



RCP, Inc

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

Redacted

October 17, 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 – 41497341-T79B
Construction Contractor:	Snelson – 41474005 -T79B
Test Section:	PG&E T-79B L-300B, Redacted
Test Date:	October 17, 2011
Certificate Number:	RCP 61362 - T-79B, L-300B, Redacted

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).

The test segment was subjected to a spike pressure test of 1135 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 8.08 hour test duration period.

This hydrostatic test was completed successfully. Pressure was maintained on the test facilities in excess of 8.08 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 1059 psig and the established MAOP is 847 psig.

Pressure decreased 76 psi during the test. 4,826.88 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 3,119.51 ounces, gain, which is equivalent to a 2.46 °F change in pipe temperature and larger than the anticipated 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 inherent error associated with physically attempting to measure the average temperature of 1,471 feet of buried and 154 feet of exposed pipe from a single point on the line.

Sincerely,

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Test 79B.xlsm
Letter



Hydrostatic Test Certification

Company	Pacific Gas and Electric Company	Job Number	41497341-179B
Construction Co.	Snelson	Job Number	41474005-179B
Hydro. Test Co.	Milbar hydro-test inc.	Project No.	FY12-112
Test Section	Redacted		
File Name	RCP 61362 - T-79B, L-300B, L-160.88		

Hydrostatic Test Pressure

APPLICABLE CODE FOR CERTIFICATION: **d** Test Date: 17-Oct-11
 Code of Federal Regulations, Title 49, Part 192, Subpart J (Class 2)

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-79B L-300B, MP 160.57 - 160.88
 From: 15+58 To: 0+00

Pipe Data

Segment	Length	Diameter	Wall Thickness	Specification	100% SMYS
1	60 ft	34.000 in.	0.500 in.	API5L-X65, DSAW, Arc Weld, Steel	1,912 psi
2	1,471 ft	34.000 in.	0.505 in.	API5L-X66, DSAW, Arc Weld, Steel	1,366 psi
3	32 ft	34.000 in.	0.375 in.	API5L-X65, DSAW, Arc Weld, Steel	1,434 psi
4	22 ft	34.000 in.	0.505 in.	API5L-X60, DSAW, Arc Weld, Steel	1,782 psi
5	40 ft	34.000 in.	0.500 in.	API5L-X65, DSAW, Arc Weld, Steel	1,812 psi

Initial Test Conditions

Pressure at Test Point:	1,135 psig	Date/Time:	10/17/11 11:40 AM	Pipe Temperature Unrestrained:	80.0 °F
Ambient Temperature:	81.0 °F	Elevation @ Test Point:	2,208.0 ft	Restrained:	77.0 °F
Pressure @ High Point (Cal/Measure):	1,135 psig	Elevation @ High Point:	2,208.0 ft	Location:	15+58
Pressure @ Low Point (Cal/Measure):	1,137 psig	Elevation @ Low Point:	2,204.0 ft	Location:	0+00

Final Test Conditions

Pressure at Test Point:	1,059 psig	Date/Time:	10/17/11 7:45 PM	Pipe Temperature Unrestrained:	73.0 °F
Ambient Temperature:	76.0 °F	Elevation @ Test Point:	2,208.0 ft	Restrained:	76.0 °F
Pressure @ High Point (Cal/Measure):	1,059 psig	Elevation @ High Point:	2,208.0 ft	Location:	15+58
Pressure @ Low Point (Cal/Measure):	1,061 psig	Elevation @ Low Point:	2,204.0 ft	Location:	0+00

Total Fluid Injected:		Total Fluid Withdrawn:	4826.88 fluid ounces	Volume gain	
Net Change in Volume of the Test Section ± (+ Gain, - Loss):	3,119.51 oz	gain	0.0336%	2.464 °F equivalent	

Test Duration: 8.08 hours

Minimum Test Pressure:	1,055 psig	Maximum Test Pressure:	1,055 psig	Min Elevation:	1,057 psig
Maximum Test Pressure:	1,138 psig	Min Elevation:	1,138 psig	Maximum:	1,140 psig
% SMYS:	59.5%	Maximum:	83.4%		

Minimum Test Pressure (Calculated/Measured): 1,059 psig

Maximum Allowable Operating Pressure:

DOT Part 192 Test Factor= 1.25 847 psig

Were leaks observed? **No** Explain:

Acceptable Hydrostatic Test? **Yes**

The test segment was subjected to a spike pressure test of 1135 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 8.08 hour test duration period.

No leaks were observed during the test period. The test section included 1,471 feet of buried and 154 feet of exposed pipe. Pressure lost 76 psi during the test. The buried pipe segment lost 1°F fluid temperature and the exposed pipe segment lost 7°F.

4,826.88 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 3,119.51 ounces, gain, which is equivalent to a 2.46 °F change in pipe temperature and larger than the anticipated 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 inherent error associated with physically attempting to measure the pressure temperature of 1,471 feet of buried and 154 feet of exposed pipe at a single point on the line.

Remarks: Redacted

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Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	41497341-T79B
Construction Co.	Snelson	Job Number	41474005 - T79B
Testing Co.	Milbar hydro-test inc.	Project No.	FY12-112
Test Section	PG&E T-79B L-300B, Redacted		
File Name	RCP 61362 - T-79B, L-300B, Redacted		

Date 17-Oct-11

Test Log

Log No.	Test Period		Test Pressure	Temperature °F			Remarks		
	Date	Time		Ambient	Pipe		Comment	Bleed	Inject
					Unrestrained	Restrained			
1	10/17/11	11:10 AM	779 psig	81 °F	78 °F	77 °F	Start Spike		
2	10/17/11	11:11 AM	789 psig	81 °F	78 °F	77 °F	Inject		560 oz.
3	10/17/11	11:12 AM	799 psig	81 °F	78 °F	77 °F	Inject		436 oz.
4	10/17/11	11:13 AM	809 psig	81 °F	78 °F	77 °F	Inject		498 oz.
5	10/17/11	11:14 AM	819 psig	81 °F	78 °F	77 °F	Inject		436 oz.
6	10/17/11	11:15 AM	829 psig	81 °F	78 °F	77 °F	Inject		498 oz.
7	10/17/11	11:16 AM	839 psig	81 °F	78 °F	77 °F	Inject		498 oz.
8	10/17/11	11:17 AM	849 psig	81 °F	78 °F	77 °F	Inject		436 oz.
9	10/17/11	11:18 AM	859 psig	81 °F	78 °F	77 °F	Inject		498 oz.
10	10/17/11	11:19 AM	869 psig	81 °F	78 °F	77 °F	Inject		436 oz.
11	10/17/11	11:20 AM	879 psig	81 °F	78 °F	77 °F	Inject		498 oz.
12	10/17/11	11:21 AM	889 psig	81 °F	78 °F	77 °F	Inject		436 oz.
13	10/17/11	11:22 AM	899 psig	81 °F	78 °F	77 °F	Inject		498 oz.
14	10/17/11	11:23 AM	909 psig	81 °F	78 °F	77 °F	Inject		498 oz.
15	10/17/11	11:24 AM	919 psig	81 °F	78 °F	77 °F	Inject		436 oz.
16	10/17/11	11:25 AM	929 psig	81 °F	78 °F	77 °F	Inject		498 oz.
17	10/17/11	11:26 AM	939 psig	81 °F	78 °F	77 °F	Inject		436 oz.
18	10/17/11	11:27 AM	949 psig	81 °F	78 °F	77 °F	Inject		498 oz.
19	10/17/11	11:28 AM	959 psig	81 °F	78 °F	77 °F	Inject		436 oz.
20	10/17/11	11:29 AM	969 psig	81 °F	78 °F	77 °F	Inject		498 oz.
21	10/17/11	11:30 AM	979 psig	81 °F	78 °F	77 °F	Inject		436 oz.
22	10/17/11	11:31 AM	989 psig	81 °F	78 °F	77 °F	Inject		498 oz.
23	10/17/11	11:32 AM	999 psig	81 °F	78 °F	77 °F	Inject		498 oz.
24	10/17/11	11:33 AM	1,009 psig	81 °F	78 °F	77 °F	Inject		436 oz.
25	10/17/11	11:34 AM	1,019 psig	81 °F	78 °F	77 °F	Inject		498 oz.
26	10/17/11	11:35 AM	1,029 psig	81 °F	78 °F	77 °F	Inject		436 oz.
27	10/17/11	11:36 AM	1,039 psig	81 °F	78 °F	77 °F	Inject		498 oz.
28	10/17/11	11:36 AM	1,049 psig	81 °F	78 °F	77 °F	Inject		498 oz.
29	10/17/11	11:36 AM	1,059 psig	81 °F	78 °F	77 °F	Inject		436 oz.
30	10/17/11	11:37 AM	1,069 psig	81 °F	78 °F	77 °F	Inject		498 oz.
31	10/17/11	11:37 AM	1,079 psig	81 °F	78 °F	77 °F	Inject		498 oz.
32	10/17/11	11:38 AM	1,089 psig	81 °F	78 °F	77 °F	Inject		436 oz.
33	10/17/11	11:38 AM	1,099 psig	81 °F	78 °F	77 °F	Inject		498 oz.
34	10/17/11	11:39 AM	1,109 psig	81 °F	78 °F	77 °F	Inject		436 oz.
35	10/17/11	11:39 AM	1,119 psig	81 °F	78 °F	77 °F	Inject		498 oz.
36	10/17/11	11:39 AM	1,129 psig	81 °F	78 °F	77 °F	Inject		436 oz.
37	10/17/11	11:40 AM	1,135 psig	81 °F	80 °F	77 °F	Inject		311 oz.
38	10/17/11	11:40 AM	1,135 psig	81 °F	80 °F	77 °F	On Test		
39	10/17/11	11:50 AM	1,136 psig	82 °F	81 °F	77 °F			
40	10/17/11	12:00 PM	1,137 psig	83 °F	81 °F	77 °F			
41	10/17/11	12:10 PM	1,138 psig	84 °F	82 °F	77 °F	End Spike		
42	10/17/11	12:11 PM	1,128 psig	84 °F	82 °F	77 °F	Bleed	474 oz.	
43	10/17/11	12:12 PM	1,118 psig	84 °F	82 °F	77 °F	Bleed	474 oz.	
44	10/17/11	12:13 PM	1,108 psig	84 °F	82 °F	77 °F	Bleed	474 oz.	
45	10/17/11	12:14 PM	1,098 psig	84 °F	82 °F	77 °F	Bleed	474 oz.	

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Dead Weight Sheet

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Dead Weight Log Sheet

Owner Company	Pacific Gas and Electric Company	Job Number	41497341-T79B
Construction Co.	Snelson	Job Number	41474005 - T79B
Testing Co.	Milbar hydro-test inc.	Project No.	FY12-112
Test Section	PG&E T-79B L-300B, Redacted		
File Name	RCP 61362 - T-79B, L-300B, Redacted		

Date 17-Oct-11

Test Log

Log No.	Test Period		Test Pressure	Temperature °F			Remarks		
	Date	Time		Ambient	Pipe		Comment	Bleed	Inject
					Unrestrained	Restrained			
46	10/17/11	12:15 PM	1,088 psig	84 °F	82 °F	77 °F	Bleed	474 oz.	
47	10/17/11	12:16 PM	1,078 psig	84 °F	82 °F	77 °F	Bleed	474 oz.	
48	10/17/11	12:17 PM	1,068 psig	84 °F	82 °F	77 °F	Bleed	474 oz.	
49	10/17/11	12:18 PM	1,055 psig	84 °F	82 °F	77 °F	Bleed	616 oz.	
50	10/17/11	12:22 PM	1,055 psig	84 °F	83 °F	77 °F			
51	10/17/11	12:30 PM	1,056 psig	85 °F	83 °F	77 °F			
52	10/17/11	12:45 PM	1,058 psig	86 °F	84 °F	77 °F			
53	10/17/11	1:00 PM	1,060 psig	87 °F	85 °F	77 °F			
54	10/17/11	1:15 PM	1,061 psig	88 °F	85 °F	77 °F	Clear		
55	10/17/11	1:30 PM	1,062 psig	88 °F	86 °F	77 °F			
56	10/17/11	1:45 PM	1,064 psig	89 °F	86 °F	77 °F			
57	10/17/11	2:00 PM	1,066 psig	89 °F	86 °F	77 °F	Warm		
58	10/17/11	2:15 PM	1,067 psig	89 °F	86 °F	77 °F			
59	10/17/11	2:30 PM	1,069 psig	90 °F	86 °F	77 °F			
60	10/17/11	2:45 PM	1,070 psig	91 °F	86 °F	77 °F	Sun Shine		
61	10/17/11	3:00 PM	1,072 psig	92 °F	86 °F	77 °F			
62	10/17/11	3:15 PM	1,073 psig	91 °F	86 °F	77 °F			
63	10/17/11	3:30 PM	1,075 psig	91 °F	86 °F	77 °F			
64	10/17/11	3:37 PM	1,055 psig	91 °F	86 °F	77 °F	Bleed	896.00 oz.	
65	10/17/11	3:45 PM	1,056 psig	91 °F	85 °F	77 °F			
66	10/17/11	4:00 PM	1,057 psig	91 °F	85 °F	77 °F			
67	10/17/11	4:15 PM	1,058 psig	91 °F	85 °F	77 °F			
68	10/17/11	4:30 PM	1,059 psig	90 °F	84 °F	77 °F			
69	10/17/11	4:45 PM	1,060 psig	90 °F	82 °F	77 °F			
70	10/17/11	5:00 PM	1,061 psig	88 °F	81 °F	77 °F			
71	10/17/11	5:15 PM	1,061 psig	87 °F	80 °F	77 °F			
72	10/17/11	5:30 PM	1,062 psig	85 °F	79 °F	77 °F			
73	10/17/11	5:45 PM	1,062 psig	84 °F	78 °F	76 °F			
74	10/17/11	6:00 PM	1,062 psig	84 °F	77 °F	76 °F			
75	10/17/11	6:15 PM	1,061 psig	84 °F	76 °F	76 °F			
76	10/17/11	6:30 PM	1,061 psig	84 °F	75 °F	76 °F			
77	10/17/11	6:45 PM	1,061 psig	81 °F	75 °F	76 °F			
78	10/17/11	7:00 PM	1,060 psig	80 °F	74 °F	76 °F			
79	10/17/11	7:15 PM	1,060 psig	78 °F	73 °F	76 °F			
80	10/17/11	7:30 PM	1,059 psig	76 °F	73 °F	76 °F			
81	10/17/11	7:45 PM	1,059 psig	76 °F	73 °F	76 °F	End of Test		
							Spike Test		16,860.2 oz.
							Hydrostatic Test	4,826.9 oz.	

Were leaks observed during the test period?

Exposed and buried pipe, no leaks observed.

High Test Pressure:	1,138 psig
Low Test Pressure:	1,055 psig

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Dead Weight Sheet**COPY**

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Pipe Segment Volume Calculations

Company	Pacific Gas and Electric Company	Job Number	41497341-T79B
Construction Co.	Snelson	Job Number	41474005 -T79B
Hydro. Test Co.	Milbar hydro-test inc.	Project No.	FY12-112
Test Section	PG&E Redacted	WATER	
File Name	RCP 61362 - T-79B, L-300B, Redacted		

General Pipe Data

Description	Segment				
	1	2	3	4	5
Restrained or Unrestrained?	Unrestrained	Restrained	Unrestrained	Unrestrained	Unrestrained
Outside Diameter	34.000 in.	34.000 in.	34.000 in.	34.000 in.	34.000 in.
Wall Thickness	0.500 in.	0.505 in.	0.375 in.	0.505 in.	0.500 in.
Inside Diameter	33.000 in.	32.990 in.	33.250 in.	32.990 in.	33.000 in.
Spec./Grade	API5L-X65	API5L-X46	API5L-X65	API5L-X60	API5L-X65
Length Unrestrained	60 ft		32 ft	22 ft	40 ft
Length Restrained		1,471 ft			
Temperature - On Test	80 °F	77 °F	80.0 °F	80.0 °F	80.0 °F
Temperature - End of Test	73 °F	76 °F	73.0 °F	73.0 °F	73.0 °F
Pressure - On Test	1,135 psig	1,135 psig	1,135 psig	1,135 psig	1,135 psig
Pressure - End of Test	1,059 psig	1,059 psig	1,059 psig	1,059 psig	1,059 psig

Unrestrained Pipe

Sum:	Vo	6,863.42 gal 878,518 oz.	Vtp1	6,896.16 gal 882,709 oz.	Vtp2	6,898.99 gal 883,070 oz.
Vo Unrestrained	2,666 gal		1,443 gal	977 gal	1,777 gal	
Fwp 1	1.003479		1.003479	1.003479	1.003479	
Fpp 1	1.003121		1.004193	1.003089	1.003121	
Fpt 1	1.000364		1.000364	1.000364	1.000364	
Fwt 1	1.002418		1.002418	1.002418	1.002418	
Fpwt 1 = Fpt/Fwt	0.997951		0.997951	0.997951	0.997951	
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	2,677.99 gal		1,451.53 gal	981.30 gal	1,785.33 gal	
Fwp 2	1.003246		1.003246	1.003246	1.003246	
Fpp 2	1.002912		1.003912	1.002883	1.002912	
Fpt 2	1.000237		1.000237	1.000237	1.000237	
Fwt 2	1.001423		1.001423	1.001423	1.001423	
Fpwt = Fpt/Fwt	0.998815		0.998815	0.998815	0.998815	
Vtp = Vo(Fwp)(Fpp)(Fpwt)	2,679.13 gal		1,452.05 gal	981.72 gal	1,786.09 gal	

Restrained Pipe

Sum:	Vo	65,318.54 gal 8,360,773 oz.	Vtp1	65,581.84 gal 8,394,476 oz.	Vtp2	65,585.68 gal 8,392,407 oz.
Vo Unrestrained		65,319 gal				
Fwp 1		1.003479				
Fpp 1		1.002310				
Fpt 1		1.000206				
Fwt 1		1.001966				
Fpwt 1 = Fpt/Fwt		0.998243				
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)		65,582 gal				
Fwp 2		1.003246				
Fpp 2		1.002156				
Fpt 2		1.000194				
Fwt 2		1.001813				
Fpwt = Fpt/Fwt		0.998384				
Vtp = Vo(Fwp)(Fpp)(Fpwt)		65,566 gal				

Combined Pipe

Sum:	Vo	72,181.96 gal 9,239,291 oz.	Vtp1	72,478.00 gal 9,277,184 oz.	Vtp2	72,464.66 gal 9,275,477 oz.
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 Water Calculations

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Pipe Segment Volume Allowance Calculations

Company	Pacific Gas and Electric Company	Job Number	41497341-T79B
Construction Co.	Snelson	Job Number	41474005-T79B
Hydro. Test Co.	Milbar hydro-test inc.	Project No.	FY12-112
Test Section	PG&E T-79B L-300B, Redacted		
File Name	RCP 61362 - T-79B, L-300B, Redacted		WATER

Description	Segment				
	1	2	3	4	5
Restrained or Unrestrained?	Unrestrained	Restrained	Unrestrained	Unrestrained	Unrestrained
Outside Diameter	34.000 in.	34.000 in.	34.000 in.	34.000 in.	34.000 in.
Wall Thickness	0.500 in.	0.505 in.	0.375 in.	0.505 in.	0.500 in.
Inside Diameter	33.000 in.	32.990 in.	33.250 in.	32.990 in.	33.000 in.
Spec./Grade	API5L-X65	API5L-X46	API5L-X65	API5L-X60	API5L-X65
Length Unstrained	60.00 ft		32.00 ft	22 ft	40 ft
Length Restrained		1,471 ft			
Temperature - On Test	76 °F	76 °F	76 °F	76 °F	76 °F
Temperature - End of Test	77 °F	77 °F	77 °F	77 °F	77 °F
Pressure - On Test	1,097 psig	1,097 psig	1,097 psig	1,097 psig	1,097 psig
Pressure - End of Test	1,097 psig	1,097 psig	1,097 psig	1,097 psig	1,097 psig

Unrestrained Pipe						
Sum:	Vo			Vtp1		
		6,863.42 gal			6,898.25 gal	
		878,518 oz.			882,976 oz.	
Vo Unrestrained	2,666 gal		1,443 gal	977 gal	1,777 gal	
Fwp 1	1.003363		1.003363	1.003363	1.003363	
Fpp 1	1.003017		1.004053	1.002986	1.003017	
Fpt 1	1.000291		1.000291	1.000291	1.000291	
Fwt 1	1.001813		1.001813	1.001813	1.001813	
Fpwt 1 = Fpt/Fwt	0.998481		0.998481	0.998481	0.998481	
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)	2,678.82 gal		1,451.93 gal	981.61 gal	#####	
Fwp 2	1.003363		1.003363	1.003363	1.003363	
Fpp 2	1.003017		1.004053	1.002986	1.003017	
Fpt 2	1.000309		1.000309	1.000309	1.000309	
Fwt 2	1.001966		1.001966	1.001966	1.001966	
Fpwt = Fpt/Fwt	0.998347		0.998347	0.998347	0.998347	
Vtp = Vo(Fwp)(Fpp)(Fpwt)	2,678.46 gal		1,451.74 gal	981.48 gal	#####	

Restrained Pipe						
Sum:	Vo			Vtp1		
		65,318.54 gal			65,578.24 gal	
		8,360,773 oz.			8,394,015 oz.	
Vo Restrained		65,319 gal				
Fwp 1		1.003363				
Fpp 1		1.002231				
Fpt 1		1.000194				
Fwt 1		1.001813				
Fpwt 1 = Fpt/Fwt		0.998384				
Vtp 1 = Vo(Fwp)(Fpp)(Fpwt)		65,578 gal				
Fwp 2		1.003363				
Fpp 2		1.002235				
Fpt 2		1.000206				
Fwt 2		1.001966				
Fpwt = Fpt/Fwt		0.998243				
Vtp = Vo(Fwp)(Fpp)(Fpwt)		65,569 gal				

Combined Pipe						
Sum:	Vo			Vtp1		
		72,181.96 gal			72,476.49 gal	
		9,239,291 oz.			9,276,991 oz.	
1 °F Change	9.89 gal		1,266.07 oz.			
					72,466.60 gal	
					9,275,725 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	60 ft	Unrestrained	34.000 in.	0.5000 in.	API5L-X65	1,912 psig	Steel	Arc Weld	DSAW
2	1,471 ft	Restrained	34.000 in.	0.5050 in.	API5L-X46	1,366 psig	Steel	Arc Weld	DSAW
3	32 ft	Unrestrained	34.000 in.	0.3750 in.	API5L-X65	1,434 psig	Steel	Arc Weld	DSAW
4	22 ft	Unrestrained	34.000 in.	0.5050 in.	API5L-X60	1,782 psig	Steel	Arc Weld	DSAW
5	40 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 Attention: Redacted	41497341-T79B
Construction Company	Snelson	Job Number
Address	601 West State Street Sedro-Wooley, WA 98284 Attention: Redacted	41474005 -T79B
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-79B L-300B, Redacted From: 15+58 To: 0+00	
File Name	RCP 61362 - T-79B, L-300B, Redacted	

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	10/17/11 11:40 AM	Elevation at Test Point	2,208 ft	Min. Required Test Press At Test Point (1)	1,032.00 psig	Max. Allowable Test Press at Test Point (4)	1,138.27 psig
Time and Date Test Ended	10/17/11 7:45 PM	Max. Elevation in Test Section	2,208 ft	Min. Indicated Test Pressure (2)	1,055.00 psig	Max. Indicated Test Pressure (5)	1,138.00 psig
Actual Duration of Test	8 hours 5 minutes	Min. Elevation in Test Section	2,204 ft	Min. Test Pressure at Max. Elevation (3)	1,055.00 psig	Max. Test Pressure at Min. Elevation (6)	1,139.73 psig

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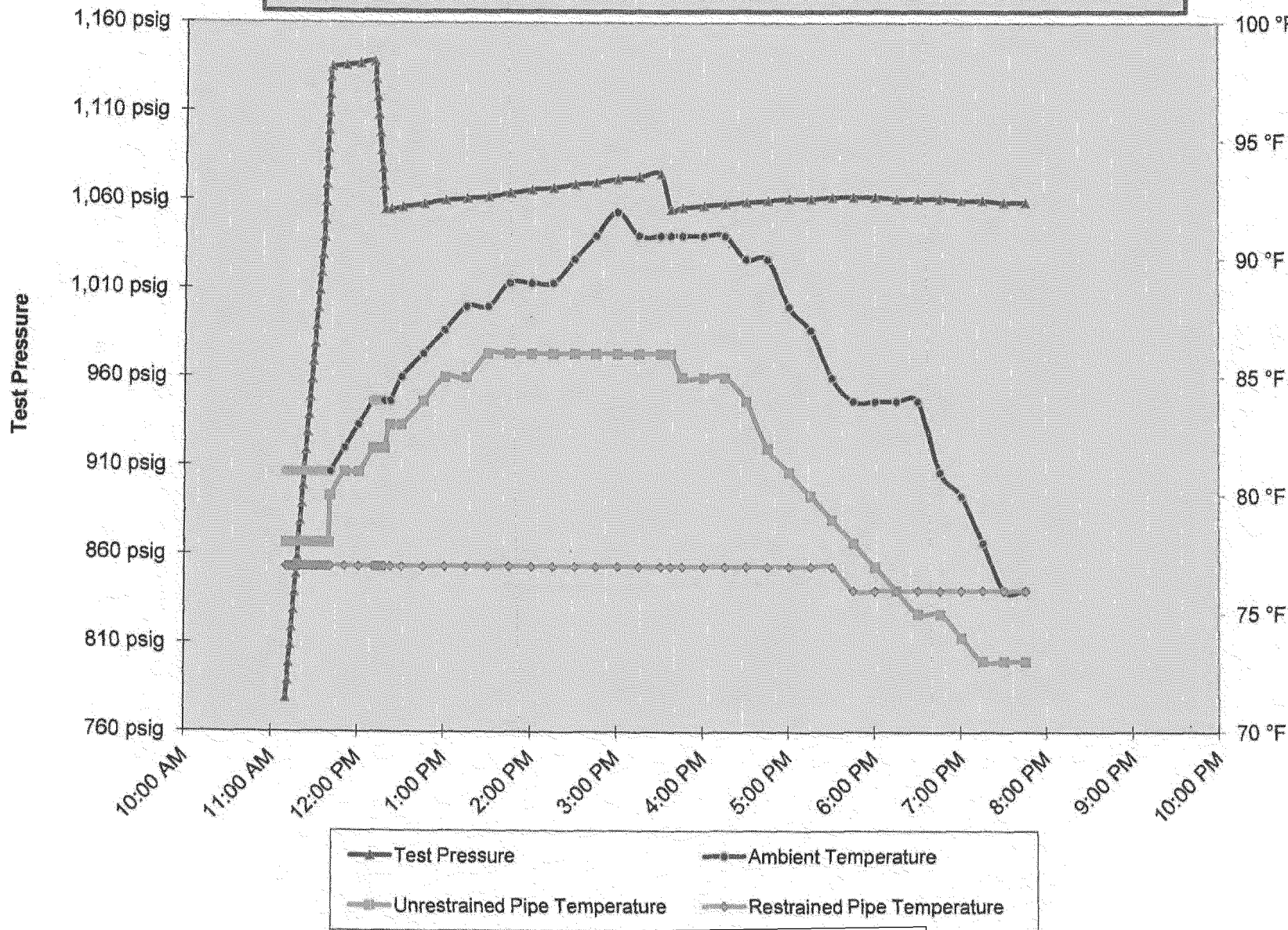
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Test 79B.xlsm
Pipe

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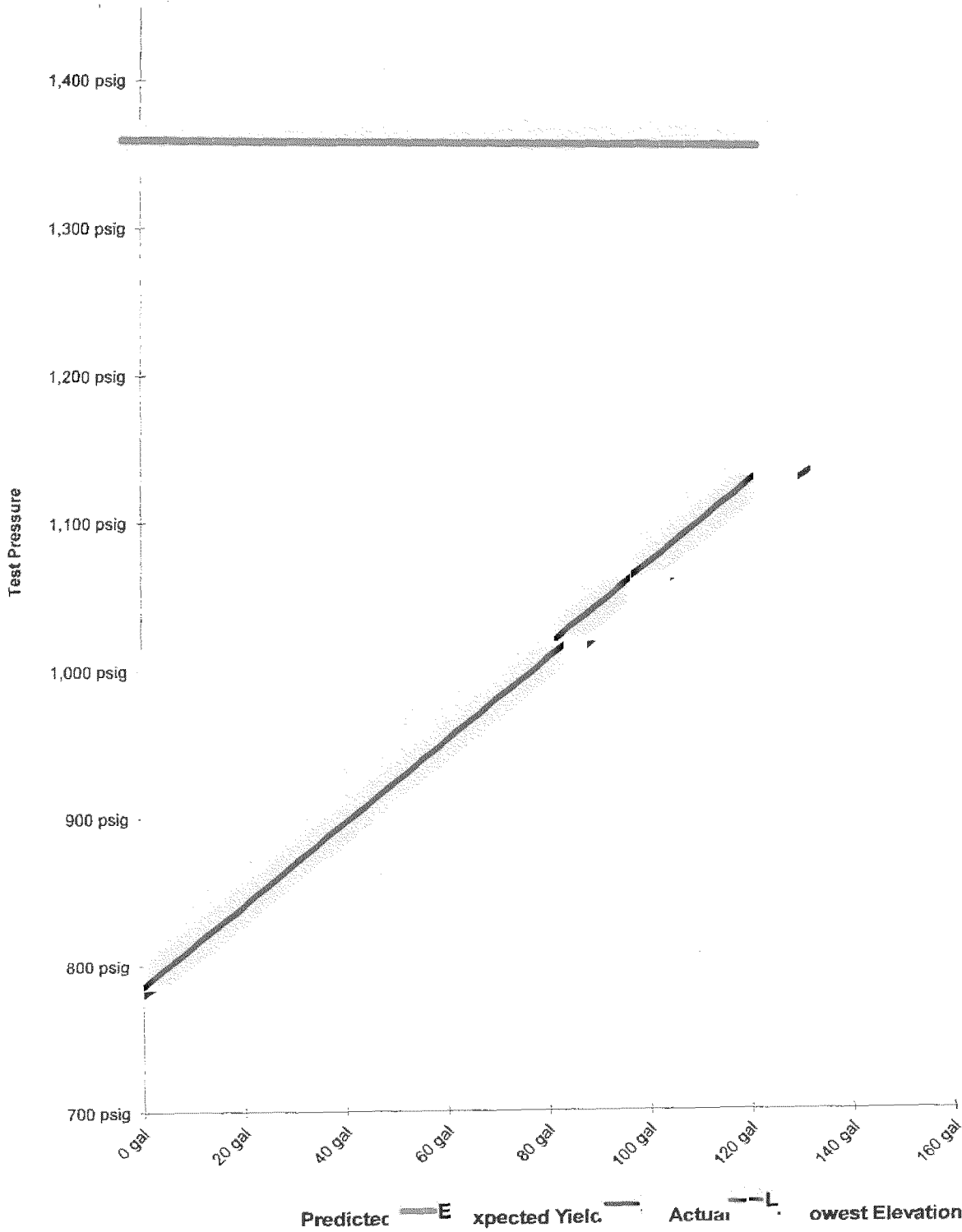
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PlotT

Spike Pressure Test
Stress Strain Curve -- PG&E T-79B L-300B, Redacted



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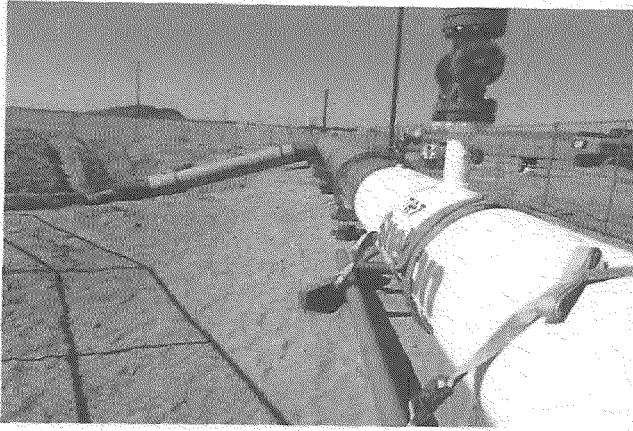
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Actual Pressure Volume Plot Data			Predicted Pressure Volume Plot Data	Slope		Spike Pressure Test Stress Strain Curve -- PG&E T-79B L-300B, Redacted	
Pressure	Strokes	Gallons	Gallons	Actual	Predicted		
779 psig	0	0.00 gal		0	0.000	Pump gal per stroke	0.551 gal/stroke
789 psig	9	4.37 gal	3.72 gal	0.437	0.372	Pump Piston Diameter	3.000 in
799 psig	16	7.78 gal	7.44 gal	0.340	0.372	Pump Piston Stroke	6.00 in
809 psig	24	11.67 gal	11.16 gal	0.389	0.372	Pump Cylinders	3 ea
819 psig	31	15.07 gal	14.88 gal	0.340	0.372	Volume check gal per stroke	0.486 gal/stroke
829 psig	39	18.96 gal	18.60 gal	0.389	0.372	Volume Released (gallons)	3.70 gal
839 psig	47	22.84 gal	22.32 gal	0.389	0.372	Pressure Reduced (psi)	10 psi
849 psig	54	26.25 gal	26.04 gal	0.340	0.372	Maximum2	140 gal
859 psig	62	30.14 gal	29.76 gal	0.389	0.372	Minimum2	0 gal
869 psig	69	33.54 gal	33.48 gal	0.340	0.372	Maximum1	1,467 psig
879 psig	77	37.43 gal	37.20 gal	0.389	0.372	Minimum1	700 psig
889 psig	84	40.83 gal	40.92 gal	0.340	0.372	Gallons/Stroke Used	0.486 gal/stroke
899 psig	92	44.72 gal	44.64 gal	0.389	0.372	Predicted Gallons/Stroke	0.489 gal/stroke
909 psig	100	48.61 gal	48.37 gal	0.389	0.372	Pressure Increment	10 psi
919 psig	107	52.01 gal	52.09 gal	0.340	0.372	Max Pressure	1,135 psig
929 psig	115	55.90 gal	55.81 gal	0.389	0.372	Buried Pipe Temperature	77 °F
939 psig	122	59.30 gal	59.53 gal	0.340	0.372	Exposed Pipe Temperature	81 °F
949 psig	130	63.19 gal	63.26 gal	0.389	0.372	ASME B31.8 Appendix N-5	
959 psig	137	66.59 gal	66.98 gal	0.340	0.372	Average Actual Elastic Slope	0.370
969 psig	145	70.48 gal	70.70 gal	0.389	0.372	Average Predicted Elastic Slope	0.372
979 psig	152	73.88 gal	74.43 gal	0.340	0.372	Code Prescribed Minimum Yield Slope (less 10%) B31.8 N-5 (c)(2)	0.704
989 psig	160	77.77 gal	78.15 gal	0.389	0.372	Established Minimum Yield Pressure B31.8 N-5 (c)(2)	1,135 psig
999 psig	168	81.66 gal	81.87 gal	0.389	0.372	Maximum Allowed Volume (After Slope Deviation) B31.8 N-5 (c)(2)	418 gal
1,009 psig	175	85.06 gal	85.60 gal	0.340	0.372	Volume (After Slope Deviation) B31.8 N-5 (c)(2)	0 gal
1,019 psig	183	88.95 gal	89.32 gal	0.389	0.372	<div style="border: 1px solid black; width: 150px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> Redacted </div> <div style="margin-top: 10px; text-align: right;"> 10-17-11 Date </div>	
1,029 psig	190	92.35 gal	93.05 gal	0.340	0.372		
1,039 psig	198	96.24 gal	96.77 gal	0.389	0.372		
1,049 psig	206	100.13 gal	100.50 gal	0.389	0.373		
1,059 psig	213	103.53 gal	104.22 gal	0.340	0.373		
1,069 psig	221	107.42 gal	107.95 gal	0.389	0.373		
1,079 psig	229	111.31 gal	111.67 gal	0.389	0.373		
1,089 psig	236	114.71 gal	115.40 gal	0.340	0.373		
1,099 psig	244	118.60 gal	119.12 gal	0.389	0.373		
1,109 psig	251	122.00 gal	122.85 gal	0.340	0.373		
1,119 psig	259	125.89 gal	126.58 gal	0.389	0.373		
1,129 psig	266	129.29 gal	130.30 gal	0.340	0.373		
1,135 psig	271	131.72 gal	132.54 gal	0.405	0.373		
1,135 psig		131.72 gal	132.54 gal	0.000	0.000		
1,135 psig		131.72 gal	132.54 gal	0.000	0.000		
1,135 psig		131.72 gal	132.54 gal	0.000	0.000		
1,135 psig		131.72 gal	132.54 gal	0.000	0.000		
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1,135 psig		131.72 gal	132.54 gal	0.000	0.000		

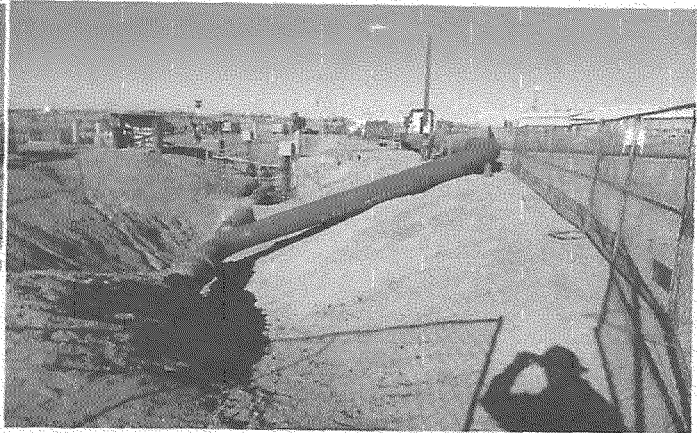
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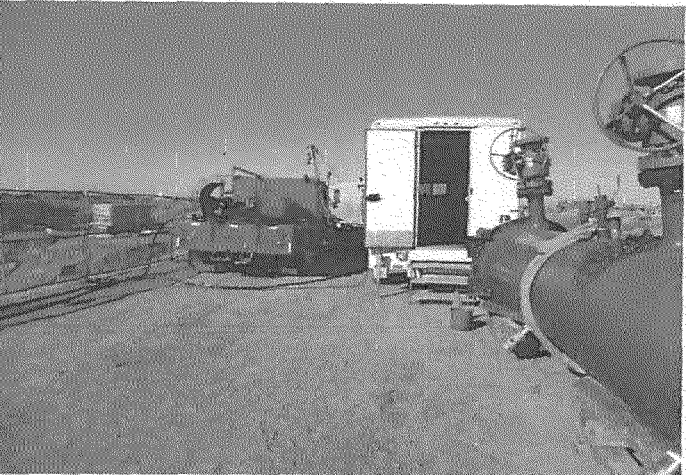
Test 79B test head



Test 79B test head & Tie In

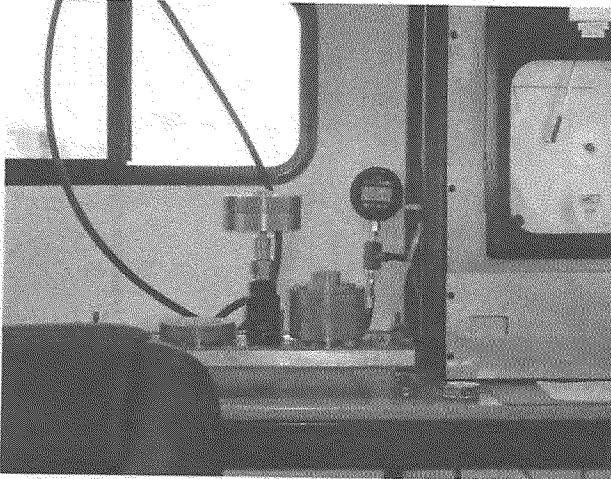


Test 79B Unrestrained & Alternate
Temp. Recorder



Test 79B Pump Truck

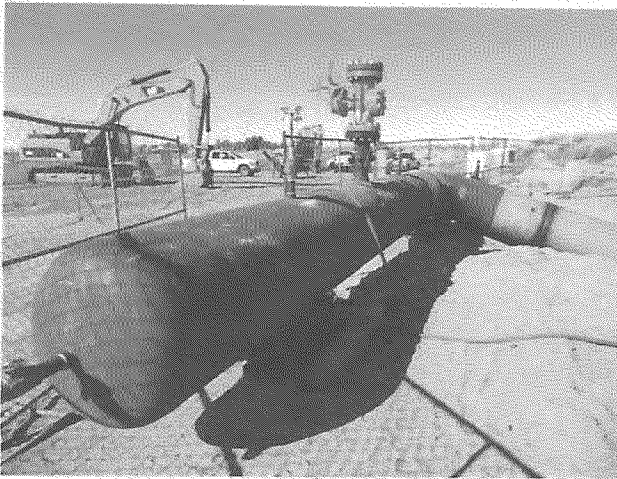
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Test T-79B Deadweight



Test T-79B Restrained Temp Rec



Test T-79B Test End



Test T-79B Test End

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