Hydrostatic Test Program Update

November 22, 2011

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Summary of 2011 Program

Pressure Test Records Validation

Priority 1 Mileage to be Tested in 2012

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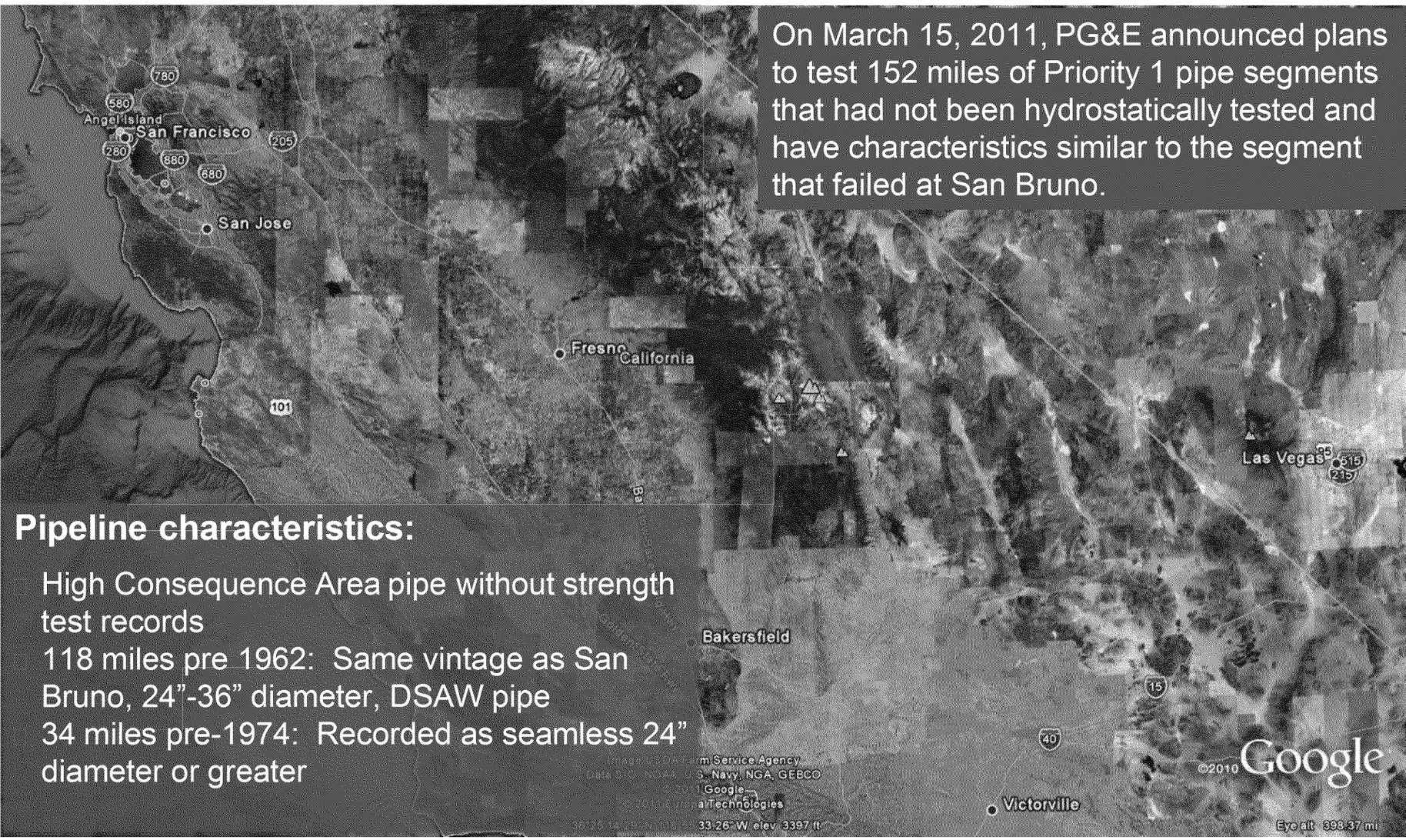
Planning for 2012

2011 Program Scope



On March 15, 2011, PG&E announced plans to test 152 miles of Priority 1 pipe segments that had not been hydrostatically tested and have characteristics similar to the segment that failed at San Bruno.

Pipeline characteristics:

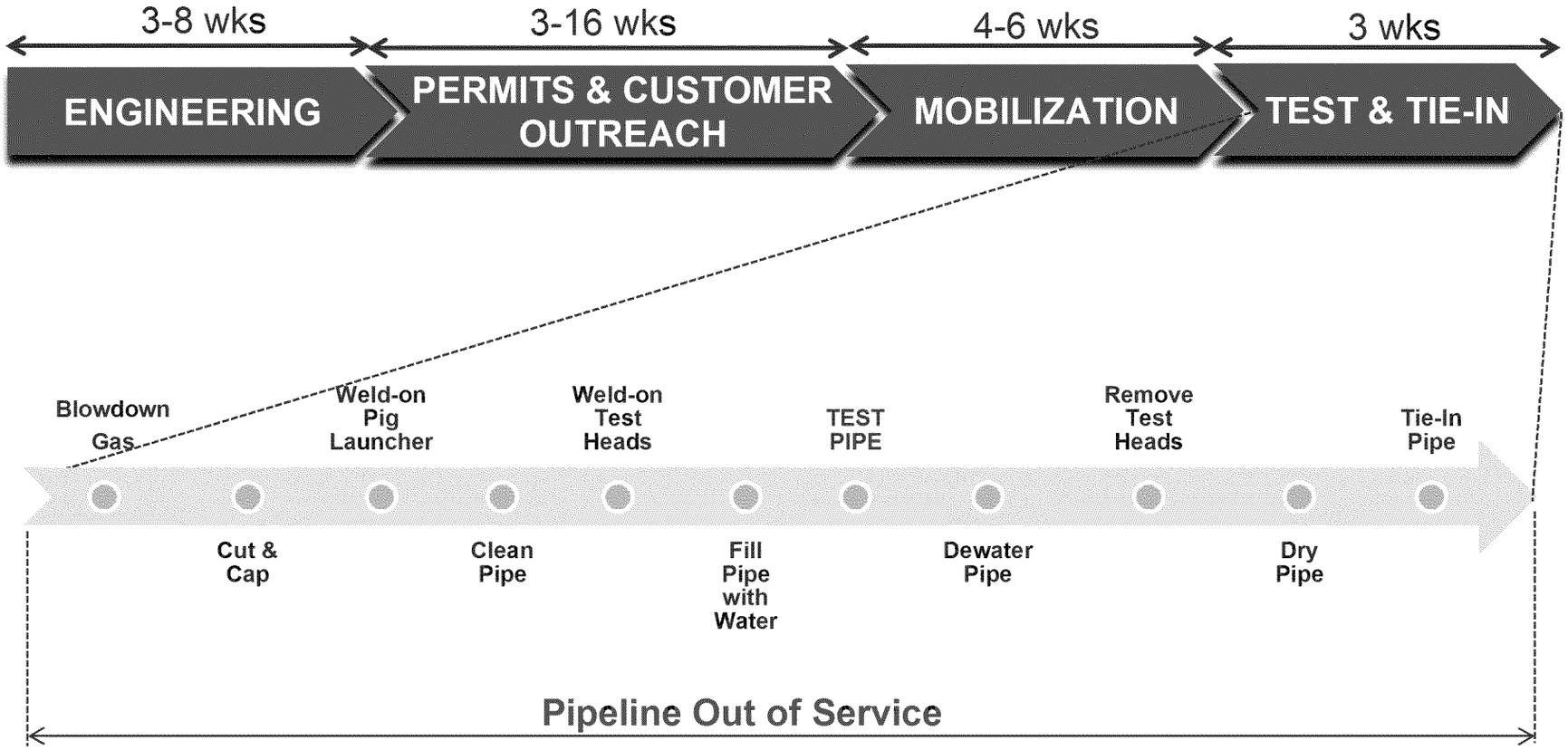
- High Consequence Area pipe without strength test records
- 118 miles pre 1962: Same vintage as San Bruno, 24”-36” diameter, DSAW pipe
- 34 miles pre-1974: Recorded as seamless 24” diameter or greater

Purpose of Hydrostatic Testing

- Validate the ability of the pipeline to operate safely at its maximum operating pressure
- Remove or prove the absence of flaws that could cause the pipeline to rupture at its maximum operating pressure
- Establish a predictable margin of safety against failure at the maximum operating pressure

Hydrostatic Testing Process

Time required to plan and conduct a Hydrostatic Test varies depending on engineering complexity and permitting requirements



Water management required higher than expected resource and time commitments

- Pipeline cleaning process required to meet discharge requirements
- Staging of tanks to manage water requires large footprint

Minimizing Service Interruptions

A significant effort has been made to minimize gas service interruptions during testing by using Compressed Natural Gas (CNG)

- Largest noncore customers and Power Plants are most impacted because CNG cannot support these loads

Summary of 2011 Program

- As of November 22nd, PG&E has conducted 94 tests covering over 158 miles of transmission pipeline
- We currently plan to conduct 5 more tests through mid-December
- Of the 94 tests, all but 10 included spike tests
- By the end of the year, we expect to test approximately 165 miles of transmission pipeline

PG&E expects to test or verify approximately 145 Priority 1 miles by the end of 2011

	PRIORITY 1 MILES	TOTAL MILES
Total Miles Hydrostatically Tested in 2011	102.3	164.9
Total Mileage with Records Verified	42.2	42.2
Total Miles Covered in 2011 Hydrostatic Test Program*	**144.5**	**207.1**

* PG&E is waiting on environmental permits for one test that could be completed in December that would increase the Priority 1 miles completed to 146 miles and the total miles completed to approximately 209 miles

March 15 Plan vs Actual

Route No	Priority 1 Miles Targeted	Priority 1 Miles with Verified Test Records	Priority 1 Miles for Testing in 2011	Actual Miles for Testing in 2011
L-021A	0.09	0.09	0.00	0.00
L-101	0.29	0.11	0.18	4.04
L-105A	3.86	1.71	2.16	3.00
L-105A-1	0.00	0.00	0.00	0.00
L-105C	1.57	0.00	1.57	1.77
L-105N	4.29	0.81	3.48	3.53
L-107	1.86	1.86	0.00	0.00
L-109	1.38	0.00	0.00	0.00
L-114	0.06	0.00	0.06	0.06
L-131	4.53	1.21	3.32	6.02
L-132	30.86	0.00	27.52	35.67
L-132A	0.81	0.00	0.81	1.45
L-147	0.96	0.00	0.96	3.38
L-153	19.73	5.21	13.83	14.34
L-191	3.95	0.02	3.94	4.13
L-300A	38.36	18.92	17.74	36.53
L-300A-1	0.61	0.00	0.61	1.46
L-300B	33.43	11.75	21.46	30.94
L-301G	0.02	0.02	0.00	0.00
L-400	0.74	0.00	0.74	4.46
L-400-3	0.87	0.00	0.87	4.46
SP3	0.49	0.49	0.00	0.00
SP5	3.05	0.00	3.05	4.80
0821-01	0.002	0.002	0.00	0.00
Other*	0.00	0.00	0.00	4.89
	151.82	**42.20**	**102.30**	**164.93**

* Additional ~ 5 Miles of pipeline, not included in the March 15th filing, is planned for test in 2011

Route No	Test Miles Planned in 2011
L-0211-01	0.74
L-105A-1	0.004
L-148	3.03
L-303	1.12
	4.89

Pressure Test Records Validation

During the engineering and planning process, PG&E identified and verified existing pressure test records for more than 42 miles of the 152 Priority 1 miles

Identify Potential Records
- Conduct initial review for records during hydrostatic test planning

Review Records Found
- Conduct secondary review of records by MAOP verification team

Verify Records Found
- Conduct third party quality control review to provide final decision on validity of records

Test	Line No.	City
T-1	L-21A	Sonoma County
T-4	L-101	Mountain View
T-6	L-101	Millbrae
T-8	L-105A	Albany
T-18	L-107	Livermore
T-61	L-300A	Kern County
T-91	L-301G	Hollister
T-95	L-SP3	Concord
T-97	L-0821-01	San Jose
T-113	L-101	Mountain View
T-12	L-105N	Hayward
T-21	L-131	Fremont
T-58	L-300A	Kern County
T-59	L-300A	Kern County
T-69	L-300A	San Jose
T-66	L-300A	Hollister
T-50	L-300A	Topock
T-111	L-153	Newark
T-88	L-300B	San Martin
T-53	L-300A	Barstow
T-78	L-300B	Daggett
T-83	L-300B	Bakersfield
T-99	1816-01	Watsonville
T-100	1816-01	Watsonville
T-98	1816-01	Watsonville
T-110	191	Antioch

Priority 1 Mileage To Be Tested in 2012

PG&E was unable to test all of the Priority 1 segments in 2011 and is planning to test the following segments in 2012*

Test Segment	Line	Location	Priority 1 Mileage	Reason test moved to 2012	Mitigation
T-25B	132	Santa Clara	0.581	Unable to complete test before winter operations needed pipeline	Pipeline operated at 20% below MAOP
T-37, T-38, T-39B	132	San Francisco	1.709	Work on Line 132 in South San Francisco did not allow these segments to be tested	Pipeline operated at 20% below MAOP
T-47C	153	Oakland	0.586	Unable to complete test before winter operations needed pipeline	Pipeline operated at 20% below MAOP
T-44	153	Oakland	.086	Overhead freeway crossing, infeasible to test safely, recommended for replacement	Pipeline operated at 20% below MAOP
T-114	109	Mountain View	0.991	Test segment near multiple replacement jobs scheduled for 2012 and is better for community to do work together	Pipeline operated at 20% below MAOP
N/A	132	San Bruno	1.1	This segment has been permanently removed from service.	Not Applicable

* PG&E also plans to hydrostatically test 0.5 Priority 1 miles in compressor and regulating stations that require more detailed engineering than was possible in 2011

Hydrostatic Test Outcomes

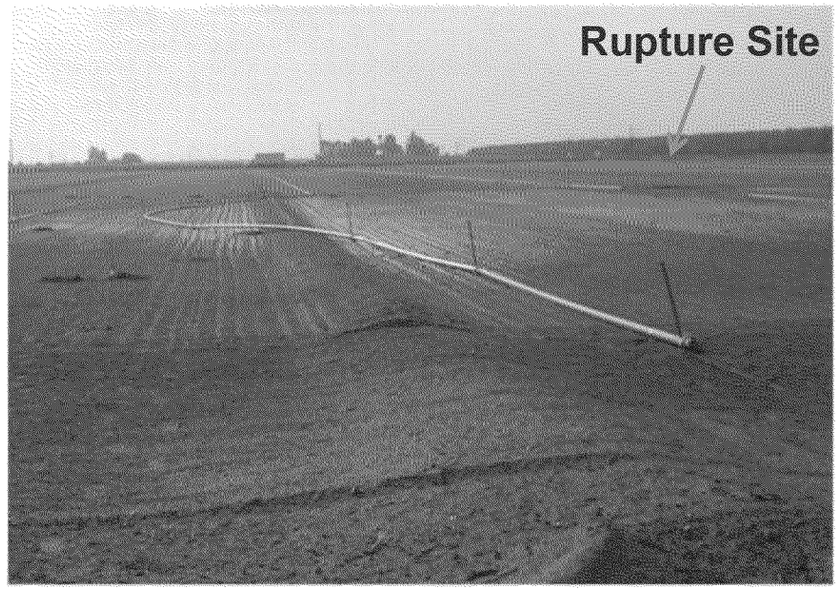
PG&E conducted 94 hydrostatic tests covering more than 158 miles of transmission pipeline

Every test concluded safely, even after three events:

- **Two tests had pipeline ruptures, which were replaced within 4 days after rupture**
- **One test had a small leak, which was repaired within 2 days after being located**

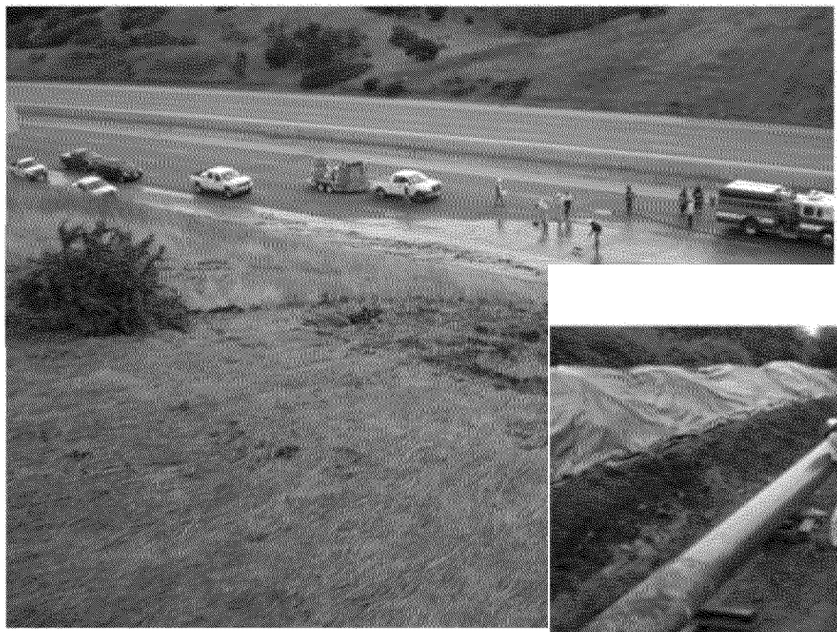
All three pipeline segments have now been repaired and successfully retested

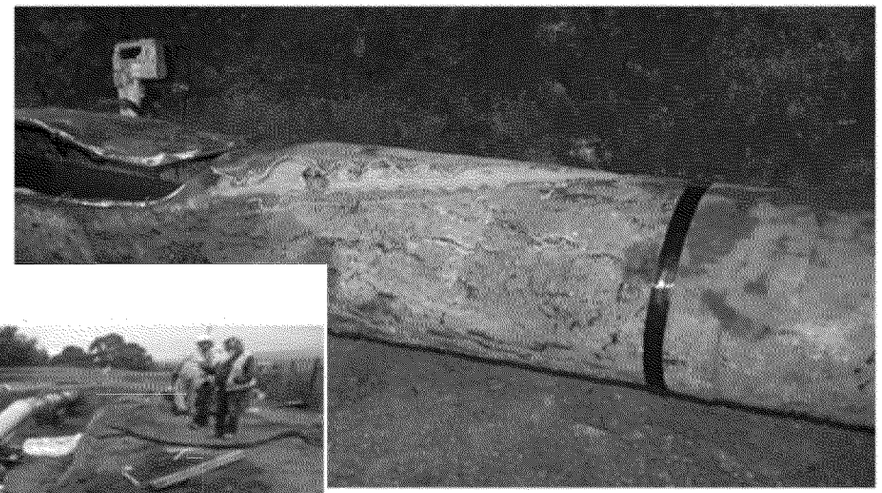
Line 300B Rupture in Bakersfield

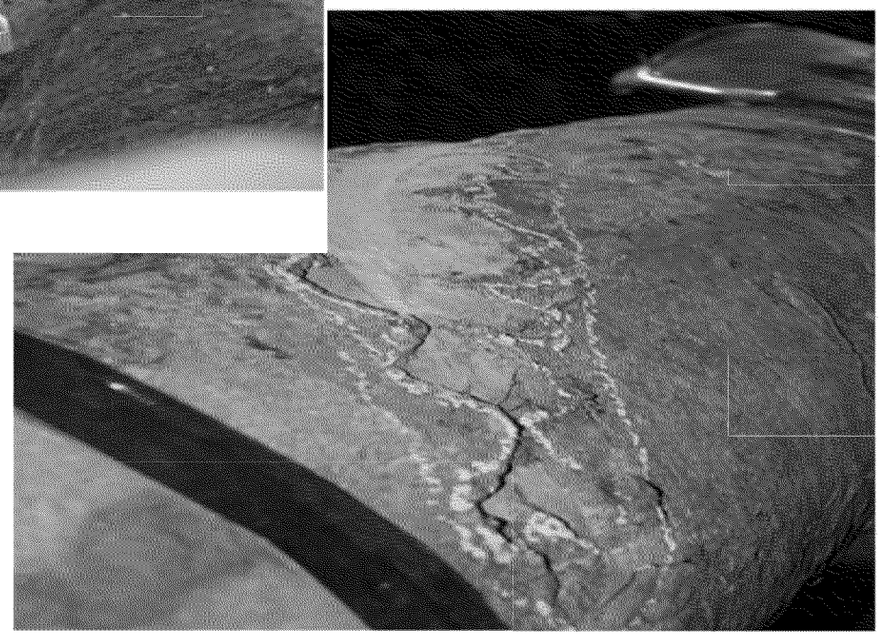


- 34” DSAW
- 998 psig at rupture (757 MAOP)
- Rupture at 95% SMYS
- Seam Failure - Undergoing analysis
- Replaced with 100’ of new pipe
- Passed new hydrostatic test

Line 132 Rupture in Woodside

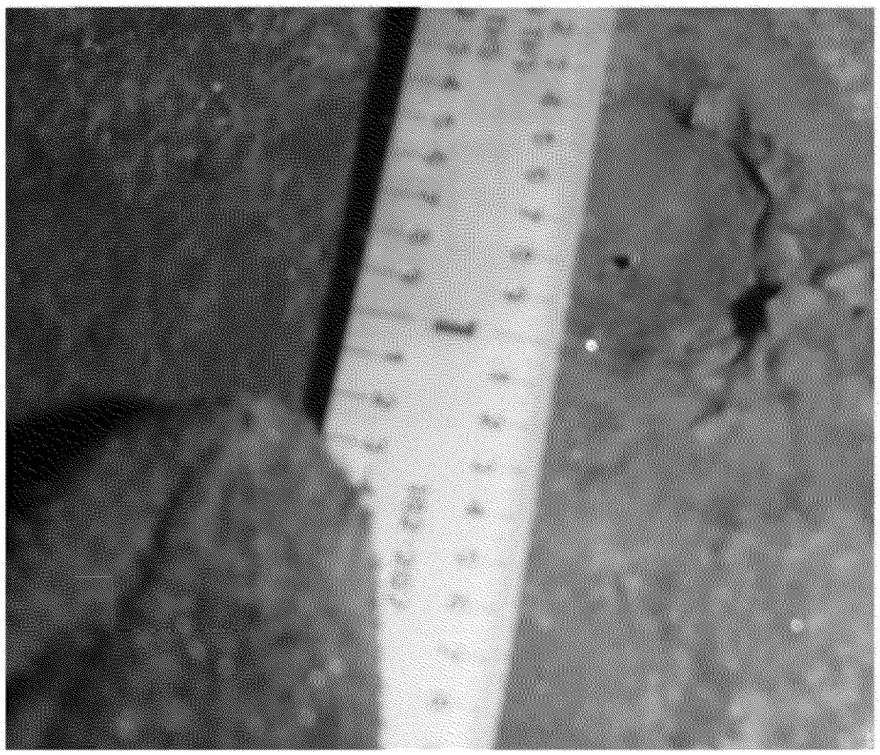






- 24” Seamless
- 550 psig at rupture (400 MAOP)
- Mechanical damage from equipment
- Replaced with 60’ of new pipe
- Passed new hydrostatic test

Line 132 Leak in Palo Alto



- 24” Seamless
- 525 psig at leak (400 MAOP)
- Leak caused by corrosion pit
- Repaired by welding full encirclement sleeve on pipe
- Passed new hydrostatic test

Redacted

Over 185 miles of pipeline are planned for hydrostatic testing in 2012 as part of the Pipeline Safety Enhancement Plan.

Work Streams	2012	2013	2014	Phase 1
Strength Testing	185 miles	204 miles	158 miles	**783***

* *Includes Mileage for Testing in 2011 and some additional mileage not yet scheduled*