FINAL

Pacific Gas and Electric Company
Gas Pipeline Facilities Strength Test Pressure Report
(For Pipeline Facilities Designed to Operate over 100 PSIG)

62-4921 (Rev. 2/04)
California Gas Transmission
(Use in Accordance with Gas Standard A-34 and GO 112-D)

Sheet 1 of 2

PART I - DESIGN DATA (TO BE PREPARED BY PROJECT ENGINEER)

Feeder Main Number, Line Number, or Station Name	Area	Division/District	Job Number	Date Job Authorized
L-132	1	Peninsula	41497353	

Description of Job – Include Reference Drawing Numbers, and Pipeline Mileposts
Test 2 – Hydrostatically test tie-in pieces, hydrostatic test piping and existing 24" & 30" L-132. Existing pipeline material listed; ie. pipe, elbows, sleeves, are from the "Material of Record" (refer to Dwg 41497353, sheet 6 of 6)
Hydrotest L-132 from MP Redacted Woodside, CA (Test section 32)

Location Class	Design Factor (F)	MAOP to be Established for this Piping by this Test	Future Design Pressure
3	.5	400 PSIG	400 PSIG

STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE)			Static Head Calculation		
	Max. Elevation	873 Ft.	For Water	0.433 X Elev. Diff. =	188 PSIG
	Min. Elevation	438 Ft.	Other (Specify)	X Elev. Diff. =	PSIG
	Elev. Diff.	435 Ft.			

Pipe Specification Size O.D.	Size W.T.	API or ASTM Grade Long Seam (ERW, DSAW, Seamless, Etc.)	Footage to Be Tested	Pipe Spec. and Footage Verified In Field	% of SMYS At MAOP	% of SMYS At Min. Test Press.	% of SMYS At Max. Test Press.	Pressure to Give 90% SMYS
30.00	0.375	Pipe, API 5L, X-65, DSAW (item #103)	~~27'~~	14.96 MR	24.62	36.92	52.62	1463
24.00	0.375	Pipe, API 5L, X-60, DSAW (item #106)	~~27'~~	28.65 MR	21.33	32.00	45.60	1688
30.00	0.375	Ell, Forged, LR, Y-60 (item #120)	~~2 Ea.~~	3 EA MR	26.67	40.00	57.00	1350
24.00	0.375	Ell, Forged, LR, Y-60 (item #123)	~~2 Ea.~~	3 EA MR	21.33	32.00	45.60	1688
30.00	0.298	Pipe, API 5L, X-60, DSAW (item #1)	~~2858'~~	2860.3 MR	33.56	50.34	71.73	1073
24.00	0.281	Pipe, 45000 SMYS, SMLS (item #2)	~~9804'~~	9801.5 MR	37.96	56.94	81.14	948
24.00	0.312	Pipe, API 5L, X-60, DSAW (item #3)	142' ✓	142' MOR	25.64	38.46	54.81	1404
30.00	0.298	Ell, Forged, LR, Y-60 (item #4)	3 Ea. ✓	3 EA MOR	33.56	50.34	71.73	1073

		Test Fluid To Be Used	MINIMUM TEST DURATION	
Minimum Test Pressure @ Max. Elevation	600 PSIG	WATER	- UNDER 30% SMYS (1 HR. MINIMUM)	8 HOURS
Maximum Test Pressure @ Min. Elevation	855 PSIG		- 30% SMYS & OVER (8 HRS. MINIMUM)	
			- PREINSTALLATION TEST (SEE ATTACHMENT 'A', GAS STD. A-34)	

Prepared By: Mark Cabral Date: 9-6-11 For Information or Changes, Call: Redacted Approved: Redacted Date: 8/6/14

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	9:34 PM 11-4-11	Elevation at Test Point	556 FT	Min. Required Test Press. At Test Point (1)	737.37 PSIG	Max. Allowable Test Press at Test Point (4)	803.87 PSIG
Time and Date Test Ended	5:45 AM 11-5-11 AM	Max. Elevation in Test Section	873 FT	Min. Indicated Test Pressure (2)	745.00 PSIG	Max. Indicated Test Pressure (5)	798 PSIG
Actual Duration of Test	8-HOURS 11-MINUTES	Min. Elevation in Test Section	438 FT	Min. Test Pressure at Max. Elevation (3)	607.63 PSIG	Max. Test Pressure at Min. Elevation (6)	849.15 PSIG

Test Fluid Used: water — Redacted — ...rified (See Part I)

Make, Range, and Serial No. of Pressure Recording Gauge	Date Last Calibrated	Make, Range, and Serial No. of Dead Weight Tester (See Note 7)	Date Last Calibrated
Barton 0-1000 - 202-3829	10-25-11	AMETEK 25-3000 - HL-4321	10-10-11

Test Su... Redacted Date: 11-5-11 — Appr... Redacted Date: 11-28-11

PUT SCHEMATIC PIPING SKETCH ON BACK OF THIS SHEET
SHOW LOCATION OF FACILITY TESTED, MINIMUM AND MAXIMUM ELEVATION IN FEET, MILE POINTS, VALVE NUMBERS AND INCORPORATED AREAS. USE AN ADDITIONAL SHEET IF NECESSARY (SHOW REFERENCE NUMBERS ON FACE OF ALL DRAWINGS AND ATTACHMENTS). FOR STATION PIPING, FABRICATED UNITS AND SHORT SECTIONS OF PIPE, ALSO SHOW A DETAILED SKETCH OF EACH ASSEMBLY TESTED.

NOTES:
(1) Add the static head due to elevation difference (between test point and maximum elevation) to "minimum test pressure at maximum elevation" from PART I.
(2) Use lowest pressure on test gauge at any time during test.
(3) Subtract static head due to elevation difference (between test point and maximum elevation) from minimum indicated test pressure.
(4) Subtract static head due to elevation difference (between test point and minimum elevation) from "maximum test pressure at minimum elevation" from PART I.
(5) Highest pressure on test gauge at any time during test.
(6) Add static head due to elevation difference (between test point and minimum elevation) to maximum indicated test pressure.
(7) A dead weight tester is only required when testing to a pressure which produces a stress level of 90% of SMYS or greater. However, if a dead weight tester is used on any test, enter the information in the space provided above.

DISTRIBUTION
JOB FILE (AT SPONSORING ORGANIZATION)
GSM&TS RESPONSIBLE DISTRICT SUPERINTENDENT
PROJECT MANAGER/PROJECT ENGINEER
TECHNICAL & CONSTRUCTION SERVICES - ASSIGNED JOBS ONLY
CAPITAL ACCOUNTING (FOREMAN'S COPY OF JOB)
RECORDS SECTION (WC), GMS&TS
REPORT FAILURES UNDER TEST TO GAS ENGINEERING & PLANNING

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Sheet 2 of 2

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	Min. Elevation	438 Ft.	Other (Specify)	X Elev. Diff. =	PSIG
	Elev. Diff.	435 Ft.			

Pipe Specification: Size O.D.	Size W.T.	API or ASTM Grade Long Seam (ERW, DSAW, Seamless, Etc.)	Footage to Be Tested	Pipe Spec. and Footage Verified In Field	% of SMYS: At MAOP	At Min. Test Press.	At Max. Test Press.	Pressure to Give 90% SMYS
24.00	0.375	Ell, Forged, LR, Y-60 (Item #6)	8 Ea.	MOR.	21.33	32.00	45.60	1688
24.00	0.3125	Ell, Unknown (Item #7)	35 Ea.	MOR.	-	-	-	-
-	-	Sleeve, Unknown (Item #10)	2 Ea.	MOR.	-	-	-	-
30.00	0.375	Reducer, 30"x24", Unknown (Item #11)	1 Ea.	MOR.	-	-	-	-

Minimum Test Pressure @ Max. Elevation	600 PSIG	Test Fluid To Be Used: WATER	MINIMUM TEST DURATION - UNDER 30% SMYS (1 HR. MINIMUM) - 30% SMYS & OVER (8 HRS. MINIMUM) - PREINSTALLATION TEST (SEE ATTACHMENT 'A', GAS STD. A-34)	8 HOURS
Maximum Test Pressure @ Min. Elevation	855 PSIG			

Prepared By: Mark Cabral Date: 8-6-11 For Information or Changes, Call: Redacted Approved: Redacted Date: 8/6/11

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Actual Duration of Test	8-hours 11-minutes	Min. Elevation in Test Section	438 FT	Min. Test Pressure at Max. Elevation (3)	607.63 PSIG	Max. Test Pressure at Min. Elevation (6)	849.13 PSIG

Test Fluid Used: water
Pipe Specification and Footage Verified (See Part I): MOR A601

Make, Range, and Serial No. of Pressure Recording Gauge	Date Last Calibrated	Make, Range, and Serial No. of Dead Weight Tester (See Note 7)	Date Last Calibrated
Barton 0-1000 202-3829	10-25-11	AMETEK 25-3000 AL-4321	10-6-11

Redacted Date: 11-5-11 Approved: Redacted Date: 11-28-11

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