



RCP, Inc

801 Louisiana, Ste.200
Houston, Texas 77002
(713)655-8080

Redacted

September 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 -- 41474054 - T75
Construction Contractor:	Snelson -- 41474005 -T75
Test Section:	PG&E T-75 L-300A1, MP 156.4 - 157.86
Test Date:	September 24, 2011
Certificate Number:	RCP 61362 - T-75, L-300A1, 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 8.5 hour test duration period.

This hydrostatic test was completed successfully. Pressure was maintained on the test facilities in excess of 8.5 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 1051 psig and the established MAOP is 700 psig.

Pressure decreased 84 psi during the test. 10,336.00 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 3,389.27 ounces, loss, which is equivalent to a 0.91 °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.

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_Hydrostatic_Test_Plan_T-75 (Large_Elevation)_8.30.2011
Letter



Hydrostatic Test Certification

Company	Pacific Gas and Electric Company	Job Number	41474054 - T75
Construction Co.	Snelson	Job Number	41474005 -T75
Hydro. Test Co.	Milbar hydro-test inc.	Project No.	FY12-112
Test Section	PG&E T-75 L-300A1, MP 156.4 - 157.86		
File Name	RCP 61362 - T-75, L-300A1, MP 156.4 - 157.86		

Hydrostatic Test Pressure

APPLICABLE CODE FOR CERTIFICATION: _____ Test Date: 24-Sep-11

Code of Federal Regulations, Title 49, Part 192, Subpart J (Class 3)

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-75 L-300A1, MP 156.4 - 157.86

From: 0+00 To: 77+22

Pipe Data

Segment	Length	Diameter	Wall Thickness	Specification	100% SMYS
1	38 ft	26.000 in.	0.500 in.	API5L-X65, DSAW, Arc Weld, Steel	2,500 psi
2	7,662 ft	26.000 in.	0.500 in.	API5L-Grade B, SM, Arc Weld, Steel	1,346 psi
3	32 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:	9/24/11 8:30 AM	Pipe Temperature	
Ambient Temperature:	71.0 °F	Elevation @ Test Point:	2,194.0 ft	Unrestrained:	75.0 °F
Pressure @ High Point (Cal/Measure):	1,135 psig	Elevation @ High Point:	2,196.0 ft	Restrained:	79.0 °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:	1,052 psig	Date/Time:	9/24/11 5:00 PM	Pipe Temperature	
Ambient Temperature:	93.0 °F	Elevation @ Test Point:	2,194.0 ft	Unrestrained:	85.0 °F
Pressure @ High Point (Cal/Measure):	1,051 psig	Elevation @ High Point:	2,196.0 ft	Restrained:	80.0 °F
Pressure @ Low Point (Cal/Measure):	1,053 psig	Elevation @ Low Point:	2,191.0 ft	Location:	0+00
				Location:	77+22
				Location:	39+52

Total Fluid Injected: _____

Total Fluid Withdrawn: 10336.00 fluid ounces

Net Change in Volume of the Test Section ± (+ Gain, - Loss): (3,389.27) oz loss (0.0134)% (0.914) °F equivalent

Test Duration: 8.50 hours

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): 1,051 psig

DOT Part 192 Test Factor= 1.50 700 psig

Maximum Allowable Operating Pressure:			
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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 8.5 hour test duration period.

No leaks were observed during the test period. The test section included 7,662 feet of buried and 70 feet of exposed pipe. Pressure lost 84 psi during the test. The buried pipe segment gained 1°F fluid temperature and the exposed pipe segment gained 10°F.

10,336.00 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 3,389.27 ounces, loss, which is equivalent to a 0.91 °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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24-Sep-11



Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	41474054 - T75
Construction Co.	Snelson	Job Number	41474005 -T75
Testing Co.	Milbar hydro-test inc.	Project No.	FY12-112
Test Section	PG&E T-75 L-300A1, MP 156.4 - 157.86		
File Name	RCP 61362 - T-75, L-300A1, MP 156.4 - 157.86		

Date		Test Log							
Log No.	Test Period		Test Pressure	Temperature °F			Remarks		
	Date	Time		Ambient	Pipe		Comment	Bleed	Inject
					Unrestrained	Restrained			
1	9/24/11	7:52 AM	774 psig	71 °F	74 °F	79 °F	Start Spike		
2	9/24/11	7:53 AM	784 psig	71 °F	74 °F	79 °F	Inject		1,155 oz.
3	9/24/11	7:54 AM	794 psig	71 °F	74 °F	79 °F	Inject		1,094 oz.
4	9/24/11	7:55 AM	804 psig	71 °F	74 °F	79 °F	Inject		1,094 oz.
5	9/24/11	7:56 AM	814 psig	71 °F	74 °F	79 °F	Inject		1,033 oz.
6	9/24/11	7:57 AM	824 psig	71 °F	74 °F	79 °F	Inject		1,094 oz.
7	9/24/11	7:58 AM	834 psig	71 °F	74 °F	79 °F	Inject		1,094 oz.
8	9/24/11	7:59 AM	844 psig	71 °F	74 °F	79 °F	Inject		1,033 oz.
9	9/24/11	8:00 AM	854 psig	71 °F	74 °F	79 °F	Inject		1,094 oz.
10	9/24/11	8:01 AM	864 psig	71 °F	74 °F	79 °F	Inject		1,094 oz.
11	9/24/11	8:02 AM	874 psig	71 °F	74 °F	79 °F	Inject		1,033 oz.
12	9/24/11	8:03 AM	884 psig	71 °F	74 °F	79 °F	Inject		1,094 oz.
13	9/24/11	8:04 AM	894 psig	71 °F	74 °F	79 °F	Inject		1,094 oz.
14	9/24/11	8:05 AM	904 psig	71 °F	74 °F	79 °F	Inject		1,094 oz.
15	9/24/11	8:06 AM	914 psig	71 °F	74 °F	79 °F	Inject		1,033 oz.
16	9/24/11	8:07 AM	924 psig	71 °F	74 °F	79 °F	Inject		1,094 oz.
17	9/24/11	8:08 AM	934 psig	71 °F	74 °F	79 °F	Inject		1,094 oz.
18	9/24/11	8:09 AM	944 psig	71 °F	74 °F	79 °F	Inject		1,033 oz.
19	9/24/11	8:10 AM	954 psig	71 °F	74 °F	79 °F	Inject		1,155 oz.
20	9/24/11	8:11 AM	964 psig	71 °F	74 °F	79 °F	Inject		1,094 oz.
21	9/24/11	8:12 AM	974 psig	71 °F	74 °F	79 °F	Inject		1,094 oz.
22	9/24/11	8:13 AM	984 psig	71 °F	74 °F	79 °F	Inject		1,033 oz.
23	9/24/11	8:14 AM	994 psig	71 °F	74 °F	79 °F	Inject		1,216 oz.
24	9/24/11	8:15 AM	1,004 psig	71 °F	74 °F	79 °F	Inject		972 oz.
25	9/24/11	8:16 AM	1,014 psig	71 °F	74 °F	79 °F	Inject		1,033 oz.
26	9/24/11	8:17 AM	1,024 psig	71 °F	74 °F	79 °F	Inject		1,155 oz.
27	9/24/11	8:18 AM	1,034 psig	71 °F	74 °F	79 °F	Inject		1,094 oz.
28	9/24/11	8:19 AM	1,044 psig	71 °F	74 °F	79 °F	Inject		1,033 oz.
29	9/24/11	8:20 AM	1,054 psig	71 °F	74 °F	79 °F	Inject		1,155 oz.
30	9/24/11	8:21 AM	1,064 psig	71 °F	74 °F	79 °F	Inject		1,094 oz.
31	9/24/11	8:22 AM	1,074 psig	71 °F	74 °F	79 °F	Inject		1,094 oz.
32	9/24/11	8:23 AM	1,084 psig	71 °F	74 °F	79 °F	Inject		1,094 oz.
33	9/24/11	8:24 AM	1,094 psig	71 °F	74 °F	79 °F	Inject		1,094 oz.
34	9/24/11	8:25 AM	1,104 psig	71 °F	74 °F	79 °F	Inject		1,094 oz.
35	9/24/11	8:26 AM	1,114 psig	71 °F	74 °F	79 °F	Inject		1,155 oz.
36	9/24/11	8:27 AM	1,124 psig	71 °F	74 °F	79 °F	Inject		1,094 oz.
37	9/24/11	8:28 AM	1,134 psig	71 °F	74 °F	79 °F	Inject		1,094 oz.
38	9/24/11	8:29 AM	1,136 psig	71 °F	74 °F	79 °F	Inject		182 oz.
39	9/24/11	8:30 AM	1,136 psig	71 °F	75 °F	79 °F	On Test		
40	9/24/11	8:40 AM	1,135 psig	71 °F	75 °F	79 °F			
41	9/24/11	8:50 AM	1,135 psig	72 °F	75 °F	79 °F			
42	9/24/11	9:00 AM	1,135 psig	72 °F	75 °F	79 °F	End Spike		
43	9/24/11	9:25 AM	1,040 psig	73 °F	75 °F	79 °F		10,336 oz.	



Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	41474054 - T75
Construction Co.	Snelson	Job Number	41474005 -T75
Testing Co.	Milbar hydro-test inc.	Project No.	FY12-112
Test Section	PG&E T-75 L-300A1, MP 156.4 - 157.86		
File Name	RCP 61362 - T-75, L-300A1, MP 156.4 - 157.86		

Date 24-Sep-11

Test Log

Log No.	Test Period		Test Pressure	Temperature °F			Remarks		
	Date	Time		Ambient	Pipe		Comment	Bleed	Inject
					Unrestrained	Restrained			
44	9/24/11	9:30 AM	1,040 psig	73 °F	76 °F	79 °F	Warm		
45	9/24/11	9:45 AM	1,040 psig	74 °F	77 °F	79 °F			
46	9/24/11	10:00 AM	1,040 psig	75 °F	78 °F	79 °F			
47	9/24/11	10:15 AM	1,041 psig	76 °F	79 °F	80 °F			
48	9/24/11	10:30 AM	1,041 psig	78 °F	80 °F	80 °F			
49	9/24/11	10:45 AM	1,042 psig	78 °F	81 °F	80 °F			
50	9/24/11	11:00 AM	1,042 psig	79 °F	81 °F	80 °F			
51	9/24/11	11:15 AM	1,043 psig	80 °F	82 °F	80 °F			
52	9/24/11	11:30 AM	1,043 psig	80 °F	83 °F	80 °F			
53	9/24/11	11:45 AM	1,043 psig	82 °F	83 °F	80 °F			
54	9/24/11	12:00 PM	1,044 psig	83 °F	84 °F	80 °F			
55	9/24/11	12:15 PM	1,044 psig	83 °F	85 °F	80 °F			
56	9/24/11	12:30 PM	1,045 psig	85 °F	85 °F	80 °F			
57	9/24/11	12:45 PM	1,045 psig	86 °F	85 °F	80 °F	Warm		
58	9/24/11	1:00 PM	1,046 psig	89 °F	86 °F	80 °F			
59	9/24/11	1:15 PM	1,046 psig	90 °F	86 °F	80 °F			
60	9/24/11	1:30 PM	1,047 psig	90 °F	87 °F	80 °F			
61	9/24/11	1:45 PM	1,047 psig	90 °F	87 °F	80 °F			
62	9/24/11	2:00 PM	1,048 psig	91 °F	87 °F	80 °F			
63	9/24/11	2:15 PM	1,048 psig	91 °F	87 °F	80 °F			
64	9/24/11	2:30 PM	1,048 psig	91 °F	86 °F	80 °F			
65	9/24/11	2:45 PM	1,049 psig	93 °F	86 °F	80 °F			
66	9/24/11	3:00 PM	1,049 psig	94 °F	85 °F	80 °F			
67	9/24/11	3:15 PM	1,050 psig	95 °F	85 °F	80 °F			
68	9/24/11	3:30 PM	1,050 psig	95 °F	85 °F	80 °F			
69	9/24/11	3:45 PM	1,050 psig	95 °F	85 °F	80 °F			
70	9/24/11	4:00 PM	1,051 psig	95 °F	85 °F	80 °F			
71	9/24/11	4:15 PM	1,051 psig	95 °F	86 °F	80 °F			
72	9/24/11	4:30 PM	1,051 psig	95 °F	86 °F	80 °F			
73	9/24/11	4:45 PM	1,052 psig	94 °F	86 °F	80 °F			
74	9/24/11	5:00 PM	1,052 psig	93 °F	85 °F	80 °F	End of Test		

Spike Test

39,385.6 oz.

Hydrostatic Test

10,336.0 oz.

Were leaks observed during the test period?

Exposed and buried pipe, no leaks observed.

High Test Pressure:	1,136 psig
Low Test Pressure:	1,040 psig



Pipe Segment Volume Calculations

Company	Pacific Gas and Electric Company	Job Number	41474054 - T75
Construction Co.	Snelson	Job Number	41474005 - T75
Hydro. Test Co.	Milbar hydro-test inc.	Project No.	FY12-112
Test Section	PG&E T-75 L-300A1, MP 156.4 - 157.86	WATER	
File Name	RCP 61362 - T-75, L-300A1, MP 156.4 - 157.86		

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	38 ft		32 ft						
Length Restrained		7,662 ft							
Temperature -- On Test	75 °F	79 °F	75.0 °F						
Temperature -- End of Test	85 °F	80 °F	85.0 °F						
Pressure -- On Test	1,136 psig	1,136 psig	1,136 psig						
Pressure -- End of Test	1,052 psig	1,052 psig	1,052 psig						

Unrestrained Pipe									
Sum:	Vo	1,785.00 gal	Vip1	1,792.91 gal	Vip2	1,789.78 gal			
		228,479 oz.		229,493 oz.		229,092 oz.			
Vo Unrestrained	969 gal		816 gal						
Fwp 1	1.003483		1.003483						
Fpp 1	1.002367		1.002367						
Fpt 1	1.000273		1.000273						
Fwt 1	1.001688		1.001688						
Fpwt 1 = Fpt/Fwt	0.998587		0.998587						
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	973.30 gal		819.62 gal						
Fwp 2	1.003224		1.003224						
Fpp 2	1.002192		1.002192						
Fpt 2	1.000455		1.000455						
Fwt 2	1.003192		1.003192						
Fpwt = Fpt/Fwt	0.997272		0.997272						
Vtp = Vo(Fwp)(Fpp)(Fpwt)	971.59 gal		818.18 gal						

Restrained Pipe									
Sum:	Vo	195,380.54 gal	Vip1	196,015.28 gal	Vip2	195,911.18 gal			
		25,008,710 oz.		25,089,956 oz.		25,076,632 oz.			
Vo Unrestrained		195,381 gal							
Fwp 1		1.003483							
Fpp 1		1.001791							
Fpt 1		1.000230							
Fwt 1		1.002255							
Fpwt 1 = Fpt/Fwt		0.997979							
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)		196,015 gal							
Fwp 2		1.003224							
Fpp 2		1.001688							
Fpt 2		1.000242							
Fwt 2		1.002418							
Fpwt = Fpt/Fwt		0.997829							
Vtp = Vo(Fwp)(Fpp)(Fpwt)		195,911 gal							

Combined Pipe									
Sum:	Vo	197,165.54 gal	Vip1	197,808.19 gal	Vip2	197,700.96 gal			
		25,237,189 oz.		25,319,449 oz.		25,305,723 oz.			



Pipe Segment Volume Allowance Calculations

Company	Pacific Gas and Electric Company	Job Number	41474054 - T75
Construction Co.	Snelson	Job Number	41474005 - T75
Hydro. Test Co.	Milbar hydro-test inc.	Project No.	FY12-112
Test Section	PG&E T-75 L-300A1, MP 156.4 - 157.86		WATER
File Name	RCP 61362 - T-75, L-300A1, 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 Unstrained	38.00 ft		32.00 ft
Length Restrained		7.662 ft	
Temperature -- On Test	79 °F	79 °F	79 °F
Temperature -- End of Test	80 °F	80 °F	80 °F
Pressure -- On Test	1,094 psig	1,094 psig	1,094 psig
Pressure -- End of Test	1,094 psig	1,094 psig	1,094 psig

Unrestrained Pipe

Sum:	Vo	1,785.00 gal 228,479 oz.	Vip1	1,791.64 gal 229,330 oz.	Vip2	1,791.39 gal 229,297 oz.
Vo Unrestrained	969 gal					816 gal
Fwp 1	1.003353					1.003353
Fpp 1	1.002279					1.002279
Fpt 1	1.000346					1.000346
Fwt 1	1.002255					1.002255
Fpwt 1 = Fpt/Fwt	0.998095					0.998095
Vip 1 = Vo(Fwp)(Fpp)(Fpwt)	972.61 gal					819.04 gal
Fwp 2	1.003353					1.003353
Fpp 2	1.002279					1.002279
Fpt 2	1.000364					1.000364
Fwt 2	1.002418					1.002418
Fpwt = Fpt/Fwt	0.997951					0.997951
Vip = Vo(Fwp)(Fpp)(Fpwt)	972.47 gal					818.92 gal

Restrained Pipe

Sum:	Vo	195,380.54 gal 25,008,710 oz.	Vip1	195,977.58 gal 25,085,130 oz.	Vip2	195,948.87 gal 25,081,455 oz.
Vo Restrained		195,381 gal				
Fwp 1		1.003353				
Fpp 1		1.001728				
Fpt 1		1.000230				
Fwt 1		1.002255				
Fpwt 1 = Fpt/Fwt		0.997979				
Vip 1 = Vo(Fwp)(Fpp)(Fpwt)		195,978 gal				
Fwp 2		1.003353				
Fpp 2		1.001731				
Fpt 2		1.000242				
Fwt 2		1.002418				
Fpwt = Fpt/Fwt		0.997829				
Vip = Vo(Fwp)(Fpp)(Fpwt)		195,949 gal				

Combined Pipe

Sum:	Vo	197,165.54 gal 25,237,189 oz.	Vip1	197,769.23 gal 25,314,461 oz.	Vip2	197,740.25 gal 25,310,752 oz.
1 °F Change	28.97 gal					3,708.48 oz.



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	38 ft	Unrestrained	26.000 in.	0.5000 in.	API5L-X65	2,500 psig	Steel	Arc Weld	DSAW
2	7,662 ft	Restrained	26.000 in.	0.5000 in.	API5L-Grade B	1,346 psig	Steel	Arc Weld	SM
3	32 ft	Unrestrained	26.000 in.	0.5000 in.	API5L-X42	1,615 psig	Steel	Arc Weld	DSAW

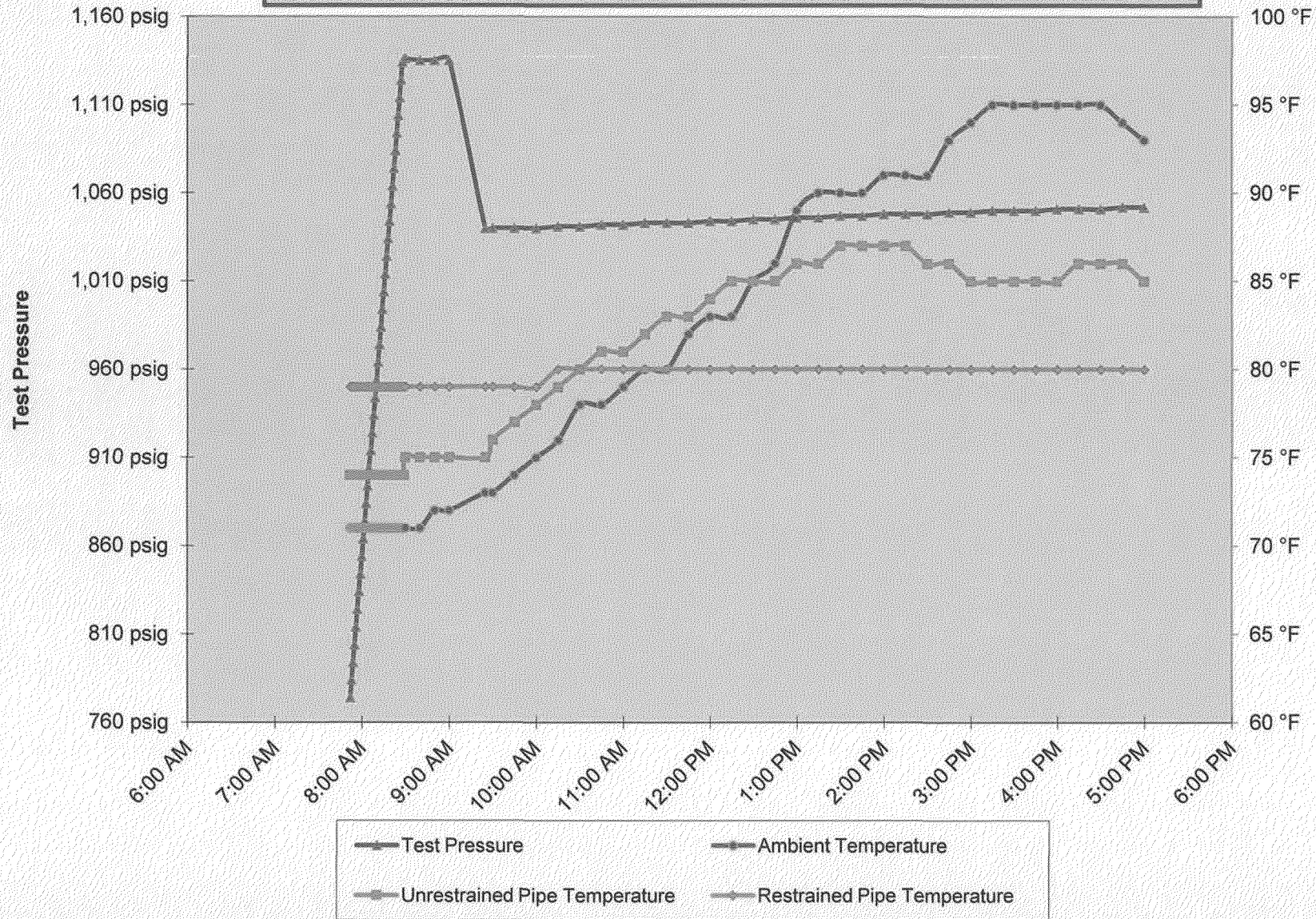
Hydrostatic Test Project Owner & Participants

Owner Company	Pacific Gas and Electric Company	Job Number
Address	350 N. Wiget Walnut Creek, CA 94598 Attention: Redacted	41474054 - T75
Construction Company	Snelson	Job Number
Address	601 West State Street Sedro-Wooley, WA 98284 Attention: Redacted	41474005 -T75
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-75 L-300A1, MP 156.4 - 157.86 From: 0+00 To: 77+22	
File Name	RCP 61362 - T-75, L-300A1 MP 156.4 - 157.86	

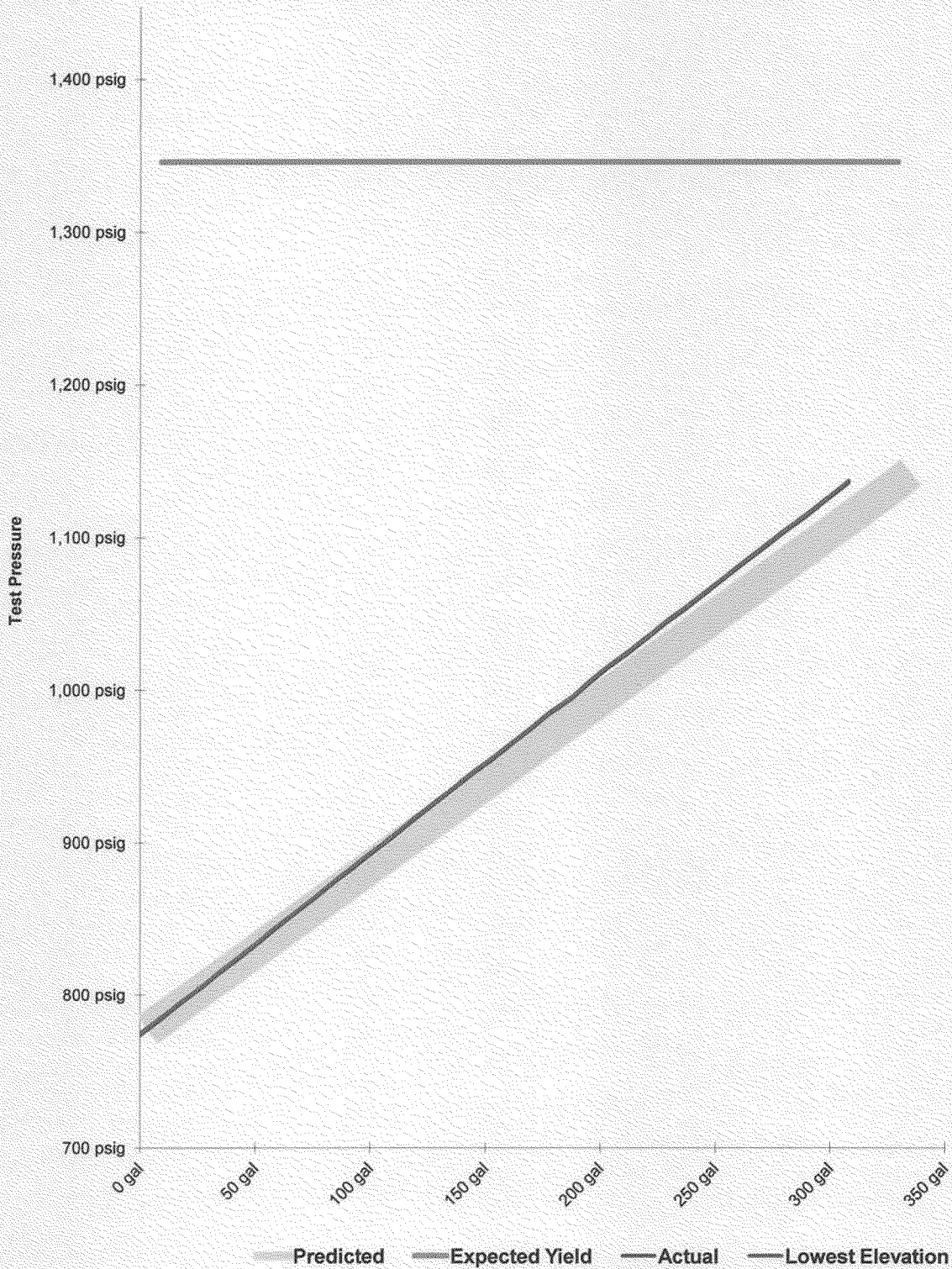
Part II – Test Data (TO BE PREPARED BY PERSON SUPERVISING TEST AT TIME OF TEST)				Note: Minimum test pressure and duration are not to be changed without written approval.			
Time and Date Test Pressure Reached	9/24/11 8:30 AM	Elevation at Test Point	2,194 ft	Min. Required Test Press At Test Point (1)	1,032.87 psig	Max. Allowable Test Press at Test Point (4)	1,138.70 psig
Time and Date Test Ended	9/24/11 5:00 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 30 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

RCP

PG&E T-75 L-300A1, MP 156.4 - 157.86



Spike Pressure Test
Stress Strain Curve -- PG&E T-75 L-300A1, MP 156.4 - 157.86

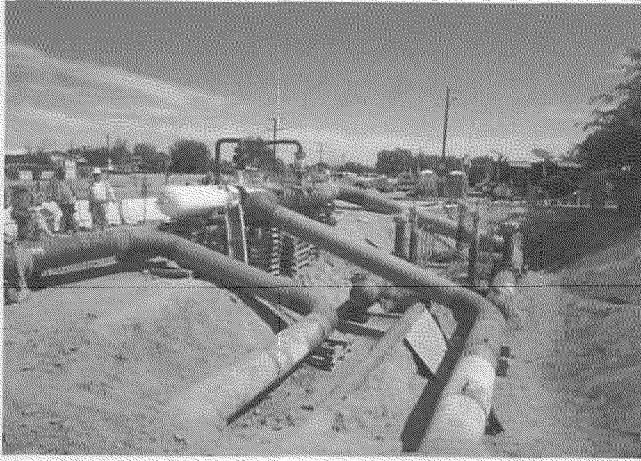




Actual Pressure Volume Plot Data			Predicted Pressure Volume Plot Data	Slope		Spike Pressure Test Stress Strain Curve -- PG&E T-75 L-300A1, MP 156.4 - 157.86	
Pressure	Strokes	Gallons	Gallons	Actual	Predicted		
774 psig	0	0.00 gal		0	0.000	Pump gal per stroke	0.551 gal/stroke
784 psig	19	9.02 gal	9.08 gal	0.902	0.908	Pump Piston Diameter	3.000 in
794 psig	37	17.57 gal	18.17 gal	0.855	0.908	Pump Piston Stroke	6.00 in
804 psig	55	26.12 gal	27.25 gal	0.855	0.908	Pump Cylinders	3 ea
814 psig	72	34.19 gal	36.34 gal	0.807	0.909	Volume check gal per stroke	0.475 gal/stroke
824 psig	90	42.74 gal	45.42 gal	0.855	0.909	Volume Released (gallons)	8.50 gal
834 psig	108	51.28 gal	54.51 gal	0.855	0.909	Pressure Reduced (psi)	10 psi
844 psig	125	59.36 gal	63.60 gal	0.807	0.909	Maximum2	350 gal
854 psig	143	67.90 gal	72.68 gal	0.855	0.909	Minimum2	0 gal
864 psig	161	76.45 gal	81.77 gal	0.855	0.909	Maximum1	1,447 psig
874 psig	178	84.52 gal	90.86 gal	0.807	0.909	Minimum1	700 psig
884 psig	196	93.07 gal	99.95 gal	0.855	0.909	Gallons/Stroke Used	0.475 gal/stroke
894 psig	214	101.62 gal	109.04 gal	0.855	0.909	Predicted Gallons/Stroke	0.508 gal/stroke
904 psig	232	110.16 gal	118.13 gal	0.855	0.909	Pressure Increment	10 psi
914 psig	249	118.24 gal	127.22 gal	0.807	0.909		
924 psig	267	126.78 gal	136.31 gal	0.855	0.909	Max Pressure	1,136 psig
934 psig	285	135.33 gal	145.40 gal	0.855	0.909		
944 psig	302	143.40 gal	154.50 gal	0.807	0.909	Buried Pipe Temperature	79 °F
954 psig	321	152.43 gal	163.59 gal	0.902	0.909		
964 psig	339	160.97 gal	172.68 gal	0.855	0.909	Exposed Pipe Temperature	75 °F
974 psig	357	169.52 gal	181.78 gal	0.855	0.909		
984 psig	374	177.59 gal	190.87 gal	0.807	0.909		
994 psig	394	187.09 gal	199.97 gal	0.950	0.910		
						ASME B31.8 Appendix N-5	
1,004 psig	410	194.69 gal	209.06 gal	0.760	0.910	Average Actual Elastic Slope	0.847
1,014 psig	427	202.76 gal	218.16 gal	0.807	0.910		
1,024 psig	446	211.78 gal	227.26 gal	0.902	0.910	Average Predicted Elastic Slope	0.909
1,034 psig	464	220.33 gal	236.35 gal	0.855	0.910		
1,044 psig	481	228.40 gal	245.45 gal	0.807	0.910	Code Prescribed Minimum Yield Slope (less 10%) B31.8 N-5 (c)(2)	1.609
1,054 psig	500	237.42 gal	254.55 gal	0.902	0.910		
1,064 psig	518	245.97 gal	263.65 gal	0.855	0.910	Established Minimum Yield Pressure B31.8 N-5 (c)(2)	1,136 psig
1,074 psig	536	254.52 gal	272.75 gal	0.855	0.910		
1,084 psig	554	263.06 gal	281.85 gal	0.855	0.910	Maximum Allowed Volume (After Slope Deviation) B31.8 N-5 (c)(2)	418 gal
1,094 psig	572	271.61 gal	290.95 gal	0.855	0.910		
1,104 psig	590	280.16 gal	300.05 gal	0.855	0.910	Volume (After Slope Deviation) B31.8 N-5 (c)(2)	0 gal
1,114 psig	609	289.18 gal	309.15 gal	0.902	0.910		
1,124 psig	627	297.73 gal	318.26 gal	0.855	0.910		
1,134 psig	645	306.28 gal	327.36 gal	0.855	0.910		
1,136 psig	648	307.70 gal	329.18 gal	0.712	0.910		
1,136 psig		307.70 gal	329.18 gal	0.000	0.000		
1,136 psig		307.70 gal	329.18 gal	0.000	0.000		
1,136 psig		307.70 gal	329.18 gal	0.000	0.000		
1,136 psig		307.70 gal	329.18 gal	0.000	0.000		
1,136 psig		307.70 gal	329.18 gal	0.000	0.000		
1,136 psig		307.70 gal	329.18 gal	0.000	0.000		
1,136 psig		307.70 gal	329.18 gal	0.000	0.000		

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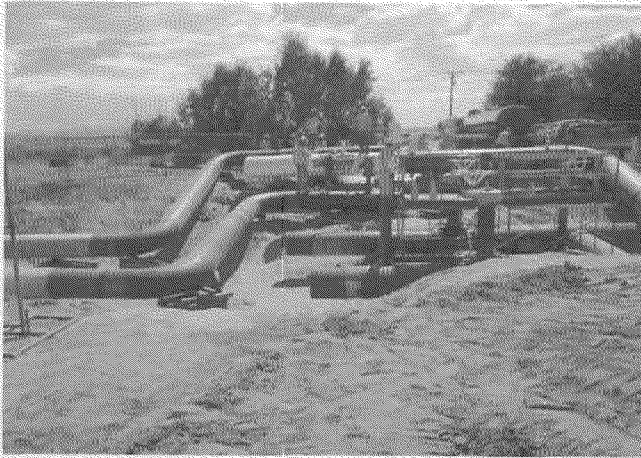
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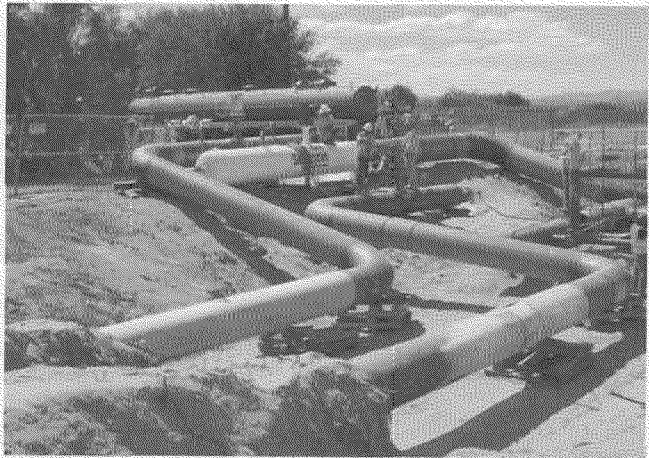
test 75 -Loc. B testheads for t-75 and t-55



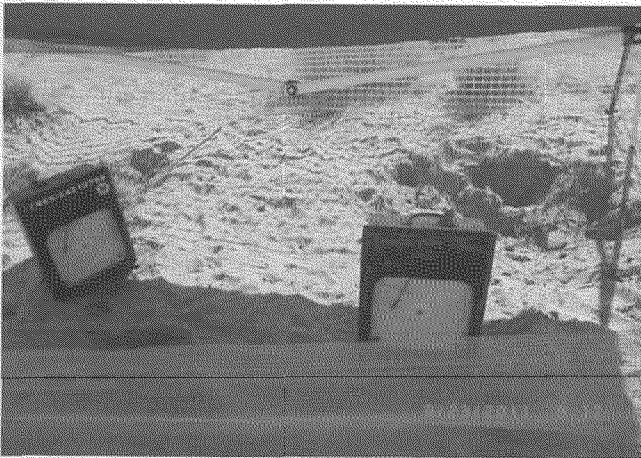
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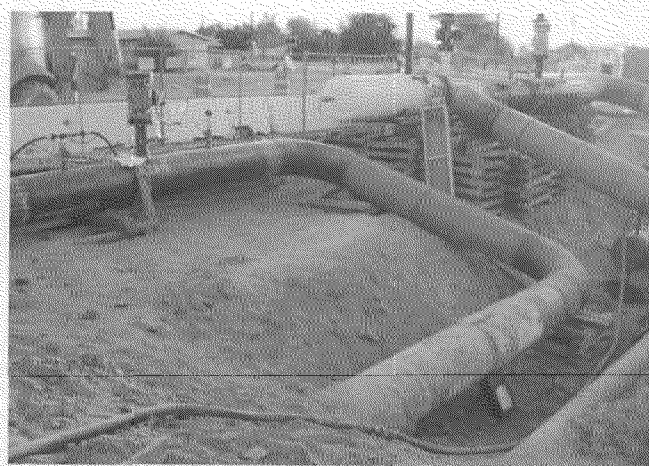
Test - 75 location A testheads



test 75 location A test heads



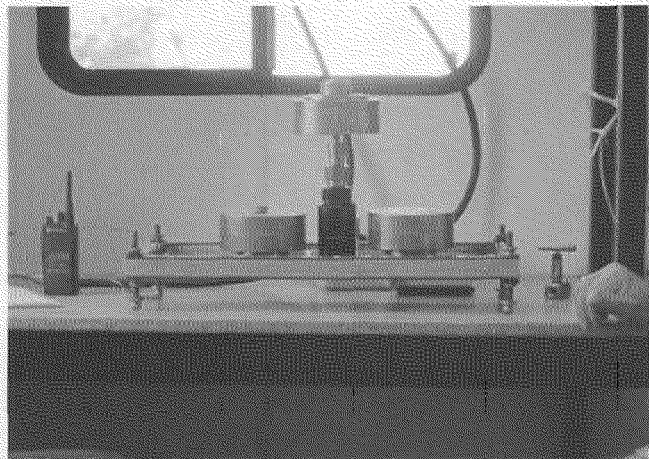
test 75 -remote restrained temp. recorder @loc. A



test 75 Location B dual temp recorder restrained and unrestrained pipe temp.



test 75 -loc.B Milbar test pump truck



test 75 - deadweights in service during test,loc.B



test 75 location B test head