1.000473					
Fwt 2		1.003373	1.003373		1.003373	1.003373					
Fpwt = Fpt/Fwt		0.997110	0.997110		0.997110	0.997110					
Vtp = Vo(Fwp)(Fpp)(Fpwt)		2,716.52 gal	1,584.87 gal		1,782.46 gal	222.81 gal					
Restrained Pipe											
Sum:	Vo	281,159.11 gal 35,988,366 oz.		Vtp1	281,882.58 gal 36,080,970 oz.		Vtp2	281,841.86 gal 36,075,758 oz.			
Vo Restrained			281,159 gal								
Fwp 1			1.003074								
Fpp 1			1.003051								
Fpt 1			1.000351								
Fwt 1			1.003903								
Fpwt 1 = Fpt/Fwt			0.996461								
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)			281,883 gal								
Fwp 2			1.003074								
Fpp 2			1.003054								
Fpt 2			1.000363								
Fwt 2			1.004064								
Fpwt = Fpt/Fwt			0.996314								
Vtp = Vo(Fwp)(Fpp)(Fpwt)			281,842 gal								
Combined Pipe											
Sum:	Vo	287,445.91 gal 36,793,076 oz.		Vtp1	288,190.26 gal 36,888,353 oz.		Vtp2	288,148.51 gal 36,883,010 oz.			
1 °F Change		41.75 gal	5,343.54 oz.								

RCP**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	61 ft	Unrestrained	34.000 in.	0.5050 in.	API5L-X60	1,782 psig	Steel	Arc Weld	DSAW
2	35 ft	Unrestrained	34.000 in.	0.3750 in.	API5L-X65	1,434 psig	Steel	Arc Weld	DSAW
3	6,210 ft	Restrained	34.000 in.	0.3440 in.	API5L-X52	1,052 psig	Steel	Arc Weld	DSAW
4	40 ft	Unrestrained	34.000 in.	0.5000 in.	API5L-X65	1,912 psig	Steel	Arc Weld	DSAW
5	5 ft	Unrestrained	34.000 in.	0.5000 in.	API5L-X65	1,912 psig	Steel	Arc Weld	DSAW

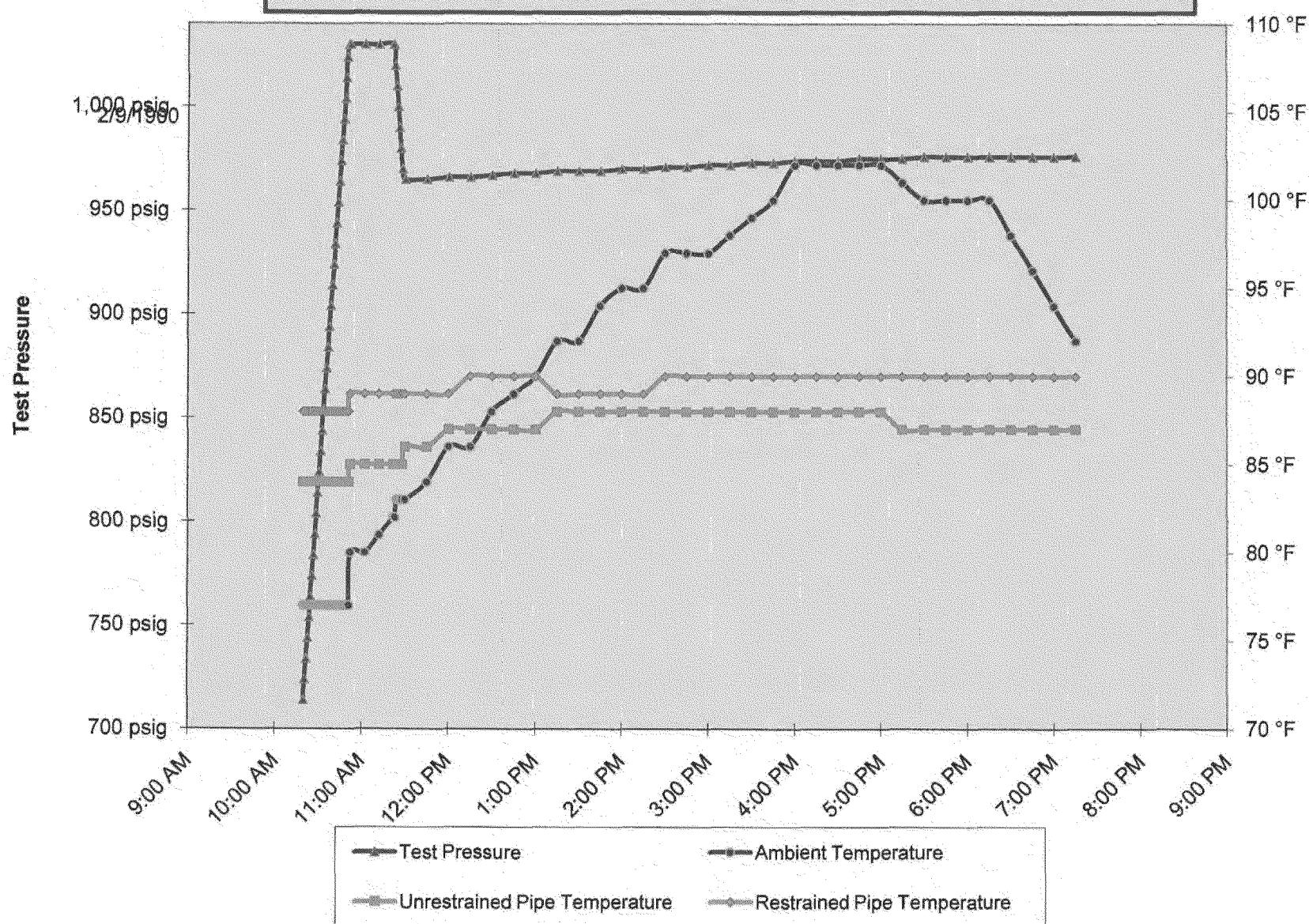
Hydrostatic Test Project Owner & Participants

Owner Company	Pacific Gas and Electric Company	Job Number
Address	350 N. Wiget Walnut Creek CA 94598	414197338-T82
	Attention: Redacted	
Construction Company	Snelson	Job Number
Address	601 West State Street Sedro-Woolley WA 98284	41474005 -T82
	Attention: Redacted	
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-82 L-300B, MP 263.46 - 264.64	
	From: 61+95	
	To: 0+00	
File Name	RCP 61362 - T-82, L-300B, MP 263.46 - 264.64	

Part II – Test Data (TO BE PREPARED BY PERSON SUPERVISING TEST AT TIME OF TEST) Note: Minimum test pressure and duration are not to be charged without written approval.

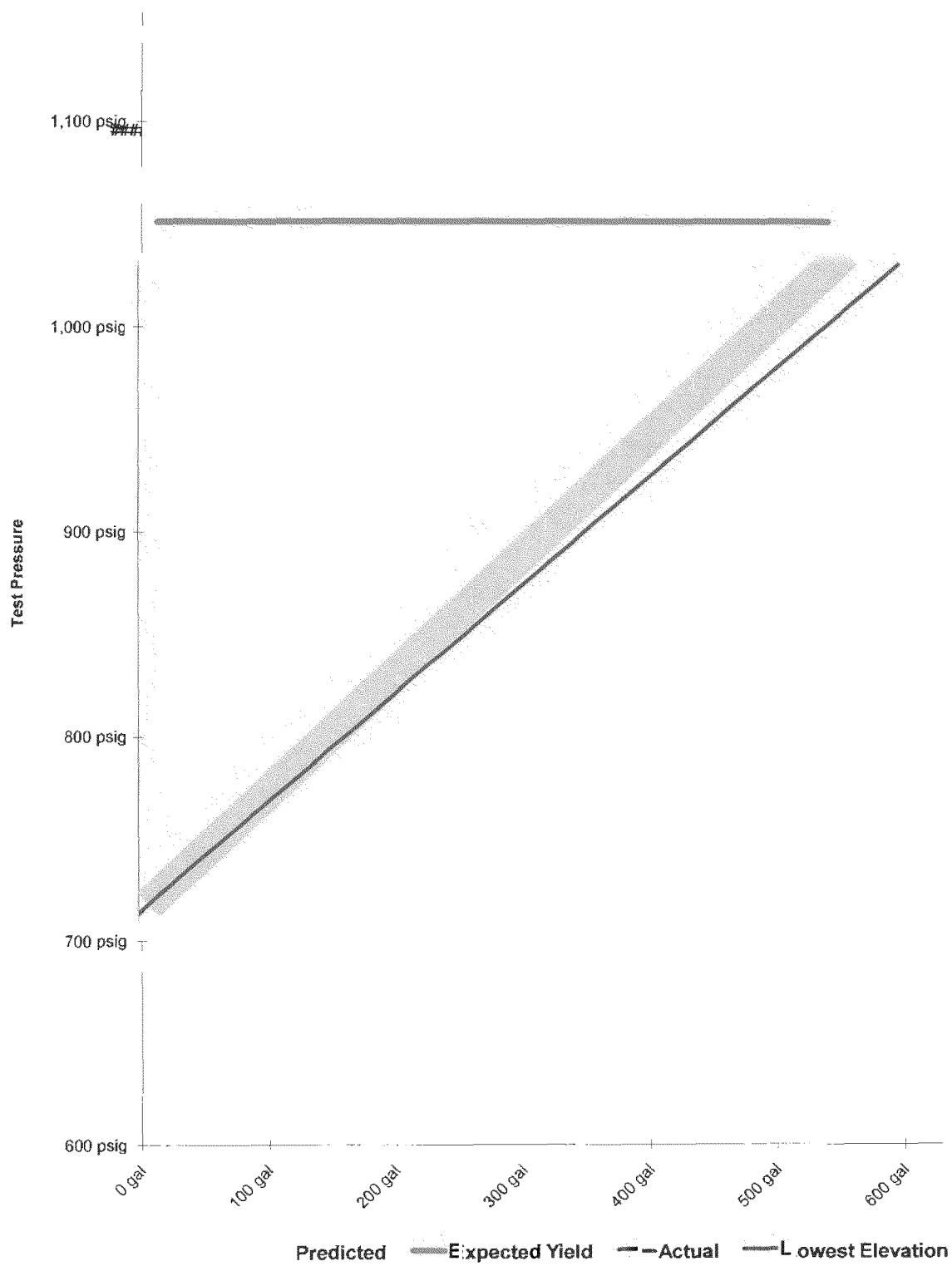
Time and Date Test Pressure Reached	8/23/11 10:52 AM	Elevation at Test Point	352 ft	Min. Required Test Press At Test Point (1)	951.77 psig	Max. Allowable Test Press at Test Point (4)	1,035.00 psig
Time and Date Test Ended	8/23/11 7:15 PM	Max. Elevation in Test Section	363 ft	Min. Indicated Test Pressure (2)	965.00 psig	Max. Indicated Test Pressure (5)	1,030.00 psig
Actual Duration of Test	8 hours 23 minutes	Min. Elevation in Test Section	352 ft	Min. Test Pressure at Max. Elevation (3)	960.23 psig	Max. Test Pressure at Min. Elevation (6)	1,030.00 psig

PG&E T-82 L-300B, MP 263.46 - 264.64



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Hydrostatic Test Plan Test T-82Flashdrive.xlsm
PlotT

Spike Pressure Test
Stress Strain Curve -- PG&E T-82 L-300B, MP 263.46 - 264.64



Actual Pressure Volume Plot Data			Predicted Pressure Volume Plot Data	Slope		Spike Pressure Test Stress Strain Curve -- PG&E T-82 L-300B, MP 263.46 - 264.64	
Pressure	Strokes	Gallons	Gallons	Actual	Predicted		
714 psig		0.00 gal		0.000		Pump gal per stroke	0.551 gal/stroke
724 psig	32	17.63 gal	17.30 gal	1.763	1.730	Pump Piston Diameter	3.000 in
734 psig	66	36.35 gal	34.60 gal	1.873	1.730	Pump Piston Stroke	6.00 in
744 psig	100	55.08 gal	51.91 gal	1.873	1.730	Pump Cylinders	3 ea
754 psig	136	74.91 gal	69.21 gal	1.983	1.731	Volume check gal per stroke	0.436 gal/stroke
764 psig	170	93.64 gal	86.52 gal	1.873	1.731	Volume Released (gallons)	15.00 gal
774 psig	204	112.36 gal	103.83 gal	1.873	1.731	Pressure Reduced (psi)	10 psi
784 psig	239	131.64 gal	121.14 gal	1.928	1.731	Maximum2	630 gal
794 psig	272	149.82 gal	138.45 gal	1.818	1.731	Minimum2	0 gal
804 psig	308	169.65 gal	155.76 gal	1.983	1.731	Maximum1	1,153 psig
814 psig	342	188.37 gal	173.07 gal	1.873	1.731	Minimum1	600 psig
824 psig	376	207.10 gal	190.38 gal	1.873	1.731	Gallons/Stroke Used	0.551 gal/stroke
834 psig	410	225.83 gal	207.69 gal	1.873	1.731	Predicted Gallons/Stroke	0.504 gal/stroke
844 psig	446	245.66 gal	225.01 gal	1.983	1.731	Pressure Increment	10 psi
854 psig	480	264.38 gal	242.32 gal	1.873	1.732		
864 psig	514	283.11 gal	259.64 gal	1.873	1.732	Max Pressure	1,030 psig
874 psig	548	301.84 gal	276.96 gal	1.873	1.732		
884 psig	583	321.12 gal	294.28 gal	1.928	1.732	Buried Pipe Temperature	89 °F
894 psig	618	340.39 gal	311.60 gal	1.928	1.732	Exposed Pipe Temperature	85 °F
904 psig	651	358.57 gal	328.92 gal	1.818	1.732		
914 psig	686	377.85 gal	346.24 gal	1.928	1.732	ASME B31.8 Appendix N-5	
924 psig	721	397.13 gal	363.56 gal	1.928	1.732	Average Actual Elastic Slope	1.892
934 psig	755	415.85 gal	380.89 gal	1.873	1.732		
944 psig	790	435.13 gal	398.21 gal	1.928	1.733	Average Predicted Elastic Slope	1.732
954 psig	824	453.86 gal	415.54 gal	1.873	1.733		
964 psig	858	472.59 gal	432.87 gal	1.873	1.733	Code Prescribed Minimum Yield Slope (less 10%) B31.8 N-5 (c)(2)	3.595
974 psig	893	491.86 gal	450.19 gal	1.928	1.733		
984 psig	928	511.14 gal	467.52 gal	1.928	1.733	Established Minimum Yield Pressure B31.8 N-5 (c)(2)	1,030 psig
994 psig	962	529.87 gal	484.85 gal	1.873	1.733		
1,004 psig	997	549.15 gal	502.19 gal	1.928	1.733	Maximum Allowed Volume (After Slope Deviation) B31.8 N-5 (c)(2)	418 gal
1,014 psig	1031	567.87 gal	519.52 gal	1.873	1.733		
1,024 psig	1066	587.15 gal	536.85 gal	1.928	1.733	Volume (After Slope Deviation) B31.8 N-5 (c)(2)	0 gal
1,030 psig	1086	598.17 gal	547.25 gal	1.836	1.733		
1,030 psig		598.17 gal	547.25 gal	0.000	0.000	Redacted	<i>8-24-11</i> Date
1,030 psig		598.17 gal	547.25 gal	0.000	0.000		
1,030 psig		598.17 gal	547.25 gal	0.000	0.000		
1,030 psig		598.17 gal	547.25 gal	0.000	0.000		
1,030 psig		598.17 gal	547.25 gal	0.000	0.000		
1,030 psig		598.17 gal	547.25 gal	0.000	0.000		
1,030 psig		598.17 gal	547.25 gal	0.000	0.000		
1,030 psig		598.17 gal	547.25 gal	0.000	0.000		



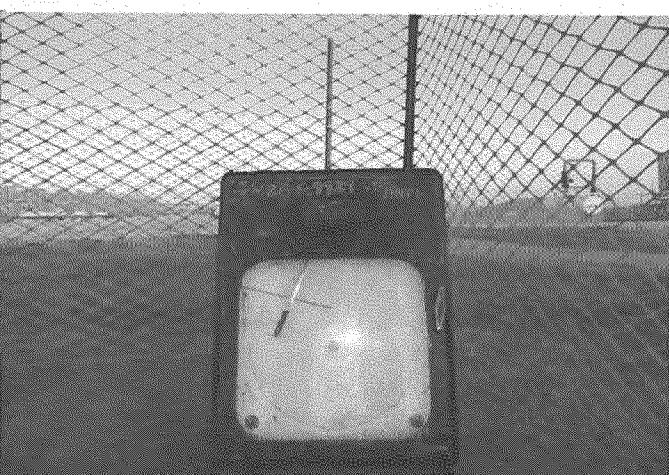
T-82 Test Head



T-82 Test Head



T-82 Unrestrained & Alt Rest. Temp



T-82 Restrained Temp