

Inspection Report
Bracelet Probe™ Inspection
(Customer Name)

Gallery # 1, # 2 and # 3

PICA: Bracelet Probe Final Report

(Customer Address)

PICA USA
Denver, Colorado USA

| | |
|-------------------------|--|
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| Inspection Dates | March 6-13, 2024 |
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Inspection Test Site Information

| Bracelet Probe™ Inspection | | |
|--|--|---------------------|
| Site information | | |
| | | Comments |
| Date Inspected: | March 6-13, 2024 | |
| Site ID: | Gallery # 1, #2, and #5 | |
| Location: | XXX | XXX |
| GPS or Google map coordinates: | XXX | |
| Pipe Size: | 14 and 18 inches | 1991 = 28 years old |
| Material Type: | Ductile Iron | |
| Class: | Pressure Class 53 (Record Drawings) | Provided by Client |
| Nominal Wall Thickness: | 14" = 0.420" 18" = 0.440" | (Record Drawings) |
| Lining Details: internal | Cement Mortar | |
| Coating Details: external | Factory brown coating | |
| Excavation Depth: | NA | |
| Scan Length: | Various | |
| Scan performed in Flow Direction: | Yes | |
| Weather: | Not applicable, inside | |
| Excavation Wetness: | Not applicable, inside | |
| Soil Type: | Not applicable, inside | |
| Photos Taken: | Yes | |
| Piping painted, and rubber coated after buffing: | Yes | |
| Other observations: | | |

Note: Pipe classes used throughout this report are in accordance with ANSI/AWWA standards.

See Pipe Class/Thickness table at end of Appendix-3

Inspection Results

The report is divided into 6 days of scanning. Each day has been delegated to a certain section of piping. This has been listed with the Gallery number and direction location (North – South). PICA was supplied with a Plan View and Elevation Map of the areas to inspect. As information was related to (Company) the inspection plan was adjusted accordingly.

Ultrasonic Thickness (UT) measurements were taken at a few selected locations based on Bracelet Probe scan data. The lowest UT measurement found on the pipe has been listed in the following 6 Tables with a location description column for that individual pipe. This individual pipe inspection has also been designated a Pipe Report #.

Additional UT measurements were also performed next to the flange on these pipes, which covered an area from the flange outwards 4 inches and covered around the circumference of the pipe. Any additional UT areas have also been listed. These also cover the bottom flange on the vertical pipes.

The following scale is used for wall loss description: (based on the nominal wall thickness)

Minor: up to - 20% depth. (Could be caused by mill tolerance)

Moderate: 21% - 40% depth. (Likely caused by pitting corrosion)

Advanced: 41% - 70% depth. (Likely caused by pitting corrosion)

Severe Corrosion: 71% - 100% depth. (Likely caused by pitting corrosion)

BP Report # 1 with the calibration pipe has been completed and attached. It can be used as a reference for the type of information which is gathered for each pipe. All information is kept on file for each pipe. BP Report # 1 will also explain how the pipe was scanned and the technology background. As mentioned in BP Report #1, the pipes have been marked up with Circumferential and Axial distances. These markings can also be seen in the digital pictures shown later in this report. The areas which were chosen for UT inspection had the external coating buffed off for inspection. After the UT inspection these areas were painted black and recoated.

Three pipes have been chosen to show as an example the information used by the technician analyzing the data. These three pipes are PR#15, PR#23, and PR#2 and are described with the information at the end of this report.

Gallery 2 (South end) - Day 1

| Pipe Size | Pipe Report # | Location Description | Low UT thickness readings (inch) | % Wall loss | Description | Near Flange: Low UT thickness readings (inch) |
|---|---------------|----------------------|--|-------------|----------------------------------|---|
| 14" | 2 | Basin 4 - V11 | 0.105 | 75% | Severe Corrosion | 0.105 same as Scan |
| 18" | 3 | Basin 4 - MPS10 | 0.416 | 6% | Minor Corrosion / Mill tolerance | Minor corrosion < 10% |
| 18" | 4 | Basin 3 - MPS10 | 0.411 | 7% | Minor Corrosion / Mill tolerance | Minor corrosion < 10% |
| 14" | 5 | Basin 3 - H9 | 0.378 | 10% | Minor Corrosion / Mill tolerance | Minor corrosion < 10% |
| 14" | 6 | Basin 4 - C8 | 0.361 | 14% | Minor Corrosion / Mill tolerance | Minor corrosion < 10% |
| 14" | 7 | Basin 3 - C8 | 0.355 | 15% | Minor Corrosion / Mill tolerance | Minor corrosion < 10% |
| 14" | 8 | Basin 4 - H9 | 0.380 | 10% | Minor Corrosion / Mill tolerance | not available |
| | | | | | | |
| | | | | | | |
| Additional UT Inspection by Flange | | | Area of coverage: Flange to 4" high | | | |
| | | | | | | |
| 14" | | Basin 4 - V10 | 0.308 | 27% | Moderate corrosion | |
| 14" | | Basin 3 - V10 | 0.187 | 55% | Advanced corrosion | |
| | | | | | | |
| Visual Inspection | | | | | | |
| | | | | | | |
| 14" | | Basin 4 - V9 | Leak | 100% | Severe corrosion | Also 0.137" by flange |
| | | | | | | |
| 14" nominal = 0.420" | | | | | | |
| 18" nominal = 0.440" | | | | | | |

Gallery 2 (North end) - Day 2

| Pipe Size | Pipe Report # | Location Description | Low UT thickness readings (inch) | % Wall loss | Description | Near Flange: Low UT thickness readings (inch) |
|---|---------------|----------------------|----------------------------------|-------------|----------------------------------|---|
| 14" | 9 | Basin 3 - V1 | 0.381 | 9% | Minor Corrosion / Mill tolerance | Minor corrosion < 10% |
| 14" | 10 | Basin 3 - V2 | 0.355 | 15% | Minor Corrosion / Mill tolerance | Minor corrosion < 10% |
| 14" | 11 | Basin 3 - H2 | 0.393 | 6% | Minor Corrosion / Mill tolerance | 0.405 |
| 14" | 12 | Basin 3 - C3 | 0.366 | 13% | Minor Corrosion / Mill tolerance | not available |
| 18" | 13 | Basin 3 - MPS3 | 0.410 | 7% | Minor Corrosion / Mill tolerance | Minor corrosion < 10% |
| 18" | 14 | Basin 3 - MPS2 | 0.392 | 12% | Minor Corrosion / Mill tolerance | Minor corrosion < 10% |
| 14" | 15 | Basin 3 - V4 | 0.256 | 39% | Moderate Corrosion | Minor corrosion < 10% |
| 14" | 16 | Basin 3 - V3 | 0.360 | 14% | Minor Corrosion / Mill tolerance | Minor corrosion < 10% |
| Additional UT Inspection by Flange | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 14" nominal = 0.420" | | | | | | |
| 18" nominal = 0.440" | | | | | | |

Gallery 2 (North end) - Day 3

| Pipe Size | Pipe Report # | Location Description | Low UT thickness readings (inch) | % Wall loss | Description | Near Flange: Low UT thickness readings (inch) |
|---|---------------|----------------------|--|-------------|---------------------------------------|--|
| 14" | 17 | Basin 4 - V1 | 0.410 | 2% | Minor Corrosion / Mill tolerance | see below |
| 14" | 18 | Basin 4 - H1 | 0.379 | 9% | Minor Corrosion / Mill tolerance | not available |
| 14" | 19 | Basin 4 - C1 | 0.317 | 24% | Moderate Corrosion - numerous pitting | |
| 14" | 20 | Basin 4 - V2 | 0.371 | 11% | Minor Corrosion / Mill tolerance | see below |
| 14" | 21 | Basin 4 - V3 | 0.363 | 14% | Minor Corrosion / Mill tolerance | see below |
| 14" | 22 | Basin 4 - H2 | 0.393 | 6% | Minor Corrosion / Mill tolerance | 0.400 |
| 14" | 23 | Basin 4 - V4 | 0.279 | 33% and 45% | Moderate to Advanced Corrosion | see below |
| 14" | 24 | Basin 4 - V5 | 0.365 | 13% | Minor Corrosion / Mill tolerance | see below |
| | | | | | | |
| | | | | | | |
| Additional UT Inspection by Flange | | | Area of coverage: Flange to 4" high | | | |
| | | | | | | |
| 14" | | Basin 4 - V5 | 0.355 | 15% | Minor Corrosion / Mill tolerance | |
| 14" | | Basin 4 - V4 | 0.232 | 45% | Advanced corrosion | This area had an additional 15 inches of UT inspection from the flange |
| 14" | | Basin 4 - V3 | Leak | 100% | Severe corrosion | |
| 14" | | Basin 4 - V2 | 0.406 | 3% | Minor Corrosion / Mill tolerance | |
| 14" | | Basin 4 - V1 | 0.410 | 2% | Minor Corrosion / Mill tolerance | Visual: Threads are showing |
| | | | | | | |
| 14" nominal = 0.420" | | | | | | |
| 18" nominal = 0.440" | | | | | | |

Gallery 1 (South end) - Day 4

| Pipe Size | Pipe Report # | Location Description | Low UT thickness readings (inch) | % Wall loss | Description | Near Flange: Low UT thickness readings (inch) |
|---|---------------|----------------------------|--|-------------|----------------------------------|---|
| 14" | 25 | Basin 2 - C9 | 0.383 | 9% | Minor Corrosion / Mill tolerance | 0.410 |
| 14" | 26 | Basin 2 - H9 | 0.353 | 16% | Minor Corrosion / Mill tolerance | 0.393 |
| 14" | 27 | Basin 1 - H9 | 0.397 | 5% | Minor Corrosion / Mill tolerance | 0.450 |
| 14" | 28 | Basin 1 - C9 | 0.440 | 0% | Minor Corrosion / Mill tolerance | NA - out of reach |
| 14" | 29 | Basin 1-2: RAS10 | 0.388 | 8% | Minor Corrosion / Mill tolerance | 0.398 |
| 14" | 30 | Basin 1-2: RAS9 | 0.373 | 11% | Minor Corrosion / Mill tolerance | 0.405 |
| 14" | 31 | Basin 2 - H9 North side | 0.375 | 11% | Minor Corrosion / Mill tolerance | 0.430 |
| Additional UT Inspection by Flange | | | Area of coverage: Flange to 4" high | | | |
| 14" | | Basin 1 - V9 | 0.050 | 88% | Severe corrosion | |
| 14" | | Basin 1 - V10 | 0.229 | 45% | Advanced corrosion | |
| 14" | | Basin 1 - V11 | 0.190 | 54% | Advanced corrosion | |
| 14" | | Basin 2 - V9 | 0.070 | 83% | Severe corrosion | |
| 14" | | Basin 2 - V10 | 0.248 | 40% | Advanced corrosion | |
| 14" | | Basin 2 - V11 | 0.125 | 70% | Advanced corrosion | |
| 14" | | Basin 2 - V8 | 0.377 | 10% | Minor Corrosion / Mill tolerance | |
| 14" nominal = 0.420" | | | | | | |
| 14" nominal = 0.420" | | | | | | |

Gallery 1 (North end) - Day 5

| Pipe Size | Pipe Report # | Location Description | Low UT thickness readings (inch) | % Wall loss | Description | Near Flange: Low UT thickness readings (inch) |
|---|---------------|----------------------|--|-------------|----------------------------------|---|
| 14" | 32 | Basin 2 - C2 | 0.368 | 12% | Minor Corrosion / Mill tolerance | 0.398 |
| 14" | 33 | Basin 1 - C2 | 0.389 | 7% | Minor Corrosion / Mill tolerance | 0.400 |
| 14" | 34 | Basin 1 - H3 | 0.386 | 8% | Minor Corrosion / Mill tolerance | 0.440 |
| 14" | 35 | Basin 1 - V4 | 0.420 | 0% | Minor Corrosion / Mill tolerance | see below |
| 14" | 36 | Basin 1 - V3 | 0.426 | 0% | Minor Corrosion / Mill tolerance | see below |
| 14" | 37 | Basin 2 - V3 | 0.375 | 11% | Minor Corrosion / Mill tolerance | see below |
| 14" | 38 | Basin 2 - V1 | 0.393 | 6% | Minor Corrosion / Mill tolerance | see below |
| 14" | 39 | Basin 1 - V1 | 0.374 | 11% | Minor Corrosion / Mill tolerance | see below |
| 14" | 40 | Basin 1 - V2 | 0.395 | 6% | Minor Corrosion / Mill tolerance | see below |
| 14" | 41 | Basin 1 - H2 | 0.368 | 12% | Minor Corrosion / Mill tolerance | 0.429 |
| Additional UT Inspection by Flange | | | Area of coverage: Flange to 4" high | | | |
| | | | | | | Average wall |
| 14" | | Basin 1 - V1 | 0.381 | 8% | Minor Corrosion / Mill tolerance | 0.410 |
| 14" | | Basin 1 - V2 | 0.441 | NA | Minor Corrosion / Mill tolerance | 0.480 |
| 14" | | Basin 1 - V3 | 0.347 | 17% | Minor Corrosion / Mill tolerance | 0.480 |
| 14" | | Basin 1 - V4 | 0.390 | 7% | Minor Corrosion / Mill tolerance | 0.410 |
| 14" | | Basin 2 - V1 | 0.440 | NA | Minor Corrosion / Mill tolerance | 0.480 |
| 14" | | Basin 2 - V2 | 0.470 | NA | Minor Corrosion / Mill tolerance | 0.490 |
| 14" | | Basin 2 - V3 | 0.480 | NA | Minor Corrosion / Mill tolerance | 0.500 |
| 14" | | Basin 2 - V4 | 0.230 | 45% | Advanced corrosion | |
| 14" nominal = 0.420" | | | | | | |
| 18" nominal = 0.440" | | | | | | |

Gallery 3 - Day 6

| Pipe Size | Pipe Report # | Location Description | Low UT thickness readings (inch) | % Wall loss | Description | Near Flange: Low UT thickness readings (inch) |
|--|---------------|----------------------|----------------------------------|--------------------------|-------------------------------------|---|
| 14" | 42 | Basin 5 - C9 | 0.370 | 12% | Minor Corrosion / Mill tolerance | 0.355 = 15% |
| 14" | 43 | Basin 5 - H9 | 0.420 | 0% | Minor Corrosion / Mill tolerance | 0.435 |
| 14" | 44 | Basin 5 - V1 | 0.377 | 10% | Minor Corrosion / Mill tolerance | see below |
| 14" | 45 | Basin 5 - V2 | 0.410 | 2% | Minor Corrosion / Mill tolerance | see below |
| 14" | 46 | Basin 5 - H2 | 0.367 | 13% | Minor Corrosion / Mill tolerance | 0.440 |
| 14" | 47 | Basin 5 - C2 | 0.330 | 21% | Moderate corrosion | 0.332 |
| 14" | 48 | Basin 5 - V4 | 0.359 | 15% | Minor Corrosion / Mill tolerance | see below |
| Additional UT Inspection by Flange | | | Area of coverage: | Flange to 4" high | | |
| | | | | | | Average wall |
| 14" | | Basin 5 - V1 | 0.334 | 20% | Minor corrosion- on tapered edge | no corrosion on pipe (0.420) |
| 14" | | Basin 5 - V2 | 0.300 | 29% | Moderate corrosion- on tapered edge | no corrosion on pipe (0.415) |
| 14" | | Basin 5 - V3 | 0.264 | 37% | Moderate corrosion | 0.410 |
| 14" | | Basin 5 - V4 | 0.420 | 0% | Minor Corrosion / Mill tolerance | 0.480 |
| 14" | | Basin 5 - V5 | 0.326 | 22% | Moderate corrosion- on tapered edge | no corrosion on pipe (0.427) |
| 14" | | Basin 5 - V9 | 0.127 | 70% | Severe corrosion | Visual: Leaking at threads |
| 14" | | Basin 5 - V10 | 0.353 | 16% | Minor Corrosion / Mill tolerance | 0.430 |
| 14" | | Basin 5 - V11 | 0.260 | 38% | Moderate corrosion | 0.430 |
| Note: There are 2 bolts on the support beam next to B5-H2 which are loose. These have been marked with arrows and labeled with a yellow marker. | | | | | | |
| 14" nominal = 0.420" | | | | | | |
| 18" nominal = 0.440" | | | | | | |

Digital Pictures of Types of Piping

The following pictures show the 5 Main groups of piping: MPD Header, Vertical Discharge, Cell Inlet, MPS – Mixing Pump Suction, and the RAS line



The top picture shows an example of the MPD Header and the bottom picture shows the Cell Inlet piping.

Digital Pictures of Types of Piping



The picture above shows an example of the Vertical Discharge piping.

Digital Pictures of Types of Piping



The pictures above show an example of the 18" MPS – Mixing Pump Suction piping.

Digital Pictures of Types of Piping



The pictures above show an example of the RAS piping.

Inspection Test Site Details

Example Information for Day 2; for Gallery 2:
Pipe Report # 15: Basin 3: Vertical 4

The Zero Foot Reference (ZFR) was set on the pipe, as shown in Figure A1. The ZFR was 0 foot 10 inches from the inside of the bottom end flange. Five scans were performed from 0" to +48.00". Note: Further set up details can be found in BP Report # 1.

Bracelet Probe™ (BP) data for this pipe was labeled as follows:

| Bracelet Probe™ Inspection | | | | |
|-----------------------------------|--------------|---------------------------------|---------------|------------------------------|
| Scan Information | | | | |
| Scan Identification | Probe Center | Circumference Distance (inches) | Scan Distance | Comments |
| S01-01 | 0 | 48.0 to 0 to 4.5 | 5' 11" | ZFR is 10 inches from flange |
| S02-01 | 9 | 4.5 to 13.5 | 5' 11" | ZFR is 10 inches from flange |
| S03-01 | 18 | 13.5 to 22.5 | 5' 11" | ZFR is 10 inches from flange |
| S04-01 | 27 | 22.5 to 31.5 | | Not scanned - inaccessible |
| S05-01 | 36 | 31.5 to 40.5 | 5' 11" | ZFR is 10 inches from flange |
| S06-01 | 45 | 40.5 to 48.0 | 5' 11" | ZFR is 10 inches from flange |
| | | | | |
| | | | | |
| | | | | |

All scans were performed with the flow direction. On the following pages the screen captures show some examples of the data scans. Some of these scans have also been labeled with arrows providing extra information.

Digital pictures showing the marking of the pipe have also been included.

Summary of Inspection Results: PR#15: Basin 3: Vertical 4

Table-1, Summary of Thickness Results

| Circumference Location | Axial Distance | Specified Nominal | UT Low Reading | Scan Number |
|------------------------|----------------|-------------------|----------------|-------------|
| 0" | 0' | 0.420" | 0.256" | S01-01 |
| 0" | 0' | 0.420" | 0.260 | S01-01 |
| 45" | 5' | 0.420" | 0.408" | S06-01 |

Ultrasonic Thickness (UT) measurements at a few selected locations based on BP scan data are listed in Table 1.

UT = Ultrasonic Thickness.

The lowest UT measurement was 0.256" at 0' 0".

The pipe at this location exhibits Moderate internal corrosion (pitting) at 39%.

Calculation of % wall loss is against the record nominal, of Class 53, (0.420" wall).

The following scale is used for wall loss description:

Minor: up to - 20% depth. (Could be caused by mill tolerance)

Moderate: 21% - 40% depth. (Likely caused by pitting corrosion)

Advanced: 41% - 70% depth. (Likely caused by pitting corrosion)

Severe Corrosion: 71% - 100% depth. (Likely caused by pitting corrosion)

Screen Captures: PR#15: Basin 3: Vertical 4

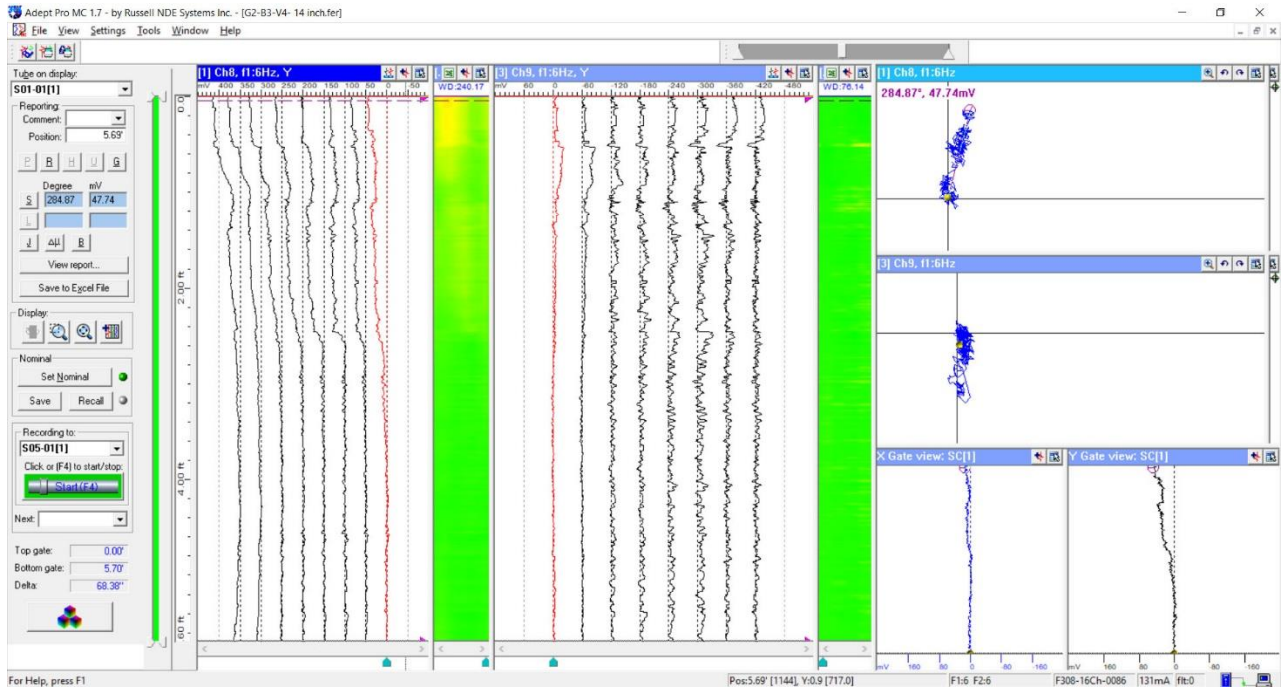
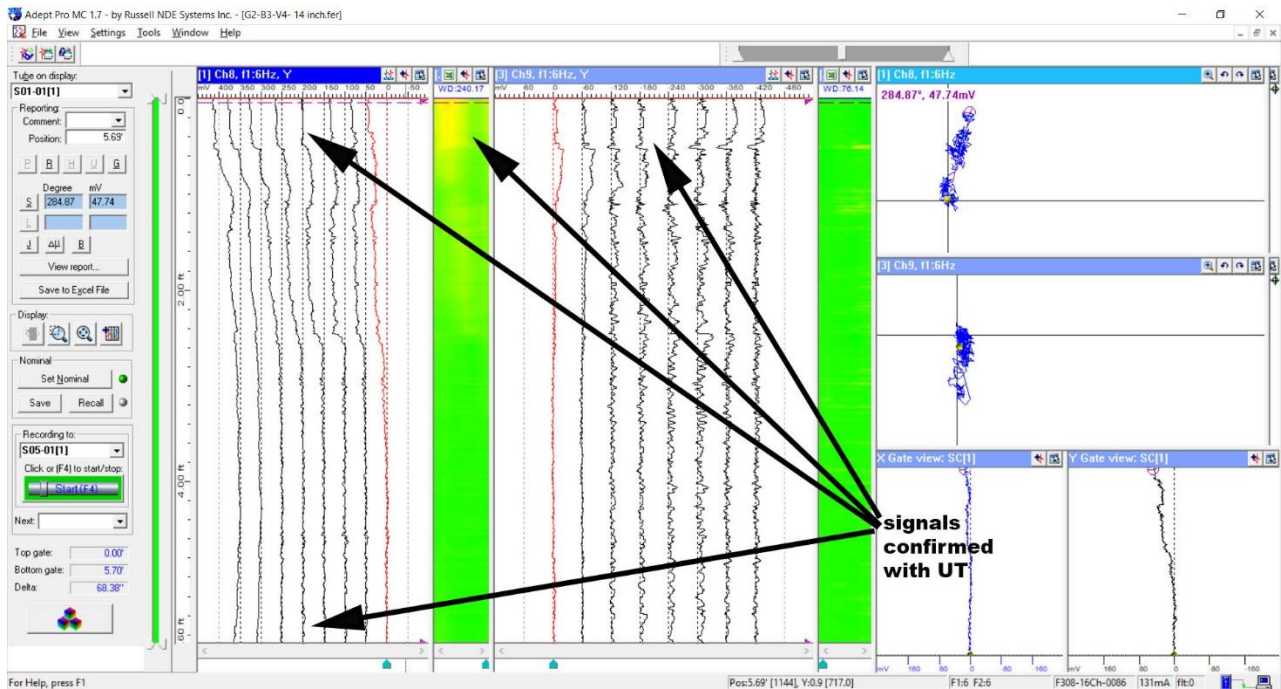


Figure 1 (Scan S01-01) BP data for a scan covering 48.0" to 0" to 4.5" circumference. (Probe centered at +0" position)



Note: The image above has been labeled showing some of the signals confirmed with UT.

Screen Captures: PR#15: Basin 3: Vertical 4

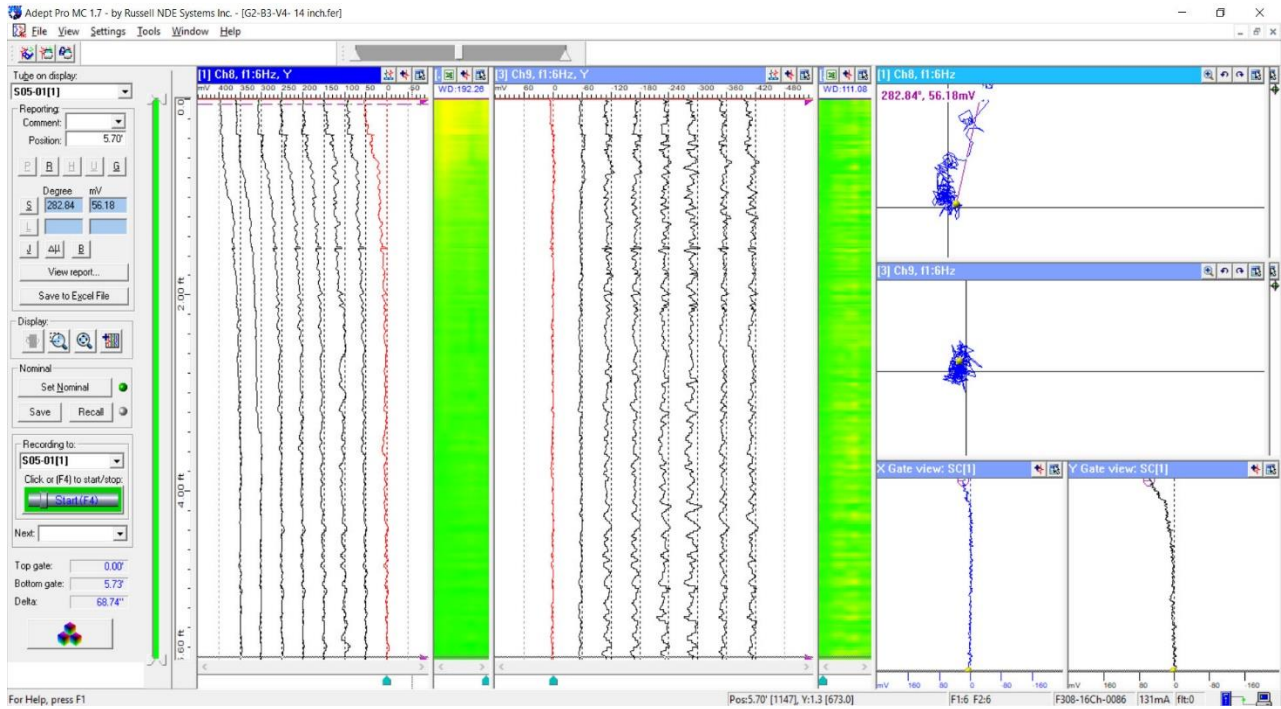


Figure 2. (Scan S05-01) BP data for a scan covering 31.5" to 40.5" circumference (Probe centered at 36" position).

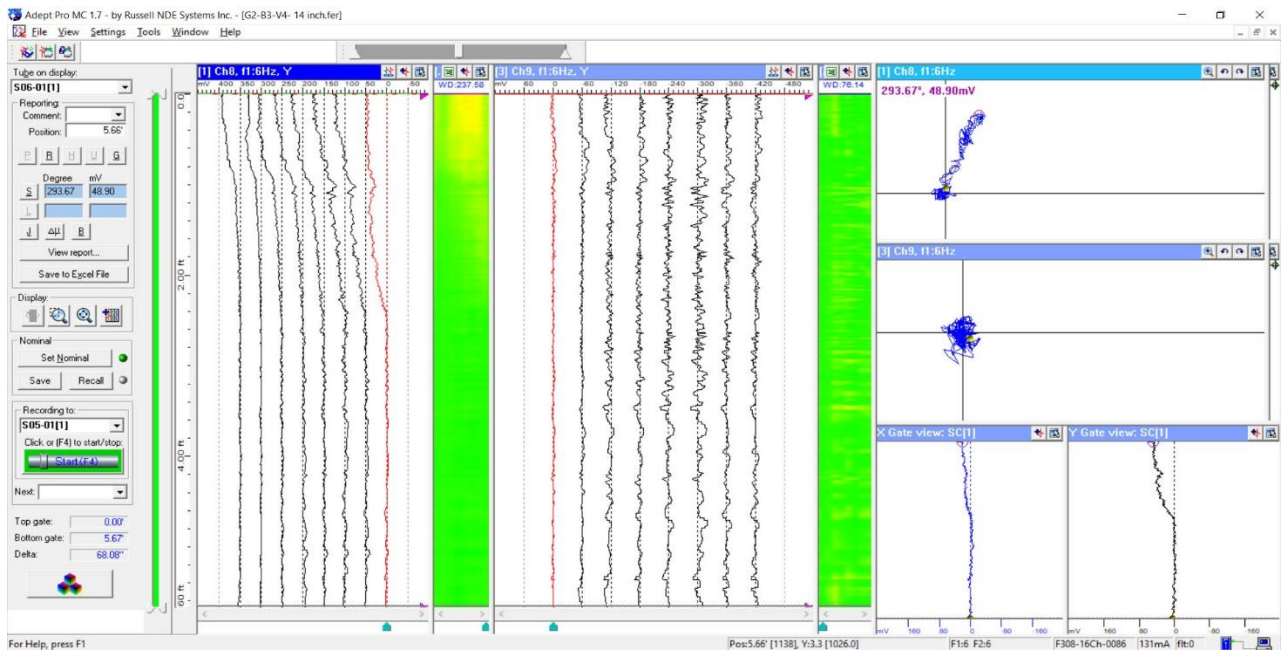


Figure 3. (Scan S06-01) BP data for a scan covering 40.5" to 49.5" circumference (Probe centered at 45" position).

Digital Pictures: PR#15: Basin 3: Vertical 4



Figure A1. The picture above shows an overview of the pipe.

Inspection Test Site Details

Example Information for Day 3; for Gallery 2:
Pipe Report # 23: Basin 4: Vertical 4

The Zero Foot Reference (ZFR) was set on the pipe, as shown in Figure A2. The ZFR was 0 foot 10 inches from the inside of the bottom end flange. Four scans were performed from 0" to +48.00". Note: Further set up details can be found in BP Report # 1.

Bracelet Probe™ (BP) data for this pipe was labeled as follows:

| Bracelet Probe™ Inspection | | | | |
|-----------------------------------|--------------|---------------------------------|---------------|------------------------------|
| Scan Information | | | | |
| Scan Identification | Probe Center | Circumference Distance (inches) | Scan Distance | Comments |
| S01-01 | 0 | 48.0 to 0 to 4.5 | 5' 11" | ZFR is 10 inches from flange |
| S02-01 | 9 | 4.5 to 13.5 | 5' 11" | ZFR is 10 inches from flange |
| S03-01 | 18 | 13.5 to 22.5 | | Not scanned - inaccessible |
| S04-01 | 27 | 22.5 to 31.5 | | Not scanned - inaccessible |
| S05-01 | 36 | 31.5 to 40.5 | 5' 11" | ZFR is 10 inches from flange |
| S06-01 | 45 | 40.5 to 48.0 | 5' 11" | ZFR is 10 inches from flange |
| | | | | |
| | | | | |
| | | | | |

All scans were performed with the flow direction. On the following pages the screen captures show some examples of the data scans. Some of these scans have also been labeled with arrows providing extra information.

Digital pictures showing the marking of the pipe have also been included.

Summary of Inspection Results: PR#23: Basin 4: Vertical 4

Table-1, Summary of Thickness Results

| Circumference Location | Axial Distance | Specified Nominal | UT Low Reading | Scan Number |
|------------------------|----------------|-------------------|----------------|-------------|
| 0" | 4" | 0.420" | 0.279" | S01-01 |
| 9" | 4" | 0.420" | 0.293" | S02-01 |
| 13" | 4'7" | 0.420" | 0.284" | S02-01 |
| 36" | 3'0" | 0.420" | 0.380" | S05-01 |
| 36" | 4'2" | 0.420" | 0.287" | S05-01 |
| 36" | 5'6" | 0.420" | 0.400" | S05-01 |
| 45" | 3" | 0.420" | 0.288" | S06-01 |

Ultrasonic Thickness (UT) measurements at a few selected locations based on BP scan data are listed in Table 1.

UT = Ultrasonic Thickness.

The lowest UT measurement indicated at first was 0.279" at 4" and after further investigation 0.232" at 1".

The pipe at this location exhibits Moderate internal corrosion (pitting) at 33% and 45% with the used above low UT measurements.

Calculation of % wall loss is against the record nominal, of Class 53, (0.420 wall").

The following scale is used for wall loss description:

Minor: up to - 20% depth. (Could be caused by mill tolerance)

Moderate: 21% - 40% depth. (Likely caused by pitting corrosion)

Advanced: 41% - 70% depth. (Likely caused by pitting corrosion)

Severe Corrosion: 71% - 100% depth. (Likely caused by pitting corrosion)

After finding the low of 0.279" at 0'4" in the area of moderate internal corrosion as seen in the BP data, a larger UT area was requested to be inspected in this area. The UT area was made up, using a grid pattern, from the flange, axial direction up 15 inches and covered the circumferential direction 7" at the 0" mark and 3" at the 9" mark. This is shown in the following digital pictures.

Table-2, Summary of additional UT Measurements

Table 2 has been added showing the results of this UT inspection. The lowest UT measurement found here was 0.232" which is a 45% wall loss.

The axial distance starts at the flange and goes up 15 inches. Each square in the grid is 1.5" x 1.5".

Table 2

UT area at Circumference 0" location

| Axial Distance | UT Low Reading | UT Low Reading | UT Low Reading | UT Low Reading | UT Low Reading |
|----------------|----------------|----------------|----------------|----------------|----------------|
| 13.5" | 0.277" | 0.275" | 0.270" | 0.279" | 0.281" |
| 12" | 0.376" | 0.377" | 0.372" | 0.383" | 0.384" |
| 10.5" | 0.292" | 0.288" | 0.292" | 0.305" | 0.300" |
| 9" | 0.315" | 0.307" | 0.300" | 0.296" | 0.308" |
| 7.5" | 0.332" | 0.335" | 0.317" | 0.316" | 0.306" |
| 6" | 0.341" | 0.354" | 0.315" | 0.297" | 0.295" |
| 4.5" | 0.330" | 0.303" | 0.315" | 0.357" | 0.381" |
| 3.0" | 0.366" | 0.396" | 0.345" | 0.405" | 0.430" |
| 1.5" | 0.380" | 0.480" | 0.375" | 0.360" | 0.341" |

UT area at Circumference 9" location

| Axial Distance | UT Low Reading | UT Low Reading |
|----------------|----------------|----------------|
| 13.5" | 0.365" | 0.306" |
| 12" | 0.294" | 0.293" |
| 10.5" | 0.232" | 0.276" |
| 9" | 0.255" | 0.246" |
| 7.5" | 0.253" | 0.258" |
| 6" | 0.269" | 0.262" |
| 4.5" | 0.315" | 0.316" |
| 3.0" | 0.368" | 0.353" |
| 1.5" | 0.329" | 0.320" |

Note: The Axial distances used for these tables are started from the bottom flange.

Screen Captures: PR#23: Basin 4: Vertical 4

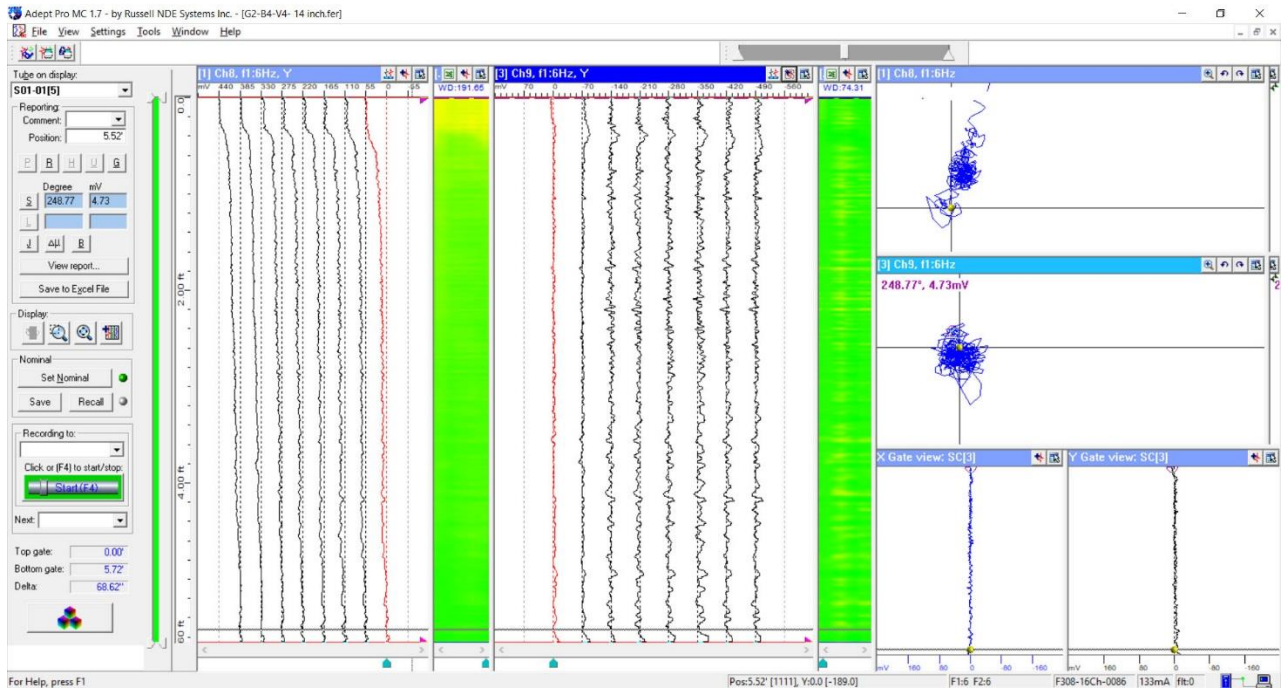
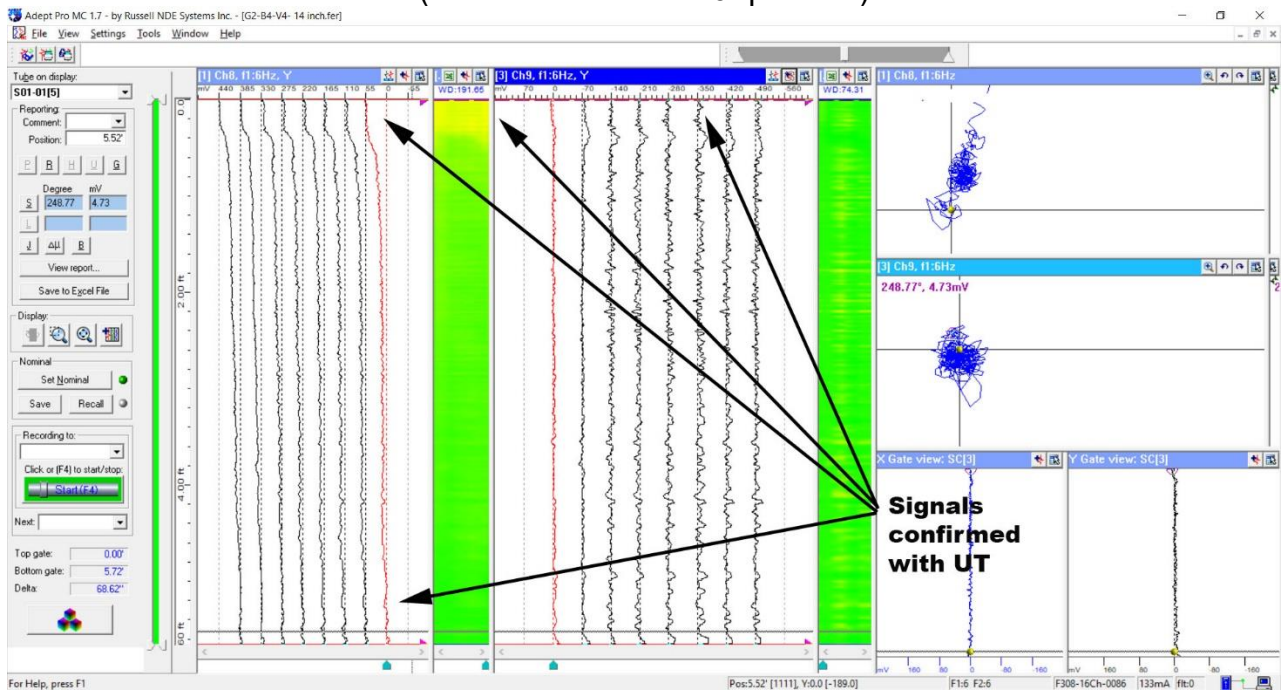


Figure 4. (Scan S01-01) BP data for a scan covering 48.0" to 0" to 4.5" circumference. (Probe centered at +0" position)



The image above has been labeled showing some of the signals confirmed with UT. The upper yellow area on the color map shows moderate corrosion. As noted, an additional UT grid was performed in this area (Table 2 on page 23).

Screen Captures: PR#23: Basin 4: Vertical 4

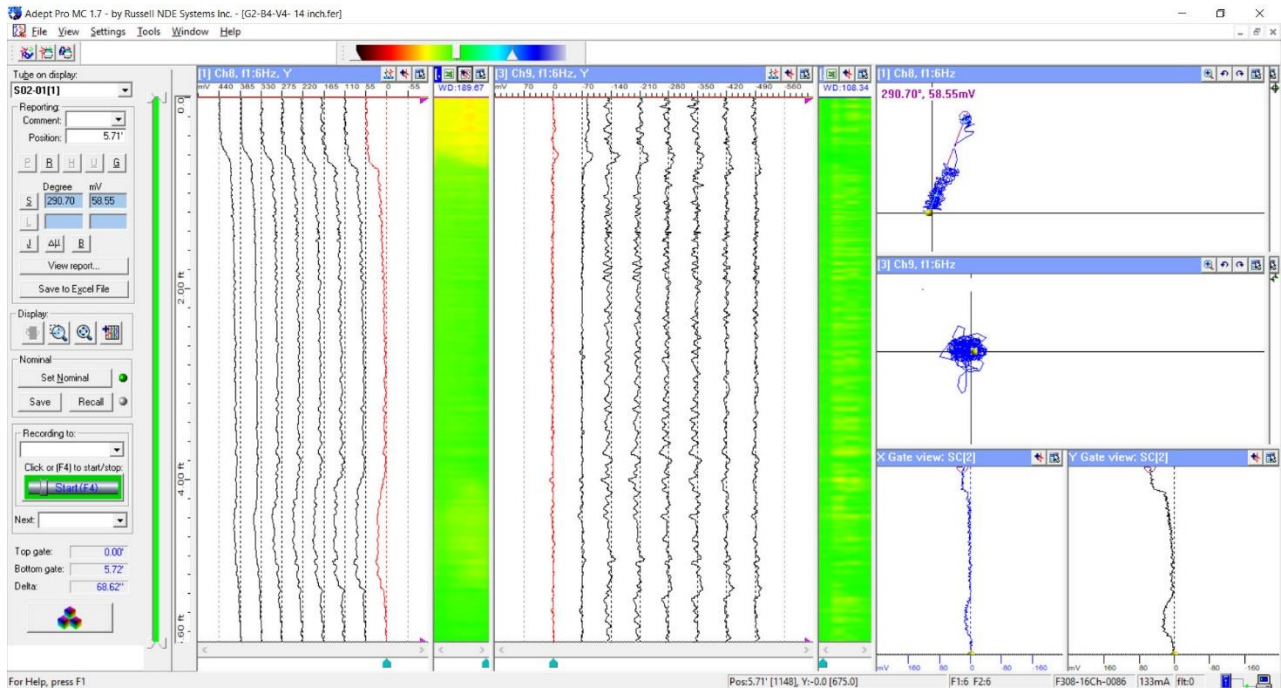
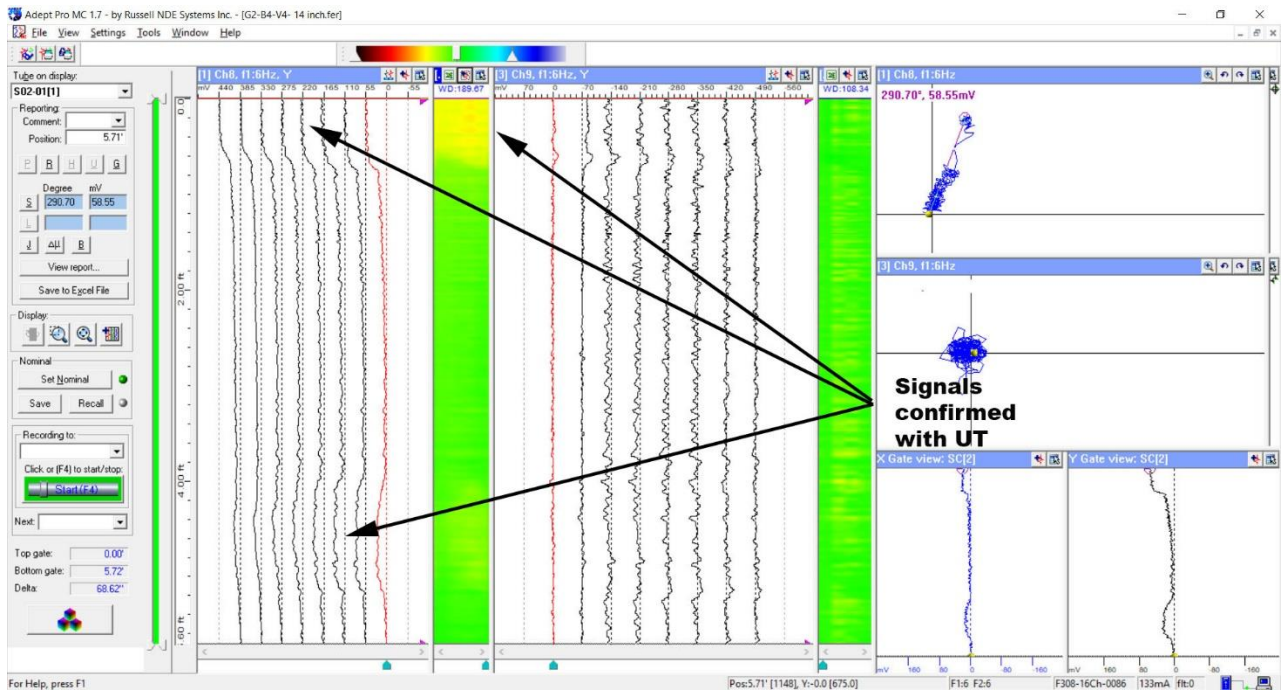


Figure 5. (Scan S02-01) BP data for a scan covering 4.5" to 13.5" circumference. (Probe centered at +9" position)



The image above has been labeled showing some of the signals confirmed with UT. The upper yellow area on the color map shows moderate corrosion.

Screen Captures: PR#23: Basin 4: Vertical 4

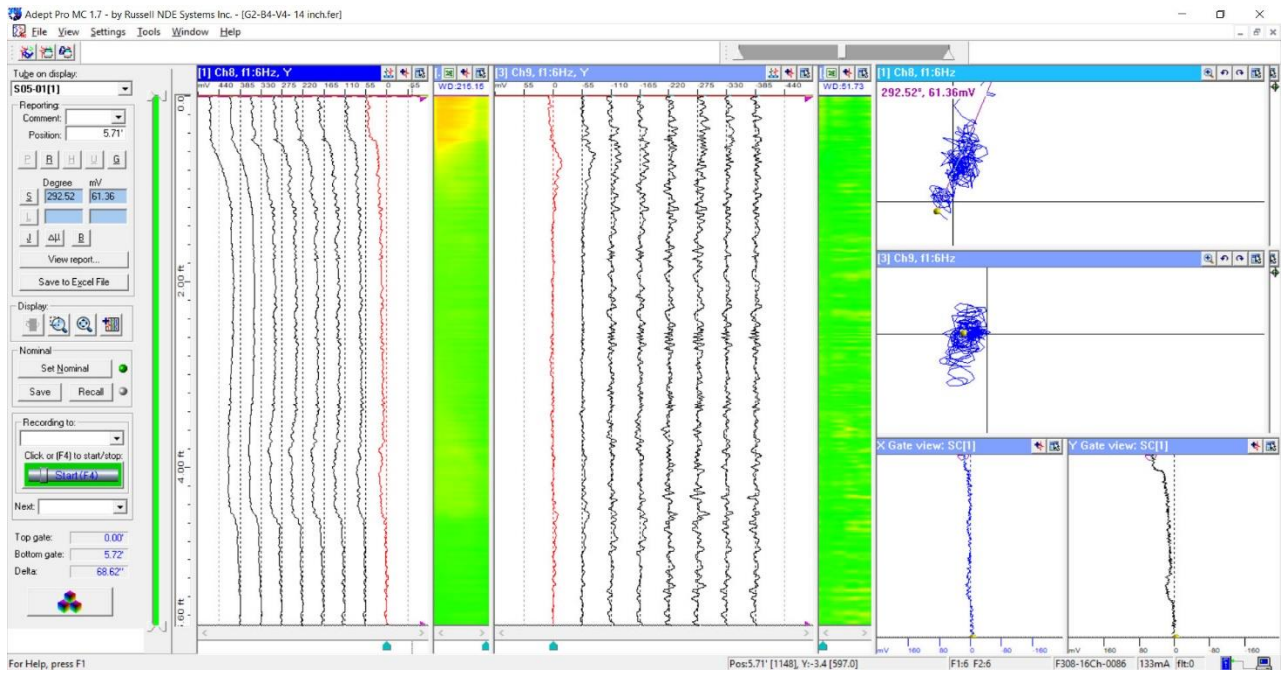
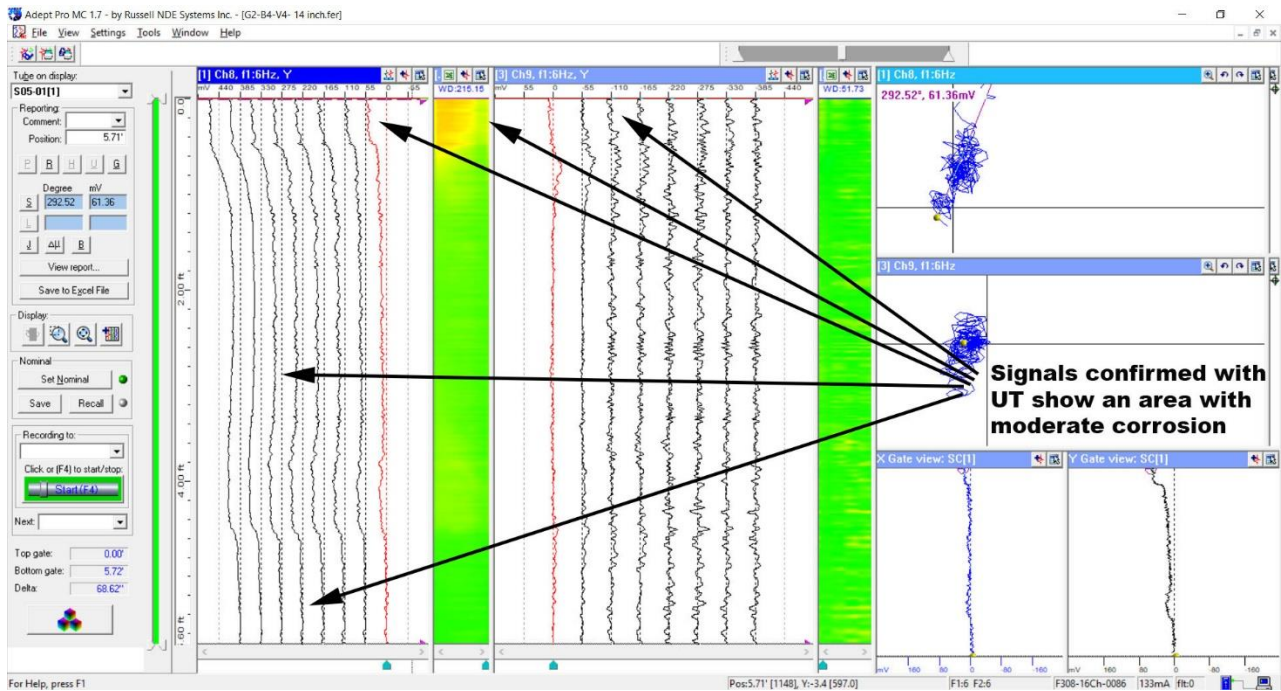


Figure 6. (Scan S05-01) BP data for a scan covering 48.0" to 0" to 4.5" circumference. (Probe centered at +36" position)



The image above has been labeled showing some of the signals confirmed with UT. The upper yellow area on the color map shows moderate corrosion.

Screen Captures: PR#23: Basin 4: Vertical 4

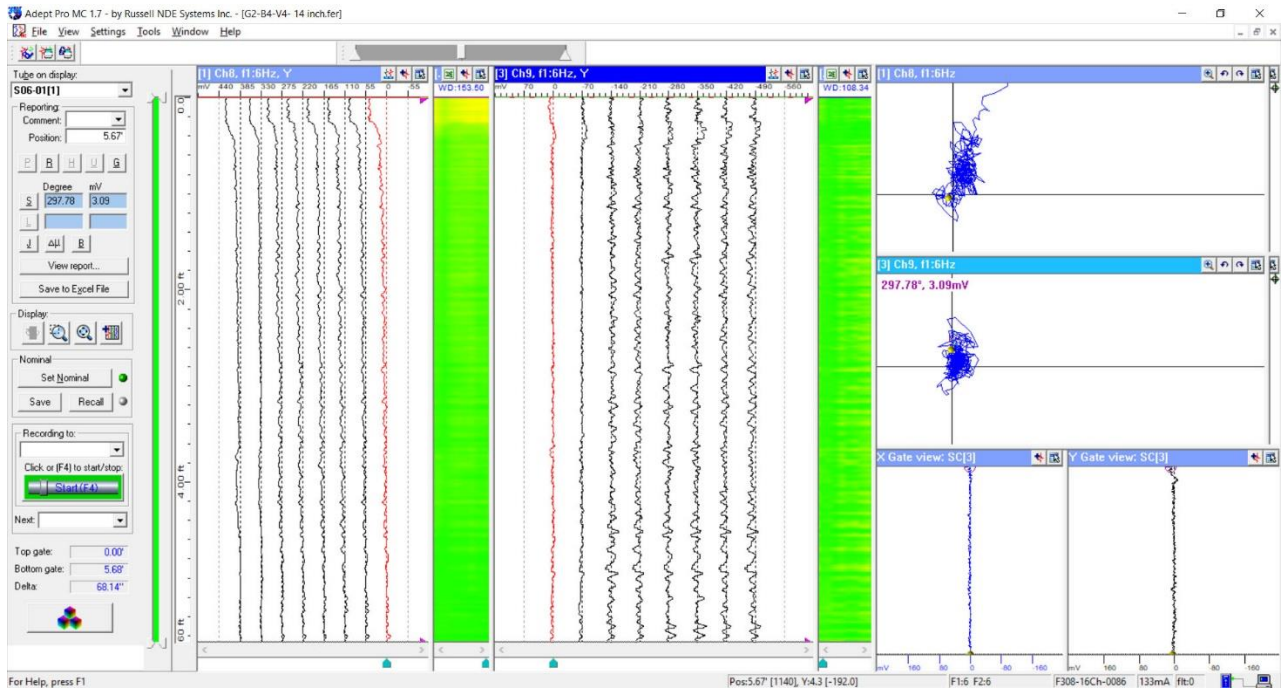
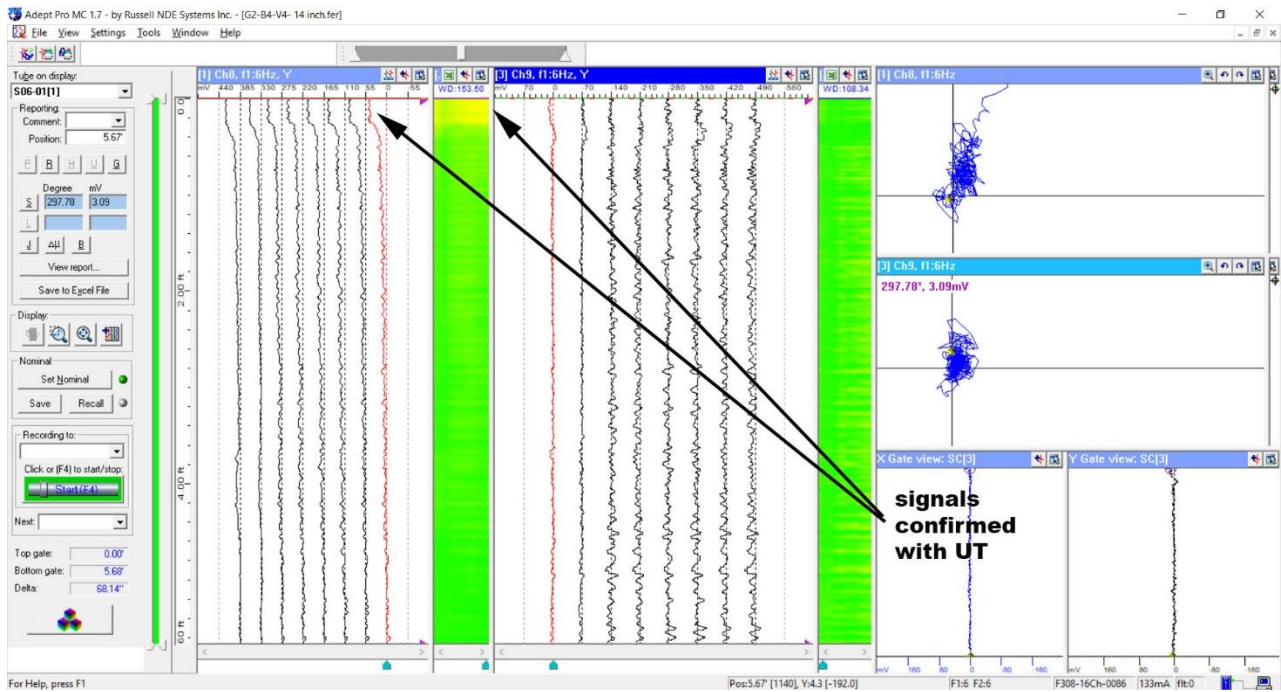


Figure 7. (Scan S06-01) BP data for a scan covering 40.5" to 49.5" circumference (Probe centered at 45" position).



The image above has been labeled showing some of the signals confirmed with UT. The upper yellow area on the color map shows moderate corrosion.

Digital Pictures: PR#23: Basin 4: Vertical 4

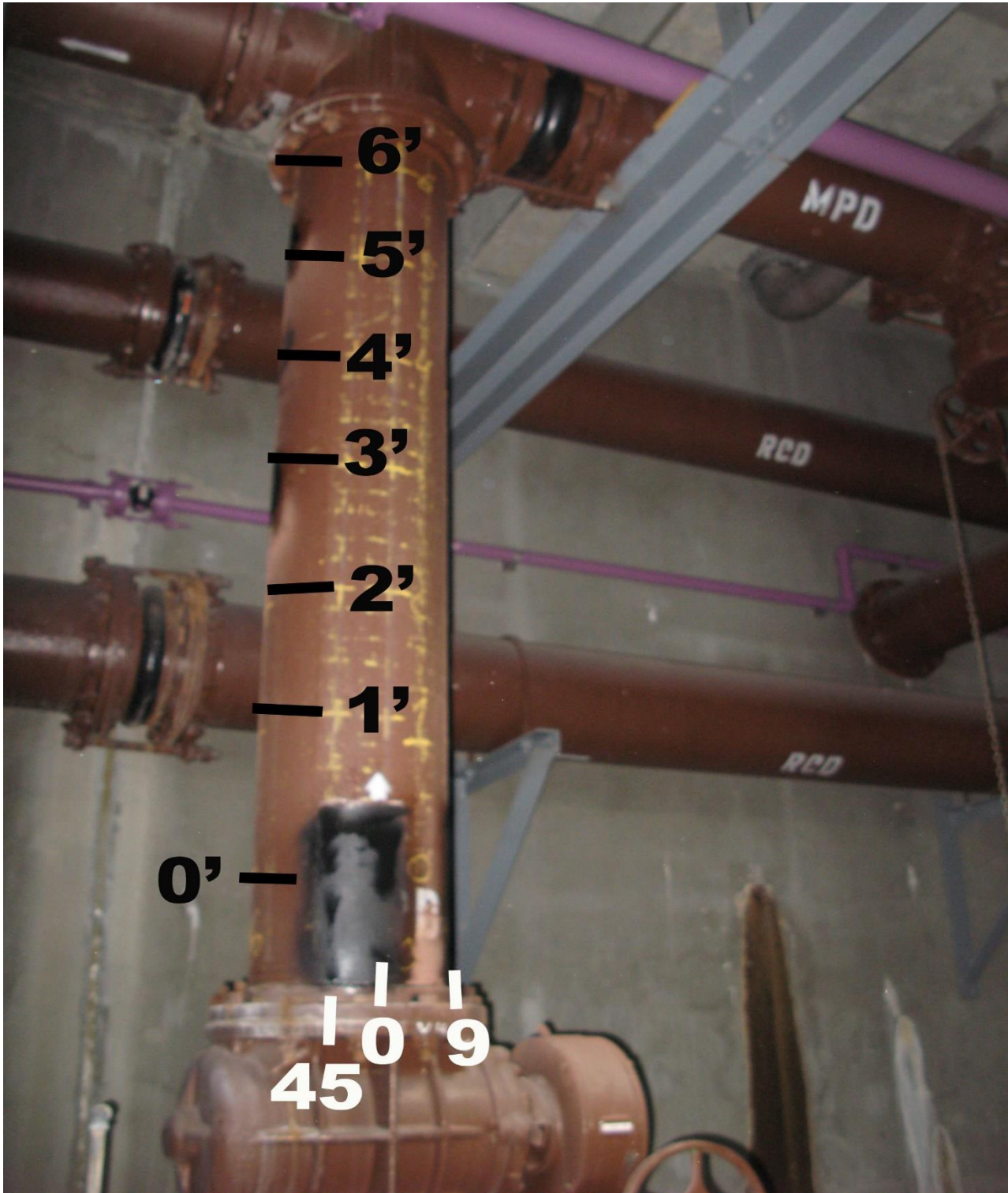
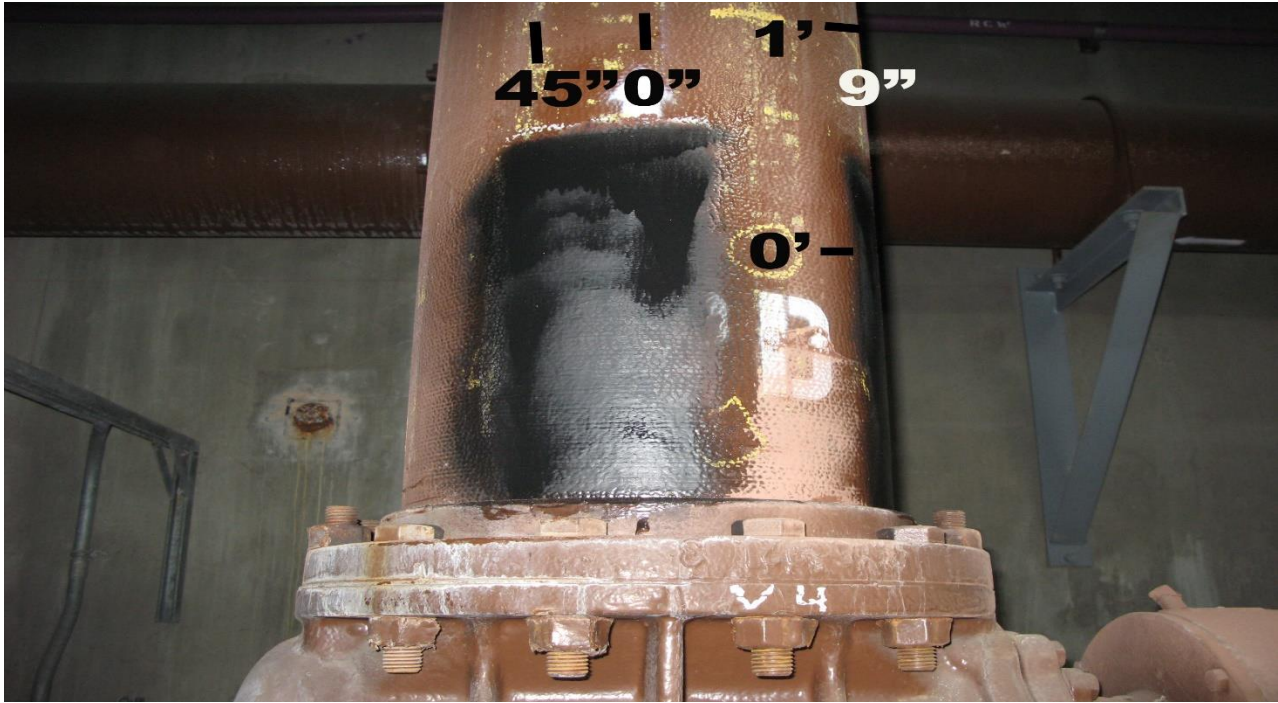


Figure A2. The picture above shows an overview of the pipe. 2 additional UT areas are shown near the bottom flange.

Digital Pictures: PR#23: Basin 4: Vertical 4



The pictures above show a closer view of the additional UT inspection areas on the pipe.

Inspection Test Site Details

Example Information for Day 1; for Gallery 2:
Pipe Report # 2: Basin 4: Vertical 11

The Zero Foot Reference (ZFR) was set on the pipe, as shown in Figure A3. The ZFR was 0 foot 10 inches from the inside of the bottom end flange. Four scans were performed from 0" to +48.00". Note: Further set up details can be found in BP Report # 1.

Bracelet Probe™ (BP) data for this pipe was labeled as follows:

| Bracelet Probe™ Inspection | | | | |
|-----------------------------------|--------------|---------------------------------|---------------|------------------------------|
| Scan Information | | | | |
| Scan Identification | Probe Center | Circumference Distance (inches) | Scan Distance | Comments |
| S01-01 | 0 | 48.0 to 0 to 4.5 | 5' 10" | ZFR is 10 inches from flange |
| S02-01 | 9 | 4.5 to 13.5 | | Not scanned – moved on |
| S03-01 | 18 | 13.5 to 22.5 | | Not scanned – moved on |
| S04-01 | 27 | 22.5 to 31.5 | | Not scanned – moved on |
| S05-01 | 36 | 31.5 to 40.5 | | Not scanned – moved on |
| S06-01 | 45 | 40.5 to 48.0 | | Not scanned – moved on |
| | | | | |
| | | | | |
| | | | | |

After scanning the first scan a corrosion area was found. UT inspection was performed in this area and it was determined to move on to a different pipe after confirming the corrosion area with a low UT measurement of 0.105".

All scans were performed with the flow direction. On the following pages the screen captures show some examples of the data scans. Some of these scans have also been labeled with arrows providing extra information.

Digital pictures showing the marking of the pipe have also been included.

Summary of Inspection Results: PR#2: Basin 4: Vertical 11

Table-1, Summary of Thickness Results

| Circumference Location | Axial Distance | Specified Nominal | UT Low Reading | Scan Number |
|------------------------|----------------|-------------------|----------------|-------------|
| 0" | 4" | 0.420" | 0.105" | S01-01 |
| 0" | 5'8" | 0.420" | 0.405" | S01-01 |
| | | | | |
| 0" | | 0.420" | 0.160" | near flange |
| | | | | |
| | | | | |

Ultrasonic Thickness (UT) measurements at a few selected locations based on BP scan data are listed in Table 1.

UT = Ultrasonic Thickness.

The lowest UT measurement was 0.105" at 4".

The pipe at this location exhibits Severe internal corrosion (pitting) at 75%.

Calculation of % wall loss is against the record nominal, of Class 53, (0.420 wall").

The following scale is used for wall loss description:

Minor: up to - 20% depth. (Could be caused by mill tolerance)

Moderate: 21% - 40% depth. (Likely caused by pitting corrosion)

Advanced: 41% - 70% depth. (Likely caused by pitting corrosion)

Severe Corrosion: 71% - 100% depth. (Likely caused by pitting corrosion)

Screen Captures: PR#2: Basin 4: Vertical 11

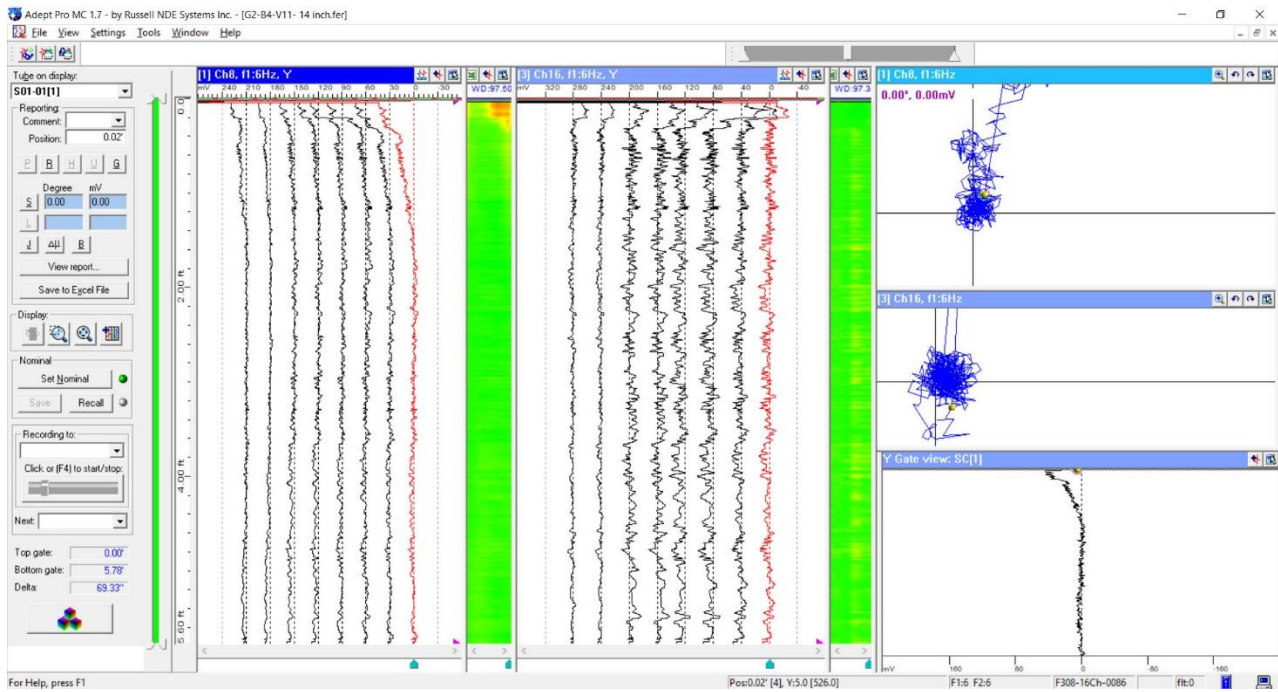
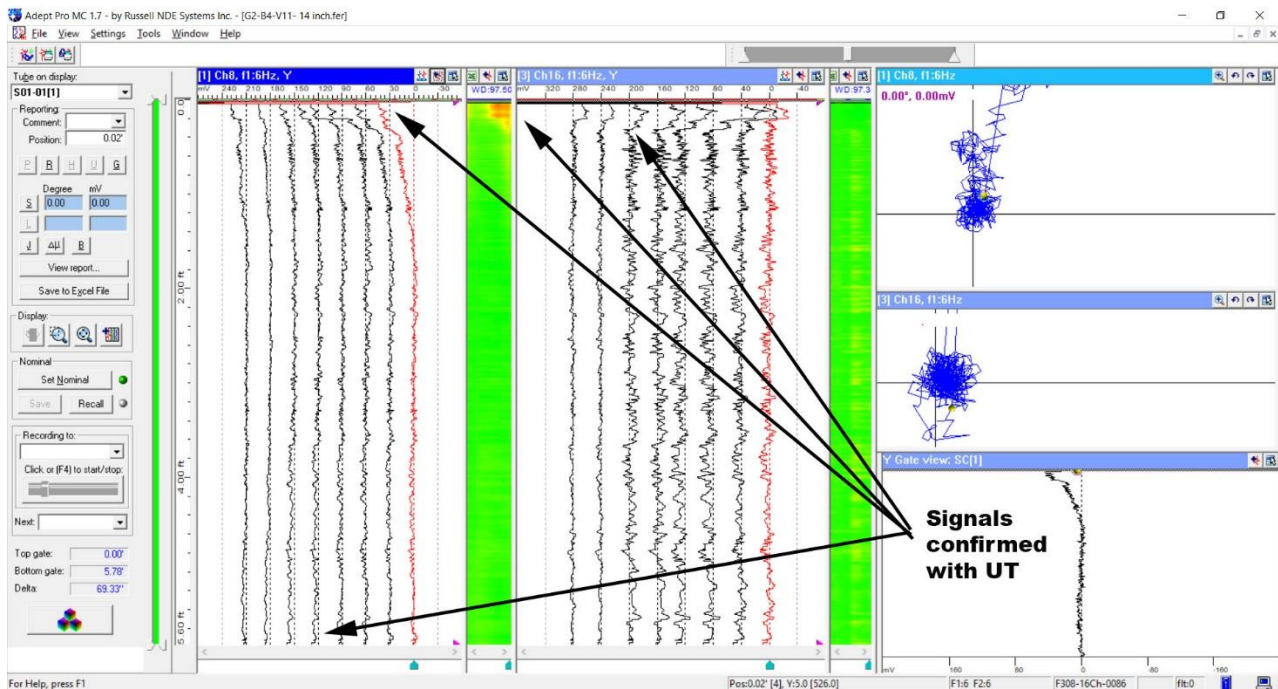


Figure 8. (Scan S01-01) BP data for a scan covering 48.0” to 0” to 4.5” circumference. (Probe centered at +0” position)



The image above has been labeled showing some of the signals confirmed with UT. The upper yellow area on the color map shows moderate corrosion

Digital Picture: PR#2: Basin 4: Vertical 11

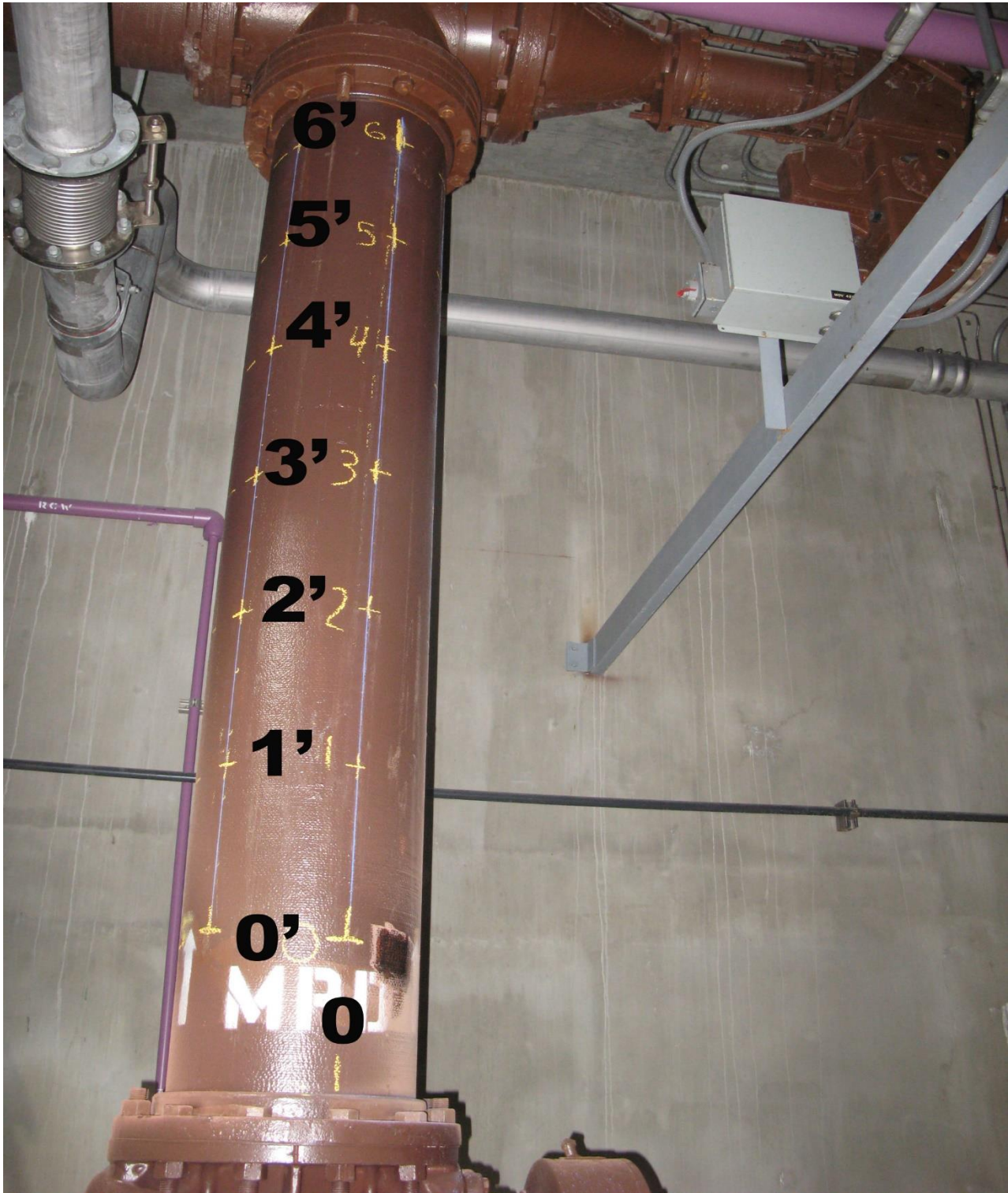


Figure A3. The picture above shows an overview of the pipe.

Digital Picture: PR#2: Basin 4: Vertical 11



The picture above shows a closer view of the UT confirmation area before being recoated.