



RCP, Inc

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

Redacted

November 15, 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 -- 41587446-B
Construction Contractor: Snelson -- 41474005 -T118-B
Test Section: PG&E T-118 B , L-300A , MP-241.6 - 243.74
Test Date: November 15, 2011
Certificate Number: RCP 61362 - T-118 B, L-300A, MP- 241.6 - 243.74

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 2).

This hydrostatic test was completed successfully. Pressure was maintained on the test facilities in excess of 8.18 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 1009 psig and the MAOP per 49 CFR Part 192, Subpart J can be as high as 807 psig. The MAOP established by this test is sufficient to qualify for Pacific Gas and Electric Company's desired MAOP of 803 psig.

Pressure increased 3 psi during the test. No fluid was intentionally injected or released from the test section. Net corrected volumetric change from beginning of the test to the end of the test is calculated to be 3,659.16 ounces, loss, which is equivalent to a 0.77 °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,

Redacted

cc. file



Hydrostatic Test Certification

Company	Pacific Gas and Electric Company	Job Number	41587446-B
Construction Co.	Snelson	Job Number	41474005-T118-B
Hydro. Test Co.	Milbar hydro-test Inc.	Project No.	FY12-112
Test Section	PG&E T-118 B, L-300A, MP-241.6 - 243.74		
File Name	RCP 61362 - T-118 B, L-300A, MP- 241.6 - 243.74		

Hydrostatic Test Pressure

APPLICABLE CODE FOR CERTIFICATION: Code of Federal Regulations, Title 49, Part 192, Subpart J (Class 2) Test Date: 15-Nov-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-118 B, L-300A, MP-241.6 - 243.74
 From: 106+98 To: 219+16

Pipe Data

Segment	Length	Diameter	Wall Thickness	Specification	100% SMYS
1	26 ft	34.000 in.	0.505 in.	API5L-X80, DSAW, Arc Weld, Steel	1,782 psi
2	11,176 ft	34.000 in.	0.375 in.	API5L-X52, DSAW, Arc Weld, Steel	1,147 psi
3	97 ft	34.000 in.	0.500 in.	API5L-X46, DSAW, Arc Weld, Steel	1,353 psi
4	40 ft	34.000 in.	0.500 in.	API5L-X65, DSAW, Arc Weld, Steel	1,912 psi
5	105 ft	12.750 in.	0.500 in.	API5L-Grade B, SM, Arc Weld, Steel	2,745 psi
6	49 ft	1.315 in.	0.113 in.	API5L-Grade B, SM, Arc Weld, Steel	6,015 psi

Initial Test Conditions

Pressure at Test Point:	1,094 psig	Date/Time:	11/15/11 10:34 AM	Pipe Temperature	
Ambient Temperature:	49.0 °F	Elevation @ Test Point:	4,050.0 ft	Unrestrained:	52.0 °F
Pressure @ High Point (Cal/Measure):	1,009 psig	Elevation @ High Point:	4,246.0 ft	Restrained:	58.0 °F
Pressure @ Low Point (Cal/Measure):	1,135 psig	Elevation @ Low Point:	3,956.0 ft	Location:	106+98
				Location:	219+16
				Location:	119+35

Final Test Conditions

Pressure at Test Point:	1,097 psig	Date/Time:	11/15/11 6:45 PM	Pipe Temperature	
Ambient Temperature:	50.0 °F	Elevation @ Test Point:	4,050.0 ft	Unrestrained:	54.0 °F
Pressure @ High Point (Cal/Measure):	1,012 psig	Elevation @ High Point:	4,246.0 ft	Restrained:	59.0 °F
Pressure @ Low Point (Cal/Measure):	1,138 psig	Elevation @ Low Point:	3,956.0 ft	Location:	106+98
				Location:	219+16
				Location:	119+35

Total Fluid Injected:
 Total Fluid Withdrawn:

Volume loss

Net Change in Volume of the Test Section ± (+ Gain, - Loss): (3,659.16) oz loss (0.0055)% (0.766) °F equivalent

Test Duration: 8.18 hours

Minimum Test Pressure:	1,094 psig	1,009 psig	1,135 psig	
Maximum Test Pressure:	1,097 psig	1,012 psig	1,138 psig	
% SMYS:		88.2%	99.2%	
Test Segment Observed % SMYS:	Minimum	18.2%	Maximum	99.2%

Minimum Test Pressure (Calculated/Measured): 1,009 psig

Maximum Allowable Operating Pressure: DOT Part 192 Test Factor= 1.25 807 psig

The MAOP established by this test is sufficient to qualify for Pacific Gas and Electric Company's desired MAOP of 803 psig.

Were leaks observed?	No	Explain:
Acceptable Hydrostatic Test?	Yes	No leaks were observed during the test period. The test section included 11,429 feet of buried and 66 feet of exposed pipe. Pressure gained 3 psi during the test. The buried pipe segment gained 1°F fluid temperature and the exposed pipe segment gained 2°F. No fluid was intentionally injected or released from the test section. Net corrected volumetric change from beginning of the test to the end of the test is calculated to be 3,659.16 ounces, loss, which is equivalent to a 0.77 °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

Redacted

15-Nov-11



Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	41587446-B
Construction Co.	Snelson	Job Number	41474005-T118 B
Testing Co.	Milbar hydro-test inc.	Project No.	FY12-112
Test Section	PG&E T-118 B, L-300A, MP-241.6 - 243.74		
File Name	RCP 61362 - T-118 B, L-300A, MP- 241.6 - 243.74		

Date		15-Nov-11		Test Log						
Log No.	Test Period		Test Pressure	Temperature °F			Remarks			
	Date	Time		Ambient	Pipe		Comment	Bleed	Inject	
				Unrestrained	Restrained					
1	11/15/11	10:07 AM	817 psig	49 °F	52 °F	58 °F				
2	11/15/11	10:08 AM	827 psig	49 °F	52 °F	58 °F	Inject		4,019 oz.	
3	11/15/11	10:09 AM	837 psig	49 °F	52 °F	58 °F	Inject		4,089 oz.	
4	11/15/11	10:10 AM	847 psig	49 °F	52 °F	58 °F	Inject		4,089 oz.	
5	11/15/11	10:11 AM	857 psig	49 °F	52 °F	58 °F	Inject		4,160 oz.	
6	11/15/11	10:12 AM	867 psig	49 °F	52 °F	58 °F	Inject		4,019 oz.	
7	11/15/11	10:13 AM	877 psig	49 °F	52 °F	58 °F	Inject		4,019 oz.	
8	11/15/11	10:14 AM	887 psig	49 °F	52 °F	58 °F	Inject		4,019 oz.	
9	11/15/11	10:15 AM	897 psig	49 °F	52 °F	58 °F	Inject		4,160 oz.	
10	11/15/11	10:16 AM	907 psig	49 °F	52 °F	58 °F	Inject		3,948 oz.	
11	11/15/11	10:17 AM	917 psig	49 °F	52 °F	58 °F	Inject		4,089 oz.	
12	11/15/11	10:18 AM	927 psig	49 °F	52 °F	58 °F	Inject		4,301 oz.	
13	11/15/11	10:19 AM	937 psig	49 °F	52 °F	58 °F	Inject		3,878 oz.	
14	11/15/11	10:20 AM	947 psig	49 °F	52 °F	58 °F	Inject		4,230 oz.	
15	11/15/11	10:21 AM	957 psig	49 °F	52 °F	58 °F	Inject		4,019 oz.	
16	11/15/11	10:22 AM	967 psig	49 °F	52 °F	58 °F	Inject		4,230 oz.	
17	11/15/11	10:23 AM	977 psig	49 °F	52 °F	58 °F	Inject		4,089 oz.	
18	11/15/11	10:24 AM	987 psig	49 °F	52 °F	58 °F	Inject		4,019 oz.	
19	11/15/11	10:25 AM	997 psig	49 °F	52 °F	58 °F	Inject		4,230 oz.	
20	11/15/11	10:26 AM	1,007 psig	49 °F	52 °F	58 °F	Inject		4,089 oz.	
21	11/15/11	10:27 AM	1,017 psig	49 °F	52 °F	58 °F	Inject		4,160 oz.	
22	11/15/11	10:28 AM	1,027 psig	49 °F	52 °F	58 °F	Inject		4,160 oz.	
23	11/15/11	10:29 AM	1,037 psig	49 °F	52 °F	58 °F	Inject		3,948 oz.	
24	11/15/11	10:30 AM	1,047 psig	49 °F	52 °F	58 °F	Inject		4,160 oz.	
25	11/15/11	10:31 AM	1,057 psig	49 °F	52 °F	58 °F	Inject		4,230 oz.	
26	11/15/11	10:32 AM	1,067 psig	49 °F	52 °F	58 °F	Inject		4,089 oz.	
27	11/15/11	10:33 AM	1,077 psig	49 °F	52 °F	58 °F	Inject		4,230 oz.	
28	11/15/11	10:34 AM	1,087 psig	49 °F	52 °F	58 °F	Inject		3,948 oz.	
29	11/15/11	10:34 AM	1,094 psig	49 °F	52 °F	58 °F	Inject		2,891 oz.	
30	11/15/11	10:34 AM	1,094 psig	49 °F	52 °F	58 °F	On Test			
31	11/15/11	10:45 AM	1,094 psig	50 °F	52 °F	59 °F				
32	11/15/11	11:00 AM	1,094 psig	51 °F	53 °F	59 °F				
33	11/15/11	11:15 AM	1,094 psig	52 °F	54 °F	59 °F				
34	11/15/11	11:30 AM	1,094 psig	53 °F	54 °F	59 °F				
35	11/15/11	11:45 AM	1,094 psig	54 °F	54 °F	59 °F	Cool			
36	11/15/11	12:00 PM	1,094 psig	54 °F	56 °F	59 °F				
37	11/15/11	12:15 PM	1,094 psig	54 °F	56 °F	59 °F				
38	11/15/11	12:30 PM	1,094 psig	55 °F	56 °F	59 °F	Cloud Cover			
39	11/15/11	12:45 PM	1,095 psig	56 °F	56 °F	59 °F				
40	11/15/11	1:00 PM	1,095 psig	56 °F	56 °F	59 °F				
41	11/15/11	1:15 PM	1,095 psig	56 °F	56 °F	59 °F				
42	11/15/11	1:30 PM	1,095 psig	56 °F	56 °F	59 °F				
43	11/15/11	1:45 PM	1,095 psig	56 °F	56 °F	59 °F				
44	11/15/11	2:00 PM	1,096 psig	56 °F	56 °F	59 °F				
45	11/15/11	2:15 PM	1,096 psig	56 °F	56 °F	59 °F				
46	11/15/11	2:30 PM	1,096 psig	57 °F	56 °F	59 °F	Cool			
47	11/15/11	2:45 PM	1,096 psig	57 °F	56 °F	59 °F				



Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	41587446-B
Construction Co.	Snelson	Job Number	41474005 - T118 B
Testing Co.	Milbar hydro-test inc.	Project No.	FY12-112
Test Section	PG&E T-118 B , L-300A , MP-241.6 - 243.74		
File Name	RCP 61362 - T-118 B, L-300A, MP- 241.6 - 243.74		

Date	15-Nov-11	<h2>Test Log</h2>
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Log No.	Test Period		Test Pressure	Temperature °F			Remarks		
	Date	Time		Ambient	Pipe		Comment	Bleed	Inject
					Unrestrained	Restrained			
48	11/15/11	3:00 PM	1,096 psig	57 °F	56 °F	60 °F	Clear		
49	11/15/11	3:15 PM	1,096 psig	57 °F	56 °F	60 °F			
50	11/15/11	3:30 PM	1,096 psig	57 °F	55 °F	59 °F			
51	11/15/11	3:45 PM	1,096 psig	56 °F	55 °F	59 °F			
52	11/15/11	4:00 PM	1,096 psig	56 °F	55 °F	59 °F			
53	11/15/11	4:15 PM	1,096 psig	55 °F	55 °F	59 °F			
54	11/15/11	4:30 PM	1,096 psig	54 °F	55 °F	59 °F			
55	11/15/11	4:45 PM	1,096 psig	53 °F	55 °F	59 °F			
56	11/15/11	5:00 PM	1,097 psig	52 °F	54 °F	59 °F	Cool		
57	11/15/11	5:15 PM	1,097 psig	52 °F	54 °F	59 °F			
58	11/15/11	5:30 PM	1,097 psig	51 °F	54 °F	59 °F			
59	11/15/11	5:45 PM	1,097 psig	51 °F	54 °F	59 °F			
60	11/15/11	6:00 PM	1,097 psig	51 °F	54 °F	59 °F			
61	11/15/11	6:15 PM	1,097 psig	51 °F	54 °F	59 °F			
62	11/15/11	6:30 PM	1,097 psig	50 °F	54 °F	59 °F			
63	11/15/11	6:45 PM	1,097 psig	50 °F	54 °F	59 °F	End of Test		
							Spike Test		
							Hydrostatic Test		
Were leaks observed during the test period?				Exposed and buried pipe, no leaks observed.			High Test Pressure:	1,097 psig	
							Low Test Pressure:	1,094 psig	



Pipe Segment Volume Calculations

Company	Pacific Gas and Electric Company	Job Number	41587446-B
Construction Co.	Snelson	Job Number	41474005 -T118-B
Hydro. Test Co.	Milbar hydro-test inc.	Project No.	FY12-112
Test Section	PG&E T-118 B , L-300A , MP-241.6 - 243.74	WATER	
File Name	RCP 61362 - T-118 B, L-300A, MP- 241.6 - 243.74		

General Pipe Data							
Description	Segment						
	1	2	3	4	5	6	
Restrained or Unrestrained?	Unrestrained	Restrained	Restrained	Unrestrained	Restrained	Restrained	
Outside Diameter	34.000 in.	34.000 in.	34.000 in.	34.000 in.	12.750 in.	1.315 in.	
Wall Thickness	0.505 in.	0.375 in.	0.500 in.	0.500 in.	0.500 in.	0.113 in.	
Inside Diameter	32.990 in.	33.250 in.	33.000 in.	33.000 in.	11.750 in.	1.089 in.	
Spec./Grade	API5L-X60	API5L-X52	API5L-X46	API5L-X65	API5L-Grade B	API5L-Grade B	
Length Unrestrained	26 ft			40 ft			
Length Restrained		11,178 ft	97 ft		105 ft	49 ft	
Temperature -- On Test	52 °F	58 °F	58.0 °F	52.0 °F	58.0 °F	59.0 °F	
Temperature -- End of Test	54 °F	59 °F	59.0 °F	54.0 °F	59.0 °F	59.0 °F	
Pressure -- On Test	1,094 psig	1,094 psig	1,094 psig	1,094 psig	1,094 psig	1,094 psig	
Pressure -- End of Test	1,097 psig	1,097 psig	1,097 psig	1,097 psig	1,097 psig	1,097 psig	

Unrestrained Pipe					
Vo	2,931.75 gal 375,264 oz.	Vtp1	2,951.71 gal 377,818 oz.	Vtp2	2,951.51 gal 377,793 oz.
Vo Unrestrained	1,155 gal		1,777 gal		
Fwp 1	1.003353		1.003353		
Fpp 1	1.002978		1.003009		
Fpt 1	0.999854		0.999854		
Fwt 1	0.999411		0.999411		
Fpwt 1 = Fpt/Fwt	1.000443		1.000443		
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	1,162.34 gal		1,789.36 gal		
Fwp 2	1.003363		1.003363		
Fpp 2	1.002986		1.003017		
Fpt 2	0.999891		0.999891		
Fwt 2	0.999532		0.999532		
Fpwt = Fpt/Fwt	1.000359		1.000359		
Vtp = Vo(Fwp)(Fpp)(Fpwt)	1,162.27 gal		1,789.24 gal		

Restrained Pipe					
Vo	509,107.95 gal 65,165,818 oz.	Vtp1	512,390.26 gal 65,585,953 oz.	Vtp2	512,361.87 gal 65,582,320 oz.
Vo Unrestrained		504,204 gal	4,310 gal	591 gal	2 gal
Fwp 1		1.003353	1.003353	1.003353	1.003353
Fpp 1		1.002935	1.002183	1.000773	1.000313
Fpt 1		0.999976	0.999976	0.999976	0.999976
Fwt 1		0.999819	0.999819	0.999819	0.999819
Fpwt 1 = Fpt/Fwt		1.000157	1.000157	1.000157	1.000157
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)		507,460 gal	4,334 gal	594 gal	2 gal
Fwp 2		1.003363	1.003363	1.003363	1.003363
Fpp 2		1.002947	1.002193	1.000778	1.000317
Fpt 2		0.999988	0.999988	0.999988	0.999988
Fwt 2		0.999907	0.999907	0.999907	0.999907
Fpwt = Fpt/Fwt		1.000081	1.000081	1.000081	1.000081
Vtp = Vo(Fwp)(Fpp)(Fpwt)		507,431 gal	4,334 gal	594 gal	2 gal

Combined Pipe					
Vo	512,039.71 gal 65,541,082 oz.	Vtp1	515,341.97 gal 65,963,772 oz.	Vtp2	515,313.38 gal 65,960,113 oz.



Pipe Segment Volume Allowance Calculations

Company	Pacific Gas and Electric Company	Job Number	41587446-B
Construction Co.	Snelson	Job Number	41474005-T118-B
Hydro. Test Co.	Milbar hydro-test inc.	Project No.	FY12-112
Test Section	PG&E T-118 B, L-300A, MP-241.6 - 243.74	WATER	
File Name	RCP 61362 - T-118 B, L-300A, MP- 241.6 - 243.74		

General Pipe Data

Description	Segment					
	1	2	3	4	5	6
Restrained or Unrestrained?	Unrestrained	Restrained	Restrained	Unrestrained	Restrained	Restrained
Outside Diameter	34.000 in.	34.000 in.	34.000 in.	34.000 in.	12.750 in.	1.315 in.
Wall Thickness	0.505 in.	0.375 in.	0.500 in.	0.500 in.	0.500 in.	0.113 in.
Inside Diameter	32.990 in.	33.250 in.	33.000 in.	33.000 in.	11.750 in.	1.089 in.
Spec./Grade	API5L-X60	API5L-X52	API5L-X46	API5L-X65	API5L-Grade B	API5L-Grade B
Length Unrestrained	26 ft			40 ft		
Length Restrained		11,178 ft	97 ft		105 ft	49 ft
Temperature -- On Test	52 °F	58 °F	58 °F	52 °F	58 °F	58 °F
Temperature -- End of Test	53 °F	59 °F	59 °F	53 °F	59 °F	59 °F
Pressure -- On Test	1,095 psig	1,095 psig	1,095 psig	1,095 psig	1,095 psig	1,095 psig
Pressure -- End of Test	1,095 psig	1,095 psig	1,095 psig	1,095 psig	1,095 psig	1,095 psig

Unrestrained Pipe

Vo	2,931.75 gal		Vtp1	2,951.72 gal		Vtp2	2,951.60 gal	
	375,264 oz.			377,821 oz.			377,805 oz.	
Vo Unrestrained	1,155 gal			1,777 gal				
Fwp 1	1.003356			1.003356				
Fpp 1	1.002981			1.003011				
Fpt 1	0.999854			0.999854				
Fwt 1	0.999411			0.999411				
Fpwt 1 = Fpt/Fwt	1.000443			1.000443				
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	1,162.35 gal			1,789.37 gal				
Fwp 2	1.003356			1.003356				
Fpp 2	1.002981			1.003011				
Fpt 2	0.999873			0.999873				
Fwt 2	0.999472			0.999472				
Fpwt = Fpt/Fwt	1.000401			1.000401				
Vtp = Vo(Fwp)(Fpp)(Fpwt)	1,162.30 gal			1,789.30 gal				

Restrained Pipe

Vo	509,107.95 gal		Vtp1	512,393.20 gal		Vtp2	512,355.99 gal	
	65,165,818 oz.			65,586,330 oz.			65,581,567 oz.	
Vo Restrained		504,204 gal	4,310 gal		591 gal	2 gal		
Fwp 1		1.003356	1.003356		1.003356	1.003356		
Fpp 1		1.002938	1.002185		1.000773	1.000313		
Fpt 1		0.999976	0.999976		0.999976	0.999976		
Fwt 1		0.999819	0.999819		0.999819	0.999819		
Fpwt 1 = Fpt/Fwt		1.000157	1.000157		1.000157	1.000157		
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)		507,462 gal	4,334 gal		594 gal	2 gal		
Fwp 2		1.003356	1.003356		1.003356	1.003356		
Fpp 2		1.002941	1.002189		1.000777	1.000316		
Fpt 2		0.999988	0.999988		0.999988	0.999988		
Fwt 2		0.999907	0.999907		0.999907	0.999907		
Fpwt = Fpt/Fwt		1.000081	1.000081		1.000081	1.000081		
Vtp = Vo(Fwp)(Fpp)(Fpwt)		507,426 gal	4,334 gal		594 gal	2 gal		

Combined Pipe

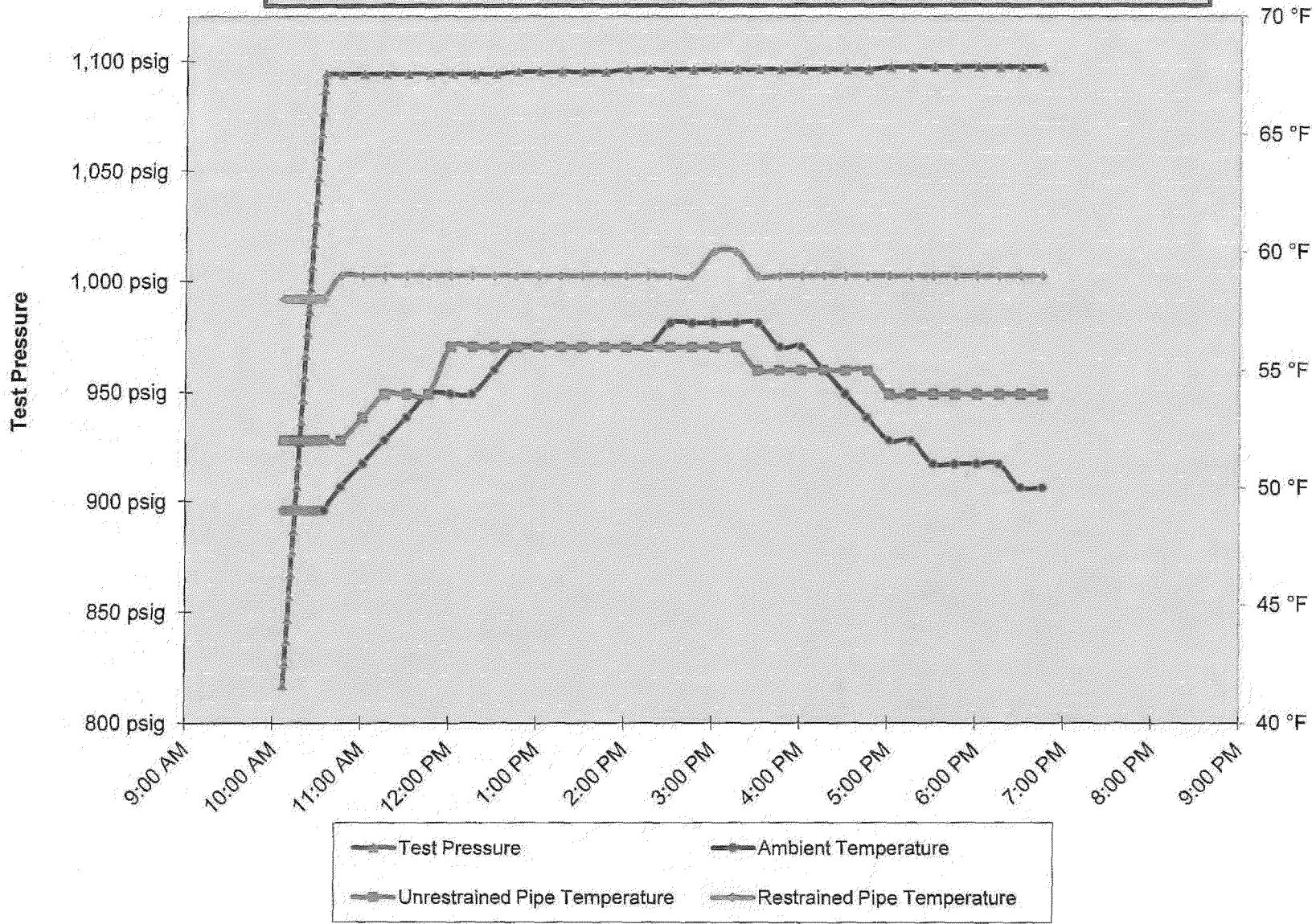
Vo	512,039.71 gal		Vtp1	515,344.93 gal		Vtp2	515,307.59 gal	
	65,541,082 oz.			65,964,150 oz.			65,959,372 oz.	
1 °F Change	37.33 gal		4,778.78 oz.					

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	26 ft	Unrestrained	34.000 in.	0.5050 in.	API5L-X60	1,782 psig	Steel	Arc Weld	DSAW
2	11,178 ft	Restrained	34.000 in.	0.3750 in.	API5L-X52	1,147 psig	Steel	Arc Weld	DSAW
3	97 ft	Restrained	34.000 in.	0.5000 in.	API5L-X46	1,353 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	105 ft	Restrained	12.750 in.	0.5000 in.	API5L-Grade B	2,745 psig	Steel	Arc Weld	SM
6	49 ft	Restrained	1.315 in.	0.1130 in.	API5L-Grade B	6,015 psig	Steel	Arc Weld	SM

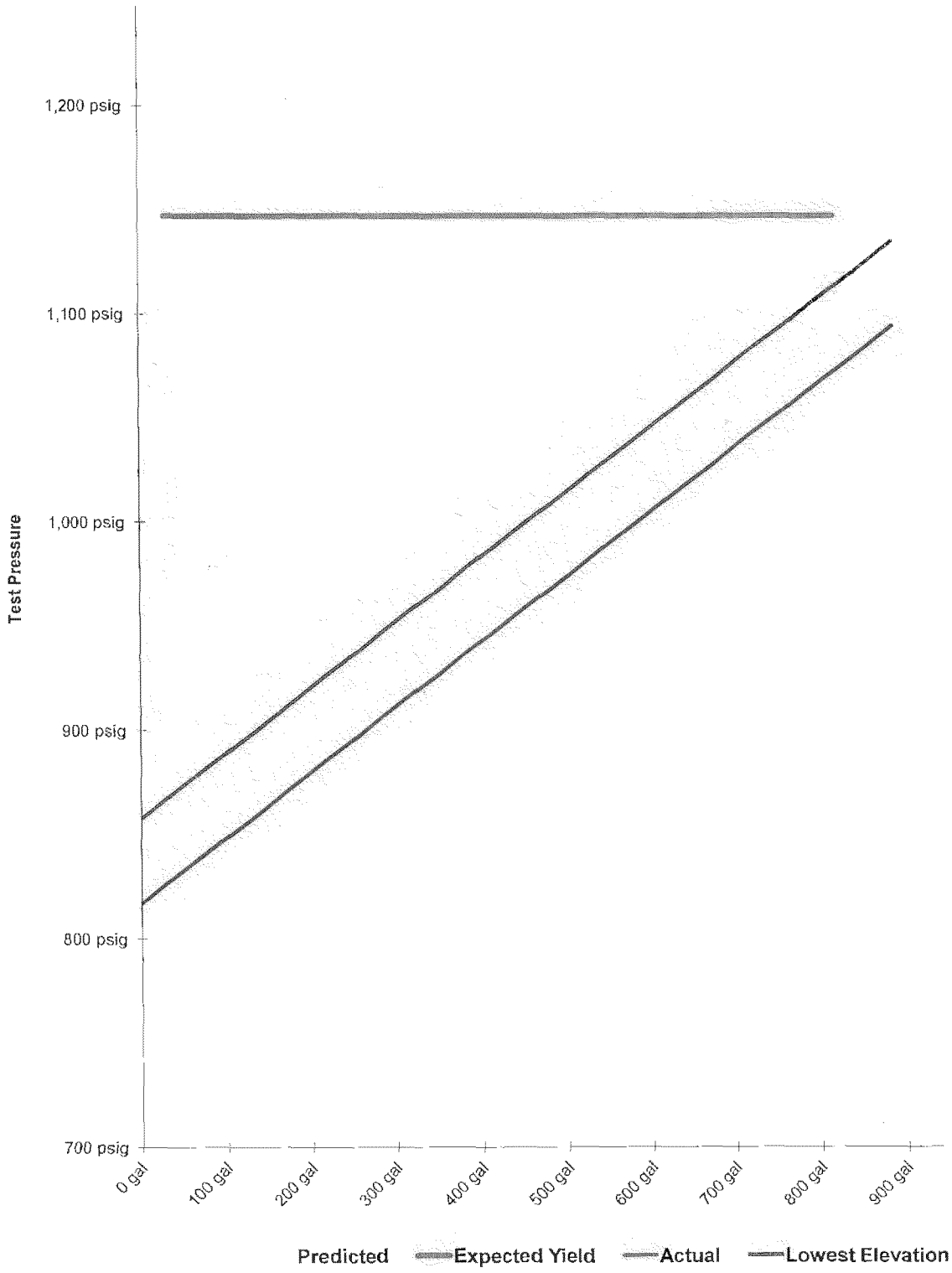
Hydrostatic Test Project Owner & Participants		
Owner Company	Pacific Gas and Electric Company	Job Number
Address	350 N. Wiget Walnut Creek, CA 94598 Attention: Redacted	41587446-B
Construction Company	Snelson	Job Number
Address	601 West State Street Sedro-Wooley, WA 98284 Attention: Redacted	41474005 -T118-B
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-118 B , L-300A , MP-241.6 - 243.74 From: 106+98 To: 219+16	
File Name	RCP 61362 - T-118 B, L-300A, MP- 241.6 - 243.74	

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	11/15/11 10:34 AM	Elevation at Test Point	4,050 ft	Min. Required Test Press At Test Point (1)	1,088.93 psig	Max. Allowable Test Press at Test Point (4)	1,104.27 psig
Time and Date Test Ended	11/15/11 6:45 PM	Max. Elevation in Test Section	4,246 ft	Min. Indicated Test Pressure (2)	1,094.00 psig	Max. Indicated Test Pressure (5)	1,097.00 psig
Actual Duration of Test	8 hours 11 minutes	Min. Elevation in Test Section	3,956 ft	Min. Test Pressure at Max. Elevation (3)	1,009.07 psig	Max. Test Pressure at Min. Elevation (6)	1,137.73 psig

PG&E T-118 B , L-300A , MP-241.6 - 243.74



Spike Pressure Test
Stress Strain Curve -- PG&E T-118 B , L-300A , MP-241.6 - 243.74





Actual Pressure Volume Plot Data			Predicted Pressure Volume Plot Data	Slope		Spike Pressure Test Stress Strain Curve -- PG&E T-118 B , L-300A , MP-241.6 - 243.74	
Pressure	Strokes	Gallons	Gallons	Actual	Predicted		
817 psig	0	0.00 gal		0	0.000	39250	0.551 gal/stroke
827 psig	57	31.40 gal	29.48 gal	3.140	2.948	Pump Piston Diameter	3.000 in
837 psig	115	63.34 gal	58.97 gal	3.195	2.948	Pump Piston Stroke	6.00 in
847 psig	173	95.29 gal	88.45 gal	3.195	2.949	Pump Cylinders	3 ea
857 psig	232	127.79 gal	117.94 gal	3.250	2.949	Volume check gal per stroke	0.000 gal/stroke
867 psig	289	159.18 gal	147.43 gal	3.140	2.949	Volume Released (gallons)	
877 psig	346	190.58 gal	176.92 gal	3.140	2.949	Pressure Reduced (psi)	10 psi
887 psig	403	221.97 gal	206.42 gal	3.140	2.949	Maximum2	940 gal
897 psig	462	254.47 gal	235.91 gal	3.250	2.950	Minimum2	0 gal
907 psig	518	285.31 gal	265.41 gal	3.084	2.950	Maximum1	1,248 psig
917 psig	576	317.26 gal	294.91 gal	3.195	2.950	Minimum1	700 psig
927 psig	637	350.86 gal	324.41 gal	3.360	2.950	Gallons/Stroke Used	0.551 gal/stroke
937 psig	692	381.15 gal	353.91 gal	3.029	2.950	Predicted Gallons/Stroke	0.508 gal/stroke
947 psig	752	414.20 gal	383.42 gal	3.305	2.950	Pressure Increment	10 psi
957 psig	809	445.60 gal	412.92 gal	3.140	2.951	Max Pressure	1,094 psig
967 psig	869	478.64 gal	442.43 gal	3.305	2.951	Buried Pipe Temperature	74 °F
977 psig	927	510.59 gal	471.94 gal	3.195	2.951	Exposed Pipe Temperature	84 °F
987 psig	984	541.99 gal	501.45 gal	3.140	2.951	ASME B31.8 Appendix N-5	
997 psig	1044	575.03 gal	530.96 gal	3.305	2.951		
1,007 psig	1102	606.98 gal	560.48 gal	3.195	2.952		
1,017 psig	1161	639.48 gal	590.00 gal	3.250	2.952	Average Actual Elastic Slope	3.202
1,027 psig	1220	671.97 gal	619.51 gal	3.250	2.952	Average Predicted Elastic Slope	2.951
1,037 psig	1276	702.82 gal	649.04 gal	3.084	2.952	Code Prescribed Minimum Yield Slope (less 10%) B31.8 N-5 (c)(2)	6.083
1,047 psig	1335	735.32 gal	678.56 gal	3.250	2.952	Established Minimum Yield Pressure B31.8 N-5 (c)(2)	1,094 psig
1,057 psig	1395	768.36 gal	708.08 gal	3.305	2.952	Maximum Allowed Volume (After Slope Deviation) B31.8 N-5 (c)(2)	418 gal
1,067 psig	1453	800.31 gal	737.61 gal	3.195	2.953	Volume (After Slope Deviation) B31.8 N-5 (c)(2)	0 gal
1,077 psig	1513	833.36 gal	767.14 gal	3.305	2.953	Redacted	
1,087 psig	1569	864.20 gal	796.67 gal	3.084	2.953		
1,094 psig	1610	886.79 gal	817.34 gal	3.226	2.953		
1,094 psig		886.79 gal	817.34 gal	0.000	0.000		
1,094 psig		886.79 gal	817.34 gal	0.000	0.000		
1,094 psig		886.79 gal	817.34 gal	0.000	0.000		
1,094 psig		886.79 gal	817.34 gal	0.000	0.000		
1,094 psig		886.79 gal	817.34 gal	0.000	0.000		
1,094 psig		886.79 gal	817.34 gal	0.000	0.000		
1,094 psig		886.79 gal	817.34 gal	0.000	0.000		
1,094 psig		886.79 gal	817.34 gal	0.000	0.000		
1,094 psig		886.79 gal	817.34 gal	0.000	0.000		

11-15-11
Date

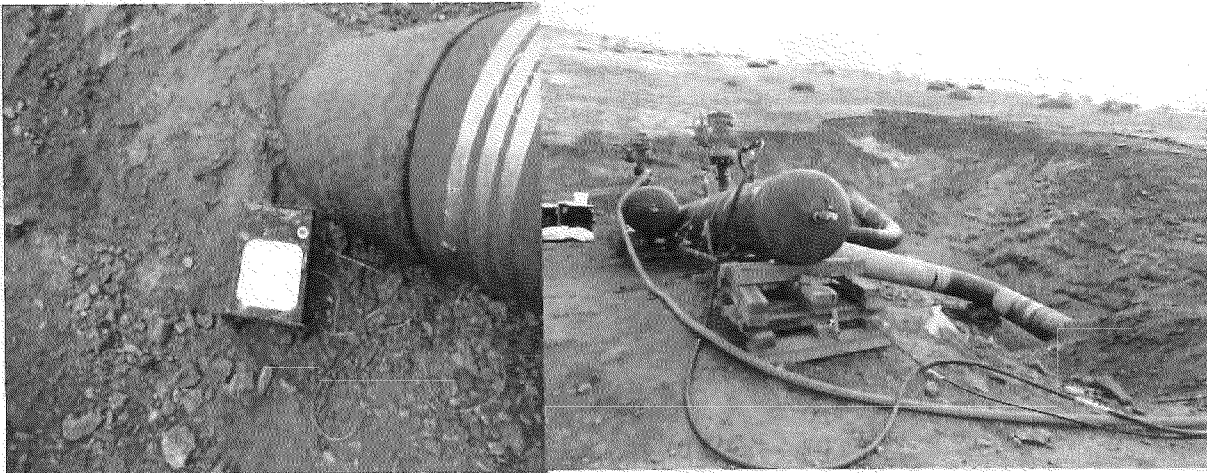
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T-118B Test Header

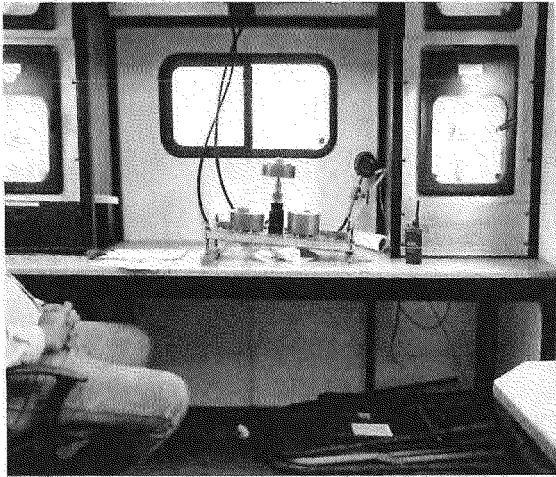


T-118B Test Header

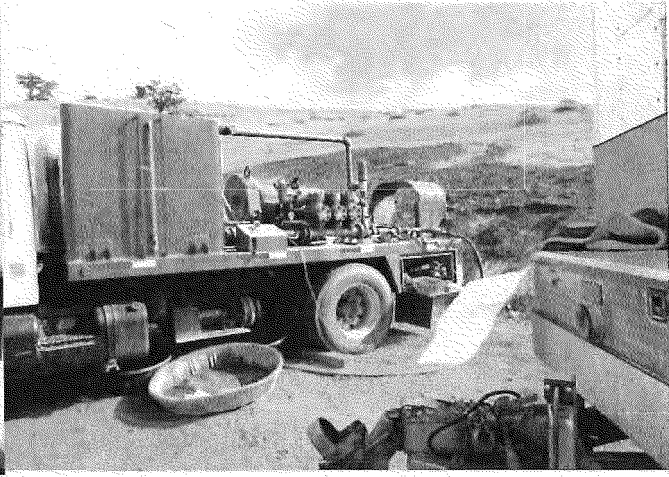


T-118B Unrestrained & Restrained
Temp. Recorder

T-118B Test Heads



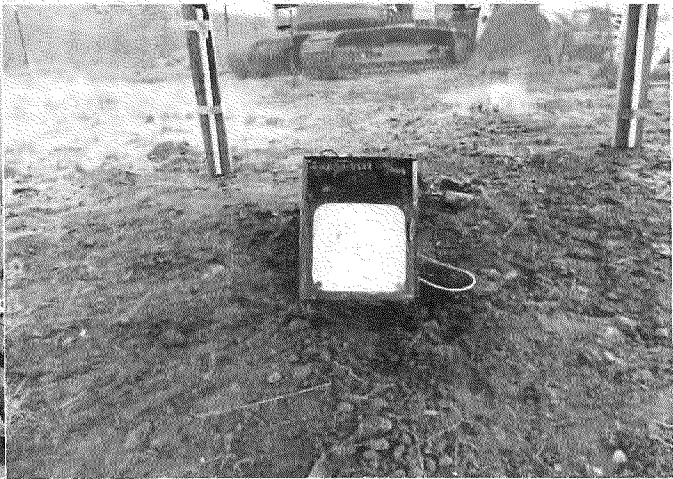
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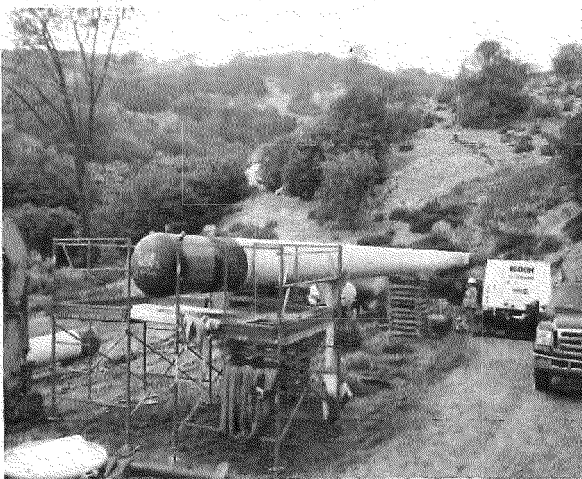
T-118B Test Pump



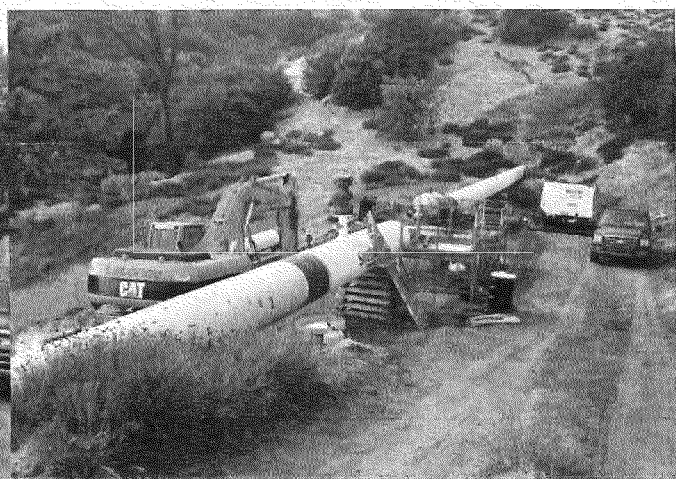
T-118B Test Trailer



T-118B Test Restrained Temp. Recorder



T-118B Test End



T-118B Test End