

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

1914	DADT L DESIGN DATA (TO BE DOCCADED BY DROUGHENGINGSB)														1		
PART I - DESIGN DATA (TO BE PREPARED BY PROJECT ENGINEER)  Feeder Main Number, or Station Name   Area   Division/Datrict   Job Number   Date Job Authorized																	
Feeder Main Number, Line Number, or Station Name Area Division/District														Date Job Authorized			
L-105N 2 Description of Job Include Reference Drawing Numbers, and Pipeline Mileposts								East Bay				414973	71	September 1, 2011			
Test 2 - Hydrostatically lest tie-in pipe assembly a Redacted																	
Hydrolesi	Hydrotest L-105N from MP 28.64 – 30.63 Oakland, CA (Test section 17)																
Location Class Design Factor (F) MAOP to be Established for this Piping by this Test Future Design Pressure  3 .5 198 PSIG														ź	175 psig		
STATIC HEAD DUE TO Max. Elevation 0 Ft.								Static Heart Calculation									
ELEVATION DIFFERENCE Min. Elevation 0 Ft.						.	For Water 0.433 X Elev. Diff. =							0 psig			
(WHERE APPLICABLE) Elev. Diff.					0 Ft		Other (Spe	cifv)	X Elev. Diff. :					PSIG			
Pipe Specification									Pipe Spec. and				% of SMYS	Pressure to			
Siz O.D.	Size         API or ASTM           D.         W.T.         Long Seam (ERW, DSA)						Foolaga to De Tested		Footage Verified In Field		ı,	AI IAOP	At Min. Test Press.	At Max. Test Press.	Give 90% SMYS		
30.00	0.375	API 5L X-65, DSAW			(Item#103)		43*-		<del> </del>			2.18	20.74	25.42	1463		
24.00	0.375	API 5L X-60, DSAW			(Item#106)		-51-		24.3 5.8	Carrie Contractor		0.56	17.97	22,03	1688		
30.00	0.375	Cap, Y-60		1 2	(Item#155)		Œa		-	Till		3.20	22.47	27.53	1350		
24.00	0.375	Cap, Y-60			(Item#158)		Œ			TN	THE PERSON NAMED IN	0.56	17.97	22.03	1688		
	0.375	Reducer, 30" x 24", Y		". Y-60			(Ea)			Tin		3.20	22.47	27.53	1350		
## Tare   10 miles   1																	
		The second section of the second second second second															
							1								****		
							<u> </u>										
Minimum Test Pressure @ Max. Elevation 337							PSIG		l Fluid e Used								
Minimum Test Pressure @ Max. Elevation 337							7310		te Used TER								
	est Pressure	@ Min. Eleva	tion	Date:	41				- PREINSTA	LLATIC	DN TEST (SE	ATTACHMEN	T 'A', GAS STO. A-				
Redacted				formation or Changes, Calt: Approved By: Calcal Date: k Cabral (925) 588-3640 Park Calcal 9-12						Date: 3-12-11							
Redacted 9/11/11 Mark Cabral (925) 588-3640 MARK Cabral 20-12-11  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 16-16-11									<del>i</del>								
Test Pressure Reached		10-18-11 4125AM			Elevation at Test Point		/# '		Min. Required Test Press. At Test Point (		1) PSIG Press a		Press at 1	lowable Test 405,24 I Test Point (4) PSIG			
Time and Date Test Ended		12045 PM		Max. Elevation in Test Section		18,1		Min, Indicated Test Pressure		(2)	SSS, OO Max. In PSIG Test Pro			386,90 PSIG			
		20/5	Min. Elevation In		n	A		Mn. Test P			355,00 Max. Tes		Pressure	395,80			
of Test 10 MINISTES Test Section FT at Max. Elevation (3) PSIG at Min. Elevation (6) Test Fluid Used . Pipe Specification and Foolage Verified (Sea Part I)													PSIG				
water TM-4550																	
		of Pressure R					dibrated [1			lange, and Serial No. of Dead Weight Tester (See Note 7)  Date Last Calibrated  10-10-11							
Test Supervised By: Redacted Date:										ved By: Redacted			141-432 10-10-11 Daje:				
Redacted //>-/8-							<u> </u>			Juacteu		, and		1020-11			
SHOW LOCA	MON OF FAC	<u>SKETCH ON B/</u> ILITY TESTED, BERS ON FACI	MUMINIM AN	ID MAXIN	AUM ELEVATION AND ATTACHME	IN FE	ET, MILE	POINTS, V	ALVE NUMBE IG. FABRICA	RS AND INCO	RPORA ID SHO	TED AREAS. RT SECTION	USE AN ADD S OF PIPE, AU	ITIONAL SHEET IF SO SHOW A DETAI	NECESSARY LED SKETCH		
	SEMBLY TES						~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				11274	.,					
***************************************	static head du	e lo elevation di	lference (betw	een test p	point and maximus	m elev	ation) to			<u>DISTRIBUTION</u> JOB FILE (AT SPONSORING ORGANIZATION)							
	"minimum test pressure at maximum elevation" from PART I.										GSM&TS RESPONSIBLE DISTRICT SUPERINTENDENT						
Subtract static head due to elevation difference (between test point and maximum elevation) from minimum indicated test pressure.										PROJECT MANAGER/PROJECT ENGINEER							
(4) Subtract	static head du	e lo elevation d			point and minimus	m elev	ation) from	)									
"maximum test pressure at minimum eteration" from PART I.  TECHNICAL & CONSTRUCTION SERVICES - ASSIGNED JOBS ONLY  (5) Highest pressure on test gauge at any time during test.																	
(6) Add state		elevation differe			t and minimum et	evation	i) to maxin	wm	CAF	ITAL ACCOUN	ning (	FOREMANS	COPY OF JOB	<b>)</b>			
(7) A dead v	reighi lester is	only required w			re which produces on any test, enter				REC	ORDS SECTIO	ON (WO	), GMS&T6					
	ovided above.								REP	ORT FAILURE	SUND	ERTEST TO	GAS ENGINEE	RING & PLANNING			





62-4921 (Rev. 2/04) California Gas Transmission

Sheet

of 5 PART I - DESIGN DATA (TO BE PREPARED BY PROJECT ENGINEER) Joh Number Date Job Authorized Feeder Main Number, Line Number, or Station Name 41497371 East Bay September 1, 2011 L-105N Description of Job - Include Reference Drawing Numbers, and Pipeline Mileposts Test 3 - Hydrostatically test tie-in pieces, hydrostatic test piping and existing 26" and 30" L-105N. Existing pipeline material listed; ie. pipe, elbows, sleeves are from the "Material of Record" (refer to Dwg 41497371, sheet 10 of 10) REV1: Removed 18' of Item#103 and Added 18' of Item#1 (Test section 17) Hydrotest L-105N from MP 28,64 - 30.63 Oakland, CA Design Factor (F) MAOP to be Established for this Piping by this Test Future Design Pressure Location Class 275 PSIG 198 18 Ft. Static Head Calculation STATIC HEAD DUE TO Max. Elevation 8 0 Ft. For Water 0.433 X Elev. Diff. = **PSIG ELEVATION DIFFERENCE** Min Flevation PSIG 18 Ft. Other (Specify) X Elev. Diff. = (WHERE APPLICABLE) % of SMYS Pipe Specification Pressure to Pipe Spec, and Footage Verified At Min. API or ASTM Grade Footage to Al Max. Give 90% Size O.D. WT Long Seam (ERW, DSAW, Seamless, Etc.) Be Tested In Field MAOP Test Press Test Press. SMYS 30.00 0.375 API 5L X-65, DSAW (Item#103) 43 12.18 20.74 25.42 1463 94.0 TW 0.375 1688 26,00 API 5L X-65, DSAW (Item#105) 261 10.56 17.97 22.03 25.7 TW 28 2663 (Item#113) 6.69 11.39 13.96 6.625 0.280 API 5L GRB, SMLS <u> 15.0</u> TIM 4.50 0.237 API 5L GRB, SMLS (Item#114) 274 5.37 9.14 11.20 3318 a9.1 TWI (Item#223) 30' 2.63 4.47 5.48 6780 1.05 0.113 API 5L GRB, SMLS 28.9 W (3 Ea. 22.47 1350 30.00 0.375 Elbow, Y-60, LR (Item#120) 13.20 27.53 TUM 0.375 Elbow, Y-60, LR (2 Ea) 11.44 19.47 23.86 1558 26.00 (Item#122) TW MINIMUM TEST DURATION Test Fluid 337 8 HOURS PSIG To Re Used - UNDER 30% SMYS (1 HR. MINIMUM) Minimum Test Pressure @ Max. Elevation -30% SMYS & OVER (8 HRS. MINIMUM) WATER PREINSTALLATION TEST (SEE ATTACHMENT 'A', GAS STD, A-34) Maximum Test Pressure @ Min. Elevation PSIG For Information or Changes, Call: Prepared By: Redacted Date Approved By: Dale 9/2 Redacted Mark Cabral (925) 588-3640 MAW 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 337,60 405,20 81 Min. Required Test Max. Allowable Test Test Pressure Elevation at Test FT (1) **PSIG** PSIG Press. At Test Point Press at Test Point (4) Reached Point 56,00 -181-11 Min. Indicated Max. Indicated Time and Date Max. Elevation in Test Pressure (2)PSIG **Test Pressure** (5)PSIG Test Ended Test Section 39*5B* 15500 84005 Min. Test Pressure **Actual Duration** Min. Elevation in Max. Test Pressure PSIG MUD PSIG Test Section at Max. Elevation at Min, Elevation (6)Test Fluid Used Pipe Specification and Footage Verified (See Part I) sate( M-A550 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 Clifwock o-woo WETEK 25-320 10-10-11 -10-11 Date: Date Approved By: Redacted Redacted 10-18-11 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 INCOMPORATED 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: DISTRIBUTION Add the static head due to elevation difference (between test point and maximum elevation) to JOB FILE (AT SPONSORING ORGANIZATION) "minimum test pressure at maximum elevation" from PART t. GSM&TS RESPONSIBLE DISTRICT SUPERINTENDENT Use lowest pressure on test gauge at any time during test. Subtract static head due to elevation difference (between test point and maximum elevation) from minimum indicated test pressure. PROJECT MANAGER/PROJECT ENGINEER Subtract static head due to elevation difference (between test point and minimum elevation) from "maximum lest pressure at minimum elevation" from PART I. Highest pressure on lest gauge at any time during test. TECHNICAL & CONSTRUCTION SERVICES - ASSIGNED JOBS ONLY Add stalic head due to elevation difference (between test point and minimum elevation) to maximum CAPITAL ACCOUNTING (FOREMAN'S COPY OF JOB) A dead weight lester is only required when lesting to a pressure which produces a stress level of 90% RECORDS SECTION (WC), GMS&TS



REPORT FAILURES UNDER TEST TO GAS ENGINEERING & PLANNING

of SMYS or greater. However, if a dead weight tester is used on any test, enter the information in the

space provided above.



indicated test pressure.

space provided above.

(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

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

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California Gas Transmission
(Use in Accordance with Gas Standard A 34 and GO 112-D)

of PART I - DESIGN DATA (TO BE PREPARED BY PROJECT ENGINEER) Job Number Date Job Authorized Feeder Main Number, Line Number, or Station Name Area 41497371 September 1, 2011 East Bay Description of Job - Include Reference Drawing Numbers, and Pipeline Mileposts Test 3 - Hydrostatically test tie-in pieces, hydrostatic test piping and existing 26" and 30" L-105N. Existing pipeline material listed; ie. pipe, elbows, sleeves are from the "Material of Record" (refer to Dwg 41497371, sheet 10 of 10) REV1: Removed 18' of Item#103 and Added 18' of Item#1 Hydrotest L-105N from MP 28.64 - 30.63 Oakland, CA (Test section 17) Future Design Pressure MAOP to be Established for this Piping by this Test Location Class Design Factor (F) 275 198 PSIG 18 Ft. Static Head Calculation STATIC HEAD DUE TO Max. Elevation 8 0 **PSIG ELEVATION DIFFERENCE** Ft. 0.433 X Elev. Diff. = Min. Elevation For Water 18 Ft. Other (Specify) X Elev. Diff. = **PSIG** Elev. Diff. (WHERE APPLICABLE) Pipe Specification Pipe Spec. and % of SMYS Pressure to Footage Verified At Min At Max. Give 90% APL or ASTM Grade Footage to Re Tested In Field MAOP Test Press. Test Press SMYS Long Seam (ERW, DSAW, Seamless, Etc.) O.D. WT 0.280 Elbow, GRB, LR (Item#210) (2 Ea) 6.69 11.39 13.96 2663 6.625 TW 9.14 11.20 3318 (Item#214&241) (6 Ea) 5.37 4.50 0.237 Elbow, GRB, LR · 在 · · · MIT (Item#224) 12 Ea. 2.63 4.47 5.48 6780 0.113 Elbow, 3/4" Socket Weld 1.05 MI (Ea) 6.69 11.39 13.96 2663 (Item#211) 0.280 Tee, GRB 6.625  $\overline{M}$ Tee, GRB 5.37 9.14 11.20 3318 0.237 (Item#215) ( Ea 4.50 TWI (4 Ea) 1.93 3.28 4.02 9240 0.154 Valve Tee, Mueller H-17656 (Item#222) 1.05 TIM 5,37 9.14 11.20 3318 4.50 0.237 Cap, GRB (Item#165) 4-Ea-260 TW 2.63 4.47 5.48 6780  $\leq$ l $k_{a}$ ... TW 1.05 O.H3 MINIMUM TEST DURATION Test Fluid 8 337 - UNDER 30% SMYS (1 HR. MINIMUM) HOURS Minimum Test Pressure @ Max. Elevation **PSIG** To Be Used - 30% SMYS & OVER (8 HRS. MINIMUM) WATER 413 -PREINSTALLATION TEST (SEE ATTACHMENT 'A', GAS STD. A-34) PSIG Maximum Test Pressure @ Min. Elevation For Information or Changes, Call: Approved By: Date Date 9/21/11 9-79-11 Redacted Mark Cabral (925) 588-3640 1420 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 10-18-11 33700 40520 Min. Required Test Max. Allowable Test Elevation at Test Test Pressure PSIG 1-25 AV (1) **PSIG** (4) Press. At Test Point Press at Test Point Reached 388,00 35500 -18 - W 18" Min. Indicated Max. Indicated Max, Elevation in Time and Date 2145 81 121 PSIG (5) PSIG Test Pressure Test Pressure Test Ended Test Section 355,00 8 14005,5 395,8 Min. Test Pressure Max. Test Pressure **Actual Duration** Min. Elevation in PSIG **PSIG** at Max. Elevation (3) at Min. Elevation (6) of Test **Test Section** Pipe Specification and Foolage Verified (See Part I) Test Fluid Used W-A550 Make, Range, and Serial No. of Dead Weight Tesler (See Note 7) usate( Make, Range, and Serial No. of Pressure Recording Gauge Date Last Calibrated Date Last Calibrated AMETEL 25-3000 16-16-U 10-10-6 Approved B Redacted Date Test Suner Date: |Redacted PUT SCHMANC 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. DISTRIBUTION NOTES: Add the static head due to elevation difference (between test point and maximum elevation) to JOB FILE (AT SPONSORING ORGANIZATION) "minimum test pressure at maximum elevation" from PART I. Use lowest pressure on test gauge at any time during test. GSM&TS RESPONSIBLE DISTRICT SUPERINTENDENT Subtract static head due to elevation difference (between test point and maximum elevation) from PROJECT MANAGER/PROJECT ENGINEER minimum indicated test pressure. Subtract static head due to elevation difference (between lest point and minimum elevation) from maximum test pressure at minimum elevation\* from PART I. TECHNICAL & CONSTRUCTION SERVICES - ASSIGNED JOBS ONLY Highest pressure on test gauge at any time during test. CAPITAL ACCOUNTING (FOREMAN'S COPY OF JOB) Add static head due to elevation difference (between test point and minimum elevation) to maximum



RECORDS SECTION (WC), GMS&TS



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California Gas Transmission
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Sheet of PART I - DESIGN DATA (TO BE PREPARED BY PROJECT ENGINEER) Feeder Main Number, Line Number, or Station Name Joh Number Date Job Authorized Area 41497371 September 1, 2011 East Bay Description of Job - Include Reference Drawing Numbers, and Pipeline Mileposts Test 3 - Hydrostatically test tie-in pieces, hydrostatic test piping and existing 26" and 30" L-105N. Existing pipeline material listed; ie. pipe, elbows, sleeves are from the "Material of Record" (refer to Dwg 41497371, sheet 10 of 10) REV1: Removed 18' of Item#103 and Added 18' of Item#1 Hydrotest L-105N from MP 28.64 - 30.63 Oakland, CA (Test section 17) MAOP to be Established for this Piping by this Test Future Design Pressure Location Class Design Factor (F) 275 198 **PSIG** PSIG 18 Ft. Static Head Calculation STATIC HEAD DUE TO Max Elevation 8 0 PSIG Ft. 0,433 X Elev. Diff. = **ELEVATION DIFFERENCE** Min. Flevation For Water 18 Ft. Other (Specify) X Elev. Diff. = **PSIG** WHERE APPLICABLES Elev. Diff. % of SMYS Pressure to Pipe Specification Pipe Spec, and At Min. Give 90% API or ASTM Grade Footage to Foolage Verified At Max. Re Tested In Field MACE Test Press. Test Press SMYS Long Seam (ERW, DSAW, Seamless, Etc.) on WT 0.375 Reducer, 30"x26", Y-65 (Item#200) 4 Ea 12.18 20.74 25.42 1463 TW Valve, Ball, X-60, ANSI 300 (Item#221) (TEa) 30.00 0.375 -... -\*\*\* TIM Valve, Ball, GRB, ANSI 300 (Item#202) (Ea) --\*\*\* 0.280 6,625 MIT (ZEa) 0.237 Valve, Ball, GRB, ANSI 300 (Item#201) 4.50 -.... TW 7497 22.63 47.20 788 0.3125 API 5L X-42, DSAW (Item#1) 38.51 30.00 7193' MOR API 5L X-52, DSAW (56) 18.28 31.11 38.12 975 0.3125 (Item#2) 30.00 MOR (3286<sup>^</sup> 681 26.00 0.2810 API 5L GRB, SMLS (Item#3) 26.17 44.54 54.59 MOR MINIMUM TEST DURATION Test Fluid 337 8 - UNDER 30% SMYS (1 HR. MINIMUM) HOURS Minimum Test Pressure @ Max. Elevation **PSIG** To Re Used - 30% SMYS & OVER (8 HRS, MINIMUM) WATER 413 - PREINSTALLATION TEST (SEE ATTACHMENT 'A', GAS STD. A-34) PSIG Maximum Test Pressure @ Min. Elevation For Information or Changes, Call: Prenared Rv: Approved By: Date Date 9/28/11 Redacted Mark Cabral (925) 588-3640 Ma 0-29-11 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 10-18 337.00 405,2 Min. Required Test Max. Allowable Test Test Pressure Elevation at Test **PSIG** (1) PSIG (4) Press. At Test Point Press at Test Point Reached **Point** 389 Min. Indicated ОC Max. Indicated Time and Date Max Elevation in PSIG (2)(5) PSIG Test Pressure Test Pressure Test Finded Test Section 355,0 8-4000 Min. Test Pressure Actual Duration Uin Flevation in Max Test Pressure PSIG at Max. Elevation **PSIG** Test Section (3) at Min. Elevation (6) of Test Pipe Specification and Footage Verified (See Part I) Test Floid Used W-A550 Make, Renge, and Serial No. of Pressure Recording Gauge Make, Range, and Serial No. of Dead Weight Tester (See Note 7) Date Last Calibrated Date Last Calibrated AMETERS 25-3000 HL-43 10-10-4 0-000 MFG42553 10-10-Approved By: Redacted Redacted 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: DISTRIBUTION (1) Add the static head due to elevation difference (between lest point and maximum elevation) to JOB FILE (AT SPONSORING ORGANIZATION) 'minimum test pressure al maximum elevation' from PART L GSM&TS RESPONSIBLE DISTRICT SUPERINTENDENT Use lowest pressure on test gauge at any time during test. Subtract static head due to elevation difference (between test point and maximum elevation) from PROJECT MANAGER/PROJECT ENGINEER minimum indicated test pressure. Subtract static head due to elevation difference (between test point and minimum elevation) from "maximum test pressure at minimum elevation" from PART I. TECHNICAL & CONSTRUCTION SERVICES - ASSIGNED JOBS ONLY Highest pressure on lest gauge at any time during test. Add static head due to elevation difference (between test point and minimum elevation) to maximum CAPITAL ACCOUNTING (FOREMAN'S COPY OF JOB) indicated test pressure. A dead weight tester is only required when testing to a pressure which produces a stress level of 90% RECORDS SECTION (WC), GMS&TS



of SMYS or greater. However, if a dead weight tester is used on any test, enter the information in the

space provided above.



of SMYS or greater. However, if a dead weight tester is used on any test, enter the information in the

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Sheet of PART I - DESIGN DATA (TO BE PREPARED BY PROJECT ENGINEER) Job Number Date Job Authorized Feeder Main Number, Line Number, or Station Name Area 41497371 September 1, 2011 L-105N East Bay Description of Job - Include Reference Drawing Numbers, and Pipeline Mileposts Test 3 - Hydrostatically test tie-in pieces, hydrostatic test piping and existing 26" and 30" L-105N. Existing pipeline material listed; ie. pipe, elbows, sleeves are from the "Material of Record" (refer to Dwg 41497371, sheet 10 of 10) REV1: Removed 18' of Item#103 and Added 18' of Item#1 Hydrotest L-105N from MP 28.64 - 30.63 Oakland, CA (Test section 17) Design Factor (F) MAOP to be Established for this Piping by this Test Future Design Pressure Location Class 275 198 **PSIG** PSIG 18 STATIC HEAD DUE TO Max. Elevation Ft. Static Head Calculation 8 0 PSIG **ELEVATION DIFFERENCE** Ft. 0.433 X Elev. Diff. = Min. Elevation For Water 18 (WHERE APPLICABLE) Elev. Diff. Other (Specify) X Elev. Diff. = PSIG % of SMYS Pipe Spec, and Pressure to Pipe Specification API or ASTM Grade Footage to Footage Verified At Min. At Max. Give 90% W.T. Long Seam (ERW, OSAW, Seamless, Etc.) O.D. Be Tested In Field MAOP Test Press Test Press. SMYS 2' 4.50 0.141 24000 SMYS, SMLS (Item#11) MOR. 13.16 22,41 27.46 1354 API 5L GRB, SMLS 296 4.58 7.80 9.56 3888 3.50 0.216 (Item#12) MOR. 2.375 0.154 API 5L GRB, SMLS (Item#13) 101' 4.36 7.42 9.10 4085 MAR. 1.05 0.113 GRB, SMLS (Item#14) 344 2.62 4.47 5.48 6780 MO.C. Test Fluid MINIMUM TEST DURATION Minimum Test Pressure @ Max, Elevation 337 **PSIG** To Be Used UNDER 30% SMYS (1 HR. MINIMUM) HOURS - 30% SMYS & OVER (8 HRS, MINIMUM) WATER 413 PREINSTALLATION TEST (SEE ATTACHMENT 'A', GAS STD. A-34) Maximum Test Pressure @ Min, Elevation **PSIG** For Information or Changes, Call: Prepared By: Date Approved By: Date: Redacted Mark Cabral (925) 588-3640 Mar PART 11 - 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 10-18-11 337,00 4057 Min. Required Test Max. Allowable Test Elevation at Test Test Pressure **PSIG PSIG** Reached Point Press. At Test Point (1)Press at Test Point (4)3880 6,00 Min. Indicated Max. Indicated Time and Date Max. Elevation in **PSIG PSIG** Test Ended **Test Section** Test Pressure Test Pressure (5)395,6 8-14001 45,00 **Actual Duration** Min, Elevation in Min. Test Pressure Max. Test Pressure PSIG **PSIG** of Test at Max. Elevation at Min. Elevation Test Fluid Used Pipe Specification and Footage Verified (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 10-10-U lif ma K-0-WOO MEGY2 AMEJEK, 25-3060 10-10-11 Approved Redacted Date: Redacted PUT SCHEMAND 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 DISTRIBUTION NOTES: Add the static head due to elevation difference (between test point and maximum elevation) to JOB FILE (AT SPONSORING ORGANIZATION) "minimum test pressure at maximum elevation" from PART I, Use lowest pressure on test gauge at any time during test, GSM&TS RESPONSIBLE DISTRICT SUPERINTENDENT Subtract static head due to elevation difference (between test point and maximum elevation) from minimum indicated test pressure, PROJECT MANAGER/PROJECT ENGINEER Subtract static head due to elevation difference (between test point and minimum elevation) from 'maximum lest pressure al minimum elevation" from PART L TECHNICAL & CONSTRUCTION SERVICES - ASSIGNED JOBS ONLY Highest pressure on lest gauge at any time during test. Add static head due to elevation difference (between test point and minimum elevation) to maximum CAPITAL ACCOUNTING (FOREMAN'S COPY OF JOB) indicated test pressure. A dead weight lester is only required when testing to a pressure which produces a stress level of 90% RECORDS SECTION (WC), GMS&TS





space provided above.

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

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Sheet

PART I - DESIGN DATA (TO BE PREPARED BY PROJECT ENGINEER) Job Number Date Job Authorized Feeder Main Number, Line Number, or Station Name Area 41497371 September 1, 2011 L-105N 2 East Bay Description of Job - Include Reference Drawing Numbers, and Pipeline Mileposts Test 3 - Hydrostatically test tie-in pieces, hydrostatic test piping and existing 26" and 30" L-105N. Existing pipeline material listed; ie. pipe, elbows, sleeves are from the "Material of Record" (refer to Dwg 41497371, sheet 10 of 10) REV1: Removed 18' of Item#103 and Added 18' of Item#1 Hydrotest L-105N from MP 28,64 - 30.63 Oakland, CA (Test section 17) Location Class Design Factor (F) MAOP to be Established for this Piping by this Test Fulure Design Pressure 275 198 PSIG 3 ,5 18 Ft. STATIC HEAD DUE TO Max. Elevation Static Head Calculation 8 0 **PSIG** Ft. **ELEVATION DIFFERENCE** Min. Elevation For Water 0.433 X Fley, Diff. = 18 X Elev. Diff. = PSIG Ff Other (Specify) (WHERE APPLICABLE) Elev, Diff. Pipe Specification Pipe Spec, and % of SMYS Pressure to Footage to Be Tested At Min API or ASTM Grade Footage Verified Al May Glue 90% O.D. W.T. Long Seam (ERW, DSAW, Seamless, Etc.) In Field MAOP Test Press Test Press. SMYS 20 Ea 0.375 (Item#4) MOR 18.86 32.10 39.33 945 30.00 Elbow, Y-42, LR, Forged **15** Ea 788 0.375 Elbow, GRB, LR, Forged (Item#5) 22.63 38.51 47,20 30,00  $m \circ R$ (8 Ea. 0.375 Elbow, Grade Unknown, LR MOR 26.00 (Item#6) (2 Ea. 32.10 18.86 39.33 945 30.00 0.375 Sleeve, X-42 (Item#8) MOR (8 Ea) 30.00 0.500 Sleeve, Grade Unknown (Item#9) MOR MINIMUM TEST DURATION Test Fluid 337 To Be Used - UNDER 30% SMYS (1 HR. MINIMUM) 8 HOURS Minimum Test Pressure @ Max. Elevation **PSIG** - 30% SMYS & OVER (8 HRS. MINIMUM) WATER - PREINSTALLATION TEST (SEE ATTACHMENT 'A', GAS STD. A-34) polG Maximum Test Pressure @ Min. Elevation 413 For Information or Changes, Call: Approved By: Data Prepared By: 9/29/11 Mark Cabral (925) 588-3640 9-28-11 Redacted PART II - TEST DATA (TO BE PREPARED BY PERSON SUPERVISING TEST AT TIME OF TEST) Note: Minimum lest pressure and duration are not to be charged without written approval. Time and Date 10-18-11 337,*00* 405. 8 Min. Required Test Max. Allowable Test Elevation at Test Test Pressure 4125 Am PSIG FT (1) **PSIG** (4) Press, At Test Point Press at Test Point Reached **Point** 10-18-11 3880 Min. Indicated 35%,00 Max. Indicated Time and Date Max. Elevation in 21,45 Am PSIG Test Pressure (2)(5) PSIG Test Ended **Test Section** Test Pressure @-lours 355,00 3758 Min. Test Pressure **Actual Duration** Min. Elevation in Max. Test Pressure (3) PSIG PSIG at Max. Elevation of Test **Test Section** at Min. Elevation (6) Test Fluid Used Pipe Specification and Footage Verified (See Part I) water Make, Range, and Serial No. of Dead Weight Tester (See Note 7) Make, Range, and Serial No. of Pressure Recording Gauge Date Last Calibrated Date Last Calibrated cust made a-was wife MMETELL 25-3000 HL-43 10-10-11 10-10-11 Redacted Date: Dale: Redacted Redacted 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. DISTRIBUTION NOTES: Add the static head due to elevation difference (between test point and maximum elevation) to JOB FILE (AT SPONSORING ORGANIZATION) (1) \*minimum lest pressure at maximum elevation\* from PART I. GSM&TS RESPONSIBLE DISTRICT SUPERINTENDENT Use lowest pressure on test gauge at any time during test. Subtract static head due to elevation difference (between test point and maximum elevation) from minimum indicated test pressure. PROJECT MANAGER/PROJECT ENGINEER Subtract static head due to elevation difference (between test point and minimum elevation) from "maximum test pressure at minimum elevation" from PART I. TECHNICAL & CONSTRUCTION SERVICES - ASSIGNED JOBS ONLY Highest pressure on test gauge at any time during test. Add static head due to elevation difference (between test point and minimum elevation) to maximum CAPITAL ACCOUNTING (FOREMAN'S COPY OF JOB) indicated test pressure. A dead weight tester is only required when testing to a pressure which produces a stress level of 90% RECORDS SECTION (WC), GMS&TS of SMYS or greater. However, if a dead weight tester is used on any test, enter the information in the

