



National Transportation Safety Board

Safety Issue #2

- Evaluation of In-Line Inspection Information



Significant Events Timeline for Olympic Pipeline In-Line Inspections

- 1991 Magnetic Flux Tool
- 1994 Water Treatment Plant Construction
- 1996 Magnetic Flux Tool
- 1997 Caliper Tool



1996 Magnetic Flux Tool Inspection Report

Distance to Rupture	Anomaly Reported
3' upstream	possible wrinkle bend
11' downstream	possible mill/mechanical 23% wall loss defect
11' downstream	possible mash



1997 Caliper Tool Inspection Report Near The Rupture

- 0.45” sharp anomaly reported near the eventual rupture area



OLYMPIC PIPE LINE COMPANY

LINALOG DIG INFORMATION

DIRECTIONS TO DIG SITE

FROM ^{ENROUTE} ~~100-2~~ RUN ¹⁹⁷ ~~100-2~~

Drawing # FE-1

Pipeline Segment FE-AL 16"

Line Sheet S - 100-2

M.P. 16.0

Joint Length 23'

Defect % 23

Position 1 O'clock

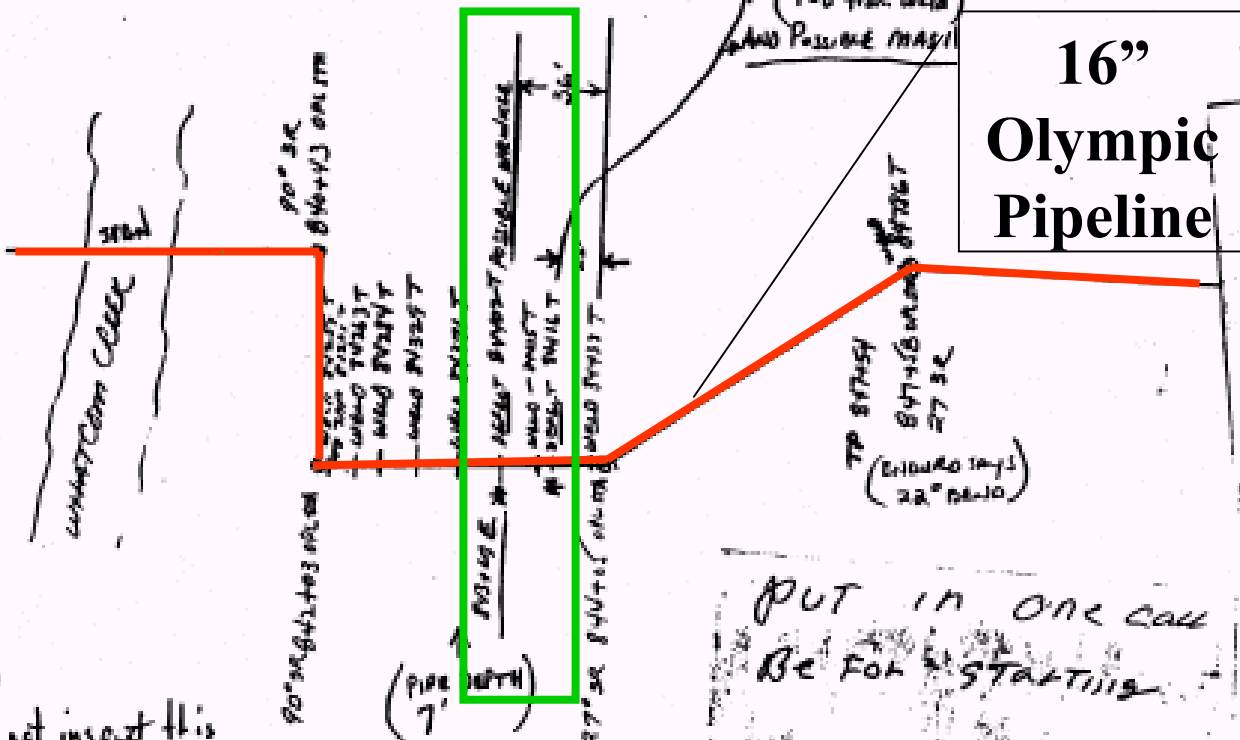
Detail:

Defect Length 0.4"

*FE 2 WELDS
4' apart*

0000092

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AIB



**16"
Olympic
Pipeline**

BILL L. EVANS
Chief Operator
Water Treatment Plant
(206) 878-6552



**City of
Bellingham**
2221 Pacific St.
Bellingham, WA 98226

35401
AT BOT SILVER BEACH
WATER PLANT
MP 16

ONE CALL
WATER LINES ON
TOP OF PIPE

**PUT IN ONE CALL
BE FOR STARTING**
BACK HOE
EXTEND A HOE

491
Did not inspect this location.
Tubercle possible mill/mach 23% (min)
Endure 45 sharp (less than repairable)

RIK.
(Differences to notes)
K10martplg/DIG2

AFE 9

23% wall loss defect



O.P.L. Cover 83"
842+85

72" Waterline

16"
Olympic
Pipeline

PZ 842+08
O.P.L. 16"

72" Steel Waterline
Cover 47"



OLYMPIC PIPE LINE COMPANY

LINALOG DIG INFORMATION

DIRECTIONS TO DIG SITE

FROM ^{ENROUTE} ~~100-1~~ RUN ¹⁹⁷ ~~100-2~~

Drawing # FE-1

Pipeline Segment FE-AL 16"

Line Sheet S - 100 - 7

M.P. 16.0

Joint Length 23'

Defect % 23
Defect Length 0.4'

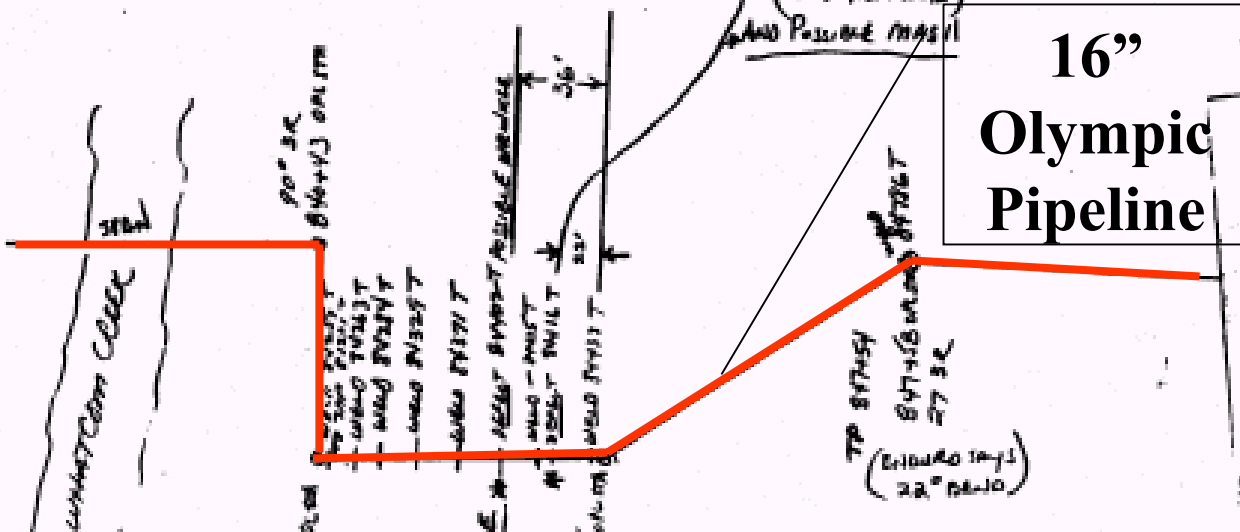
Position 1 O'clock

Detail:

FE 2 WELDS
4' apart

0000092

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AKB



16"
Olympic
Pipeline

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Chief Operator
Water Treatment Plant
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City of Bellingham
2221 Pacific St.
Bellingham, WA 98226

35201
AT BOT SILVER BEACH
WATER PLANT
MP 16

ONE CALL
WATER LINES ON
TOP OF ONE

197
Did not inspect this location.
Tubercle possible mill/mach 23% (min)
Endure 45 sharp (less than repairable)
RIK.
(Differences to notes)
K10marplg/DIG2

PUT IN ONE CALL
BE FOR STARTING
BACK HOE
EXTEND A HOE

A FE 9

Reassessment Notes-July 97

- Did not inspect this location;
- Tuboscope [magnetic flux tool company] possible mill/mechanical 23% (**min risk**)
- Enduro [caliper tool company] .45 sharp (**less than repairable**)
- Difficult area to access



In-line pipeline inspection data along with excavation activity that occurred in 1993 and 1994 were sufficient to justify excavation and examination of the pipeline in the area of reported anomalies.





National Transportation Safety Board