



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

Feeder Main Number, Line Number, or Station Name <b>L-132A</b>	Area <b>Southern</b>	Division/District <b>Peninsula</b>	Job Number <b>41474079</b>	Date Job Authorized <b>April 19, 2011</b>
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Description of Job -- Include Reference Drawing Numbers, and Pipeline Mileposts  
**Test 2 - Tie-in pieces, hydrostatic test piping and existing 24" L-132A. Existing pipeline material listed; ie. pipe, elbows, sleeves, are from the "Material of Record" (refer to Dwg 41474079, sheet 5 of 5)**

Hydrotest L-132A from MP.0075 - 1.489 Mountain View, CA (Test section 40)

Location Class <b>3</b>	Design Factor (F) <b>.5</b>	MAOP to be Established for this Piping by this Test <b>400 PSIG</b>	Future Design Pressure <b>400 PSIG</b>
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STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE)	Max. Elevation <b>33 Ft.</b>	Static Head Calculation	
	Min. Elevation <b>5 Ft.</b>	For Water	<b>0.433 X Elev. Diff. = 12 PSIG</b>
	Elev. Diff. <b>28 Ft.</b>	Other (Specify)	<b>X Elev. Diff. = PSIG</b>

Size		API or ASTM Grade Long Seam (ERW, DSAW, Seamless, Etc.)	Footage to Be Tested	Pipe Spec. and Footage Verified In Field	% of SMYS			Pressure to Give 90% SMYS
O.D.	W.T.				At MAOP	At Min. Test Press.	At Max. Test Press.	
16.00	.3125	Pipe, API 5L, X-52, ERW (item #30)	40'	0 <i>RSC</i>	19.69	29.54	34.46	1828
24.00	.375	Pipe, API 5L, X-60, DSAW (item #29)	86'	118' <i>RSC</i>	21.33	32.00	37.33	1688
16.00	.250	Pipe, SMLS, 45,000 SMYS (item #11)	335'	0 <i>RSC</i>	28.44	42.67	49.78	1266
24.00	.3125	El, Forged, Y-52 (item #4)	7 ea.	7 <i>RSC</i>	29.54	44.31	51.69	1219
24.00	.375	El, Forged, Gr.B (item #5)	11 ea.	11 <i>RSC</i>	36.57	54.86	64.00	985
24.00	.375	El, Forged, Y-42 (item #6)	2 ea.	2 <i>RSC</i>	30.48	45.71	53.33	1182
24.00	.375	El, Forged, Y-52 (item #7)	7 ea.	7 <i>RSC</i>	24.62	36.92	43.08	1463

Minimum Test Pressure @ Max. Elevation <b>600 PSIG</b>	Test Fluid To Be Used <b>WATER</b>	MINIMUM TEST DURATION - UNDER 30% SMYS (1 HR. MINIMUM) - 30% SMYS & OVER (8 HRS. MINIMUM) - PREINSTALLATION TEST (SEE ATTACHMENT 'A', GAS STD. A-34)	<b>8 HOURS</b>
Maximum Test Pressure @ Min. Elevation <b>700 PSIG</b>			

Prepared By: <b>Redacted</b>	Date: <b>05/08/2011</b>	For Information or Changes, Call: <b>Redacted</b>	Approved By: <b>Redacted</b>	Date: <b>7/14/11 (4)</b>
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**PART II - TEST DATA (TO BE PREPARED BY PERSON SUPERVISING TEST AT TIME OF TEST)**  
 Dan Dawson

Note: Minimum test pressure and duration are not to be changed without written approval.

Time and Date Test Pressure Reached 5-9-11 1000 am	Elevation at Test Point <b>7 FT</b>	Min. Required Test Press. At Test Point (1) <b>610 PSIG</b>	Max. Allowable Test Press at Test Point (4) <b>699 PSIG</b>
Time and Date Test Ended 5-9-11 1800 pm	Max. Elevation in Test Section <b>30 FT</b>	Min. Indicated Test Pressure (2) <b>620 PSIG</b>	Max. Indicated Test Pressure (5) <b>623 PSIG</b>
Actual Duration of Test <b>8 hrs</b>	Min. Elevation in Test Section <b>5 FT</b>	Min. Test Pressure at Max. Elevation (3) <b>610 PSIG</b>	Max. Test Pressure at Min. Elevation (6) <b>624 PSIG</b>

Test Fluid Used  
**Water**

Pipe Specification and Footage Verified (See Part I)  
**Above**

Make, Range, and Serial No. of Pressure Recording Gauge <b>CPL 1703 0-1000 PSI</b>	Date Last Calibrated <b>5/2/11</b>	Make, Range, and Serial No. of Dead Weight Tester (See Note 7) <b>AMETEK 2845 0-3500 PSI</b>	Date Last Calibrated <b>11-29-10</b>
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Test Supervised By: <b>Redacted</b>	Date: <b>7-14-11</b>	Approved By: <b>Redacted</b>	Date: <b>7-13-11</b>
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**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.

<b>NOTES:</b>	<b>DISTRIBUTION</b>
(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.	JOB FILE (AT SPONSORING ORGANIZATION)
(2) Use lowest pressure on test gauge at any time during test.	GSM&TS RESPONSIBLE DISTRICT SUPERINTENDENT
(3) 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 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
(5) Highest pressure on test gauge at any time during test.	CAPITAL ACCOUNTING (FOREMAN'S COPY OF JOB)
(6) Add static head due to elevation difference (between test point and minimum elevation) to maximum indicated test pressure.	RECORDS SECTION (WC), GSM&TS
(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.	REPORT FAILURES UNDER TEST TO GAS ENGINEERING & PLANNING

① original document signed 6-23-11  
 ② original document signed 5-9-11  
 ③ original document signed 5/18/11  
 ④ original document signed on 6/18/11



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

Feeder Main Number, Line Number, or Station Name <b>L-132A</b>		Area <b>Southern</b>	Division/District <b>Peninsula</b>	Job Number <b>41474079</b>	Date Job Authorized <b>April 19, 2011</b>			
Description of Job -- Include Reference Drawing Numbers, and Pipeline Mileposts <b>Test 2 - Tie-in pieces, hydrostatic test piping and existing 24" &amp; 16" L-132A. Existing pipeline material listed; ie. pipe, elbows, sleeves, are from the "Material of Record" (refer to Dwg 41474079, sheet 5 of 5)</b>								
Hydrotest L-132A from MP .0075 - 1.489 Mountain View, CA (Test section 40)								
Location Class <b>3</b>	Design Factor (F) <b>.5</b>	MAOP to be Established for this Piping by this Test <b>400 PSIG</b>			Future Design Pressure <b>400 PSIG</b>			
STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE)		Max. Elevation <b>33 Ft.</b>	Static Head Calculation		For Water <b>12 PSIG</b>			
		Min. Elevation <b>5 Ft.</b>	Other (Specify)		X Elev. Diff. = <b>PSIG</b>			
		Elev. Diff. <b>28 Ft.</b>						
Pipe Specification			Footage to Be Tested	Pipe Spec. and Footage Verified In Field	% of SMYS			Pressure to Give 90% SMYS
Size O.D.	W.T.	API or ASTM Grade Long Seam (ERW, DSAW, Seamless, Etc.)			At MAOP	At Min. Test Press.	At Max. Test Press.	
24.00	.250	Pipe, X-42 DSAW (item #12, 12A, 12B)	2062'	2062'	45.71	68.57	80.00	788
24.00	.3125	Pipe, X-52 DSAW (item #13)	612'	612'	29.54	44.31	51.69	1219
24.00	.250	Pipe, X-52 SMLS (item #14)	40'	40'	36.92	55.38	64.62	975
24.00	.281	Pipe, X-42 SMLS (item #15)	16'	16'	40.67	61.01	71.17	886
24.00	.281	Pipe, 40,000 SMYS, SMLS (item #16)	4403'	4400'	42.70	64.06	74.73	843
24.00	.286	Pipe, X-42, DSAW (item #17)	46'	46'	39.96	59.94	69.93	901
24.00	.3125	Pipe, X-52, DSAW (item #18)	253'	253'	29.54	44.31	51.69	1219
Minimum Test Pressure @ Max. Elevation		<b>600 PSIG</b>		Test Fluid To Be Used <b>WATER</b>	MINIMUM TEST DURATION			<b>8 HOURS</b>
Maximum Test Pressure @ Min. Elevation		<b>700 PSIG</b>			- UNDER 30% SMYS (1 HR. MINIMUM) - 30% SMYS & OVER (8 HRS. MINIMUM) - PREINSTALLATION TEST (SEE ATTACHMENT 'A', GAS STD. A-34)			
Prepared By: <b>Redacted</b>	Date: <b>05/8/2011</b>	For Information or Changes, Call: <b>Redacted</b>		Approved By: <b>Redacted</b>	Date: <b>7/14/11 (4)</b>			

**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	5-9-11 10 am	Elevation at Test Point	7 FT	Min. Required Test Press. At Test Point (1)	610 PSIG	Max. Allowable Test Press at Test Point (4)	699 PSIG
Time and Date Test Ended	5-9-11 1800 pm	Max. Elevation in Test Section	30 FT	Min. Indicated Test Pressure (2)	620 PSIG	Max. Indicated Test Pressure (5)	623 PSIG
Actual Duration of Test	8 hrs	Min. Elevation in Test Section	5 FT	Min. Test Pressure at Max. Elevation (3)	610 PSIG	Max. Test Pressure at Min. Elevation (6)	624 PSIG
Test Fluid Used <b>Water</b>			Pipe Specification and Footage Verified (See Part I) <b>Above</b>				
Make, Range, and Serial No. of Pressure Recording Gauge <b>CPL 1703 0-1000 PSI</b>		Date Last Calibrated <b>5-2-11</b>	Make, Range, and Serial No. of Dead Weight Tester (See Note 7) <b>AMETEK 2845 0-3500 PSI</b>			Date Last Calibrated <b>11-29-10</b>	
Test Supervised By: <b>Redacted</b>	Date: <b>7-14-11</b>	Approved By: <b>Redacted</b>	Date: <b>7-13-11</b>				

**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:**

- Add the static head due to elevation difference (between test point and maximum elevation) to "minimum test pressure at maximum elevation" from PART I.
- 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.
- Subtract static head due to elevation difference (between test point and minimum elevation) from "maximum test pressure at minimum elevation" from PART I.
- 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 indicated test pressure.
- 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

① original document signed 6-23-11 (3) original document signed 5/18/11  
 ② original document signed 7-14-11 (4) original document signed 5/18/11  
 5-9-11



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Location Class <b>3</b>	Design Factor (F) <b>.5</b>	MAOP to be Established for this Piping by this Test <b>400 PSIG</b>		Future Design Pressure <b>400 PSIG</b>				
STATIC HEAD DUE TO ELEVATION DIFFERENCE (WHERE APPLICABLE)		Max. Elevation <b>33 Ft.</b>	Static Head Calculation		12 PSIG			
		Min. Elevation <b>5 Ft.</b>	For Water 0.433 X Elev. Diff. =					
		Elev. Diff. <b>28 Ft.</b>	Other (Specify)		PSIG			
Pipe Specification			Footage to Be Tested	Pipe Spec. and Footage Verified In Field	% of SMYS			Pressure to Give 90% SMYS
Size O.D.	W.T.	API or ASTM Grade Long Seam (ERW, DSAW, Seamless, Etc.)			At MAOP	At Min. Test Press.	At Max. Test Press.	
24.00	.375	Pipe, Gr.B, SMLS (item #19)	54'	59' <i>RSL</i>	36.57	54.86	64.00	985
24.00	.250	Sleeve, Type B, X-42 (item #21)	1 ea	1 <i>RSL</i>	45.71	68.57	80.00	788
24.00	.312	Sleeve, Type B, X-42 (item #22)	2 ea.	2 <i>RSL</i>	36.63	54.95	64.10	983
24.00	.375	Sleeve, Type B, ATSM 242, X-50 (item #24)	2 ea.	2 <i>RSL</i>	25.60	38.40	44.80	1406
4.50	.237	Pipe, API 5L, Gr.B SMLS (item #25)	3'	43' <i>DSL</i>	10.85	16.27	18.99	3318
24.00	.500	Pipe, API 5L, X-60, DSAW	4'	4' <i>DSL</i>	16.00	24.00	28.00	2250
Minimum Test Pressure @ Max. Elevation			<b>600 PSIG</b>	Test Fluid To Be Used <b>WATER</b>	MINIMUM TEST DURATION			<b>8 HOURS</b>
Maximum Test Pressure @ Min. Elevation			<b>700 PSIG</b>		- UNDER 30% SMYS (1 HR. MINIMUM) - 30% SMYS & OVER (8 HRS. MINIMUM) - PREINSTALLATION TEST (SEE ATTACHMENT 'A', GAS STD. A-34)			
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Actual Duration of Test	<b>8 hrs</b>	Min. Elevation in Test Section	<b>5 FT</b>	Min. Test Pressure at Max. Elevation (3)	<b>610 PSIG</b>	Max. Test Pressure at Min. Elevation (6)	<b>624 PSIG</b>
Test Fluid Used <b>Water</b>			Pipe Specification and Footage Verified (See Part I) <b>Above</b>				
Make, Range, and Serial No. of Pressure Recording Gauge <b>CPL 1703 0-1000 PSI</b>		Date Last Calibrated <b>5-2-11</b>	Make, Range, and Serial No. of Dead Weight Tester (See Note 7) <b>AMETEK 2845 0-3500 PSI</b>			Date Last Calibrated <b>11-29-10</b>	
Test Supervised By: <b>Redacted</b>		Date: <b>7-14-11</b>	Approved By: <b>Redacted</b>		Date: <b>7-13-11</b>		

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