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*Grande Prairie, AB*
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# *Ultrasonic Inspection Report*

***UT_A 0496015_Flare Knockout_aug2025***

| | | |
|---|---|---|
| Client: **Fuelled** | Facility: **n/a** | Date: **Aug 11, 2025** |
| LSD: **n/a** | Item(s) Inspected: **Flare Knockout Drum** | Job #: **13720** |
| Material: Carbon Steel / Stainless Steel | Thickness Range: 0 to 75mm | WO #: **n/a** |
| Procedure: UT-01 Rev. 9 | Ref. Code: ASME VIII & ASME B31.3 | Surf. Temp: -20° to 20° C — Surf. Prep: Painted |
| UT Equipment: | Asset# FD-15 Olympus Epoch XT | Serial Number: 070057201 — Cal. Due: Dec. 16, 2025 |
| Transducer 1: | Asset# T-243 Technisonic Research 0° Dual 5MHz Diam. 6.35mm | Serial #:25952 |
| Transducer 2: | Asset# T-54 Olympus D-790-SM Hot Probe 0° 5MHz Diam. 6.35mm | Serial # 858220 |
| Transducer 3: | Asset# T-255 Olympus P/E 0° 5MHz Diameter 12.7mm | Serial Number: 1412290 |
| Cal. Block 1: | Asset# CB-80 (1018) Carbon Steel 6-step wedge | Serial Number: 62196 |
| Cal. Block 2: | Asset# CB-75 Stainless Steel Step Wedge 2.5 -12.5mm | Serial Number: 52747 |
| Couplant: Magnaflux UTX | Cable 1: 2m Dual BNC to Microdot | Cable 2: 2m Single BNC to Microdot |

**Job Scope:** To perform a baseline ultrasonic thickness survery on the requested vessel located at 10-07-68-09 w6m in the Wapiti Field.

**Results:** See attached UTS drawing and data sheets for all point locations and recorded thickness measurements.

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|---|
| Client Representative: Will Van Weelden |
| Technician(s): Dave Ellis (CGSB UT-2, MT-2, PT-2 #21762) (SNT-TC-1A MT-II, UT-II, PT-II) |
| Assistant(s): |
| Reviewed and Approved By: Lance Smith (CGSB MT-2, UT-2, PT-2, RT-1 #8052) (SNT-TC-1A MT-II, UT-II, PT-II) |

# ULTRASONIC THICKNESS SURVEY

# "UTS"

## Report Summary

The accompanying UTS report provides representation and data of equipment requested for inspection as accessible. The UTS drawing(s) show condition monitoring locations (CMLs) with identification numbers that correlate with the ultrasonic thickness readings recorded on the following pages. All CML locations identified on the UTS drawing(s) are inspected to locate the minimum thickness and determine an average thickness. CMLs that have thickness readings less than the calculated flagged thickness are coloured BLUE on the UTS drawings and data pages for quick reference purposes. CMLs with unusual wall thicknesses are given descriptive comments to aid future trending.

## UTS Procedure

All CML locations identified on the UTS drawing are scanned completely by continuously coupling an ultrasonic transducer to the item being tested. The average scan location on vessel heads and shells includes a 2" wide by 16" long test band. The average scan location on piping and fittings is a 2" wide band at critical areas, such as the outside radius of elbows, the neck of tees, the back of tees, or any other areas of concern.

## Equipment

All equipment used for each UTS is listed on the ultrasonic report and is in accordance with Lance Inspections Inc. procedure UT-01 (Rev. 9). All ultrasonic machine calibrations, field calibrations, and performance of ultrasonic thickness surveys are completed in accordance with Lance Inspections Inc. procedure UT-01 (Rev. 9)

## Flag Values

### Client Review

Lance Inspections does not deem CMLs acceptable or rejectable. The flag values in the attached report are provided for ease of client review only.

### Vessels

Flag thicknesses are determined by subtracting the corrosion allowances from the nominal thickness as stated on a vessel data plate or a client-provided MDR or U1A form for the vessel.
Regarding vessel and nozzle points that have a known Nominal Thickness but no stated corrosion allowance, Lance Inspections has adopted a "TRF" Thickness Reduction Flag value. This value is 1.5mm (0.059") less than the known nominal thickness. Vessel and Nozzle points without known nominals, will be given a 1.5mm (0.059") corrosion allowance from the initial minimum thickness reading.

### Piping

Flag thicknesses for piping are determined by subtracting 12.5% (mill tolerance) from the nominal thickness. The 12.5% is input as the corrosion allowance on the UTS report. Piping and fitting points without known nominals will have a 1.5mm corrosion allowance from the initial minimum thickness reading.

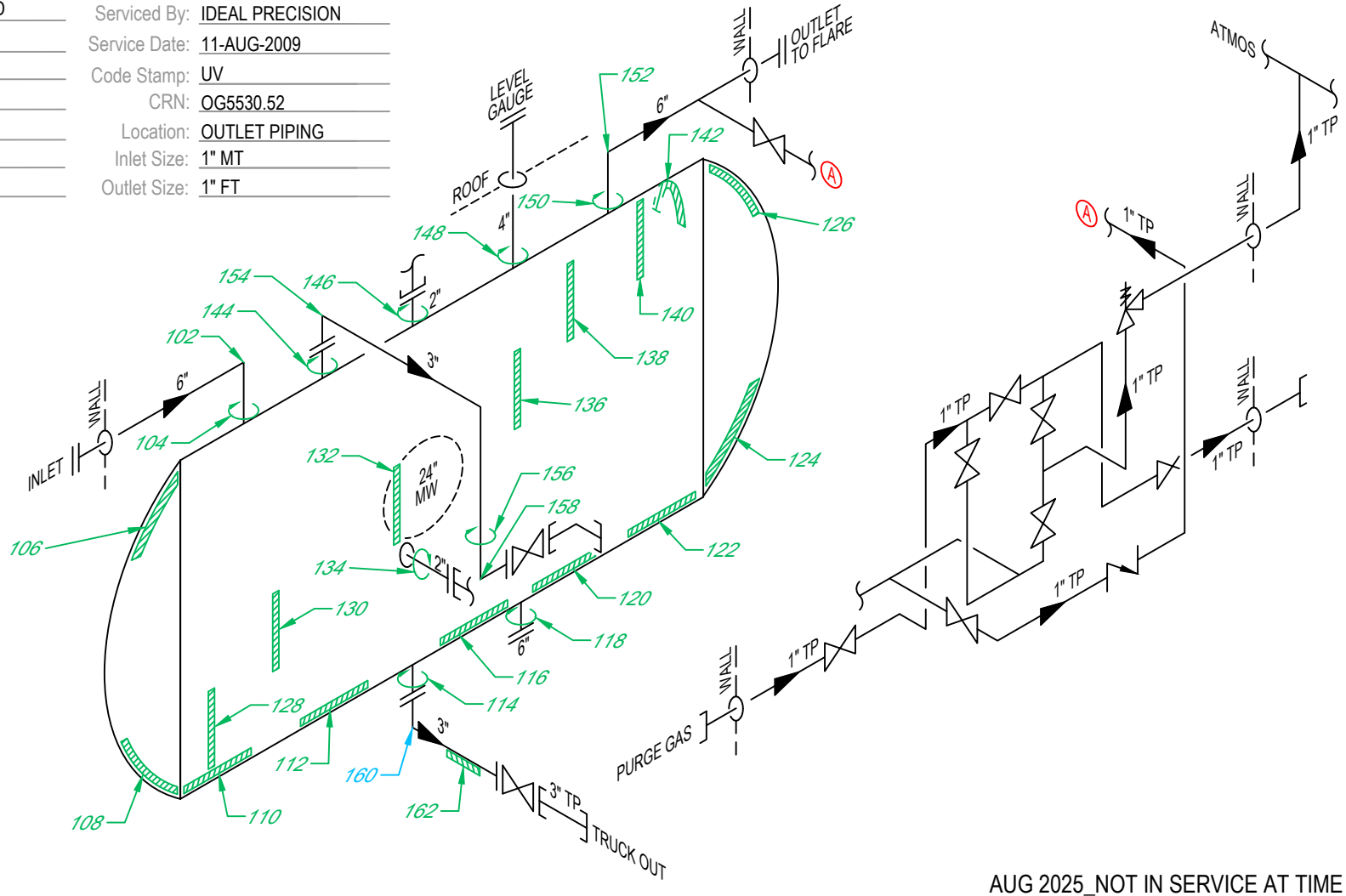
Sincerely,

Lance Smith,
Lance Inspections Inc.

Revision Date: AUG. 11, 25

## PSV DATA

| | | | |
|---|---|---|---|
| Manufacturer: | CONSOLIDATED | Serviced By: | IDEAL PRECISION |
| Model: | 190961-1000M | Service Date: | 11-AUG-2009 |
| Serial: | B119943-1-3 | Code Stamp: | UV |
| Set Pressure: | 345 kPa | CRN: | OG5530.52 |
| Capacity: | 108 scfm | Location: | OUTLET PIPING |
| Tag: | N/S | Inlet Size: | 1" MT |
| Flows To: | ATMOS | Outlet Size: | 1" FT |




AUG 2025_NOT IN SERVICE AT TIME OF INSPECTION.
AUG 2025_LOCATED ON CNRL SITE 10-07-68-09 W6M AT TIME OF INSPECTION.

LANCE INSPECTIONS INC.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Customer: | FUELLED | | | Description: | FLARE KNOCKOUT DRUM | | |
| Facility: | N/A | | | Location: | N/A | | |
| Reg A#: | 0496015 | | | Serial #: | 12928 | Drawing#: | 1 |
| CRN #: | P7899.2 | Manufacturer: | BILTON | Unit #: | N/S | Year Built: | 2003 |
| Shell MAWP: | 345 kPa | Shell MAWT: | 38°C | Shell Material: | N/S | Nominal: 9.5mm | CA: 3.2mm |
| Tube "A" MAWP: | | Tube "A" MAWT: | | Head Material: | N/S | Nominal: 8.0mm | CA: 3.2mm |
| Tube "B" MAWP: | | Tube "B" MAWT: | | Tube Material: | | Nominal: | CA: |
| Size: | 72in x 10ft | Manway: | 24in | MDMT: | -29°C | Boot Shell Mat: | Nominal: CA: |
| Insulated: | NO | C Stamp: | N/S | RT: | NO | PWHT: NO | Boot Head Mat: Nominal: CA: |

LANCE INSPECTIONS INC.

Client: **Fuelled**
Unit #: **n/s**
Equip Description: **Flare Knockout Drum**
Reg A#: **0496015**
Drawing #: **1**

## UTS Data Sheet

| | Nominal Thickness (mm) | Corrosion Allowance (mm) | Flag Thickness (mm) |
|---|---|---|---|
| **102**<br>Description: **6" 90° Nozzle**<br>Date: Aug. 11, 25<br>Minimum: 9.9<br>Average: 10.5<br>Comments: *Aug 2025_Min scan at upstream weld.* | 11.0 | 3.2 | 7.8 |
| **104**<br>Description: **Circ on 6" Nozzle**<br>Date: Aug. 11, 25<br>Minimum: 10.6<br>Average: 11.0<br>Comments: | 11.0 | 3.2 | 7.8 |
| **106**<br>Description: **Upper Head**<br>Date: Aug. 11, 25<br>Minimum: 9.4<br>Average: 9.9<br>Comments: | 8.0 | 3.2 | 4.8 |
| **108**<br>Description: **Lower Head**<br>Date: Aug. 11, 25<br>Minimum: 8.9<br>Average: 9.6<br>Comments: | 8.0 | 3.2 | 4.8 |
| **110**<br>Description: **Bottom Shell**<br>Date: Aug. 11, 25<br>Minimum: 9.5<br>Average: 9.6<br>Comments: | 9.5 | 3.2 | 6.3 |
| **112**<br>Description: **Bottom Shell**<br>Date: Aug. 11, 25<br>Minimum: 9.5<br>Average: 9.6<br>Comments: | 9.5 | 3.2 | 6.3 |
| **114**<br>Description: **Circ on 3" Nozzle**<br>Date: Aug. 11, 25<br>Minimum: 6.9<br>Average: 7.5<br>Comments: | 7.6 | 3.2 | 4.4 |
| **116**<br>Description: **Bottom Shell**<br>Date: Aug. 11, 25<br>Minimum: 9.1<br>Average: 9.4<br>Comments: *Aug 2025_Min scan at 3" nozzle weld.* | 9.5 | 3.2 | 6.3 |

LANCE INSPECTIONS INC.

Client: **Fuelled**
Unit #: **n/s**
Equip Description: **Flare Knockout Drum**
Reg A#: **0496015**
Drawing #: **1**

## UTS Data Sheet

| | | Nominal Thickness (mm) | Corrosion Allowance (mm) | Flag Thickness (mm) |
|---|---|---|---|---|
| **118** | | | | |
| Description: | **Circ on 6" Nozzle** | 11.0 | 3.2 | 7.8 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 10.5 | | | |
| Average: | 11.0 | | | |
| Comments: | | | | |
| **120** | | | | |
| Description: | **Bottom Shell** | 9.5 | 3.2 | 6.3 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 9.4 | | | |
| Average: | 9.6 | | | |
| Comments: | | | | |
| **122** | | | | |
| Description: | **Bottom Shell** | 9.5 | 3.2 | 6.3 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 9.5 | | | |
| Average: | 9.6 | | | |
| Comments: | | | | |
| **124** | | | | |
| Description: | **Lower Head** | 8.0 | 3.2 | 4.8 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 9.1 | | | |
| Average: | 9.6 | | | |
| Comments: | | | | |
| **126** | | | | |
| Description: | **Upper Head** | 8.0 | 3.2 | 4.8 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 9.5 | | | |
| Average: | 9.9 | | | |
| Comments: | | | | |
| **128** | | | | |
| Description: | **Lower Shell** | 9.5 | 3.2 | 6.3 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 9.5 | | | |
| Average: | 9.6 | | | |
| Comments: | | | | |
| **130** | | | | |
| Description: | **Lower Shell** | 9.5 | 3.2 | 6.3 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 9.5 | | | |
| Average: | 9.6 | | | |
| Comments: | | | | |
| **132** | | | | |
| Description: | **Mid Shell** | 9.5 | 3.2 | 6.3 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 9.5 | | | |
| Average: | 9.6 | | | |
| Comments: | | | | |

LANCE INSPECTIONS INC.

Client: **Fuelled**
Unit #: **n/s**
Equip Description: **Flare Knockout Drum**
Reg A#: **0496015**
Drawing #: **1**

## UTS Data Sheet

| | | Nominal Thickness (mm) | Corrosion Allowance (mm) | Flag Thickness (mm) |
|---|---|---|---|---|
| **134** | | | | |
| Description: | **Circ on 2" Nozzle** | 8.7 | 3.2 | 5.5 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 8.0 | | | |
| Average: | 8.5 | | | |
| Comments: | *Aug 2025_Min scan at upstream weld, 6:00 position.* | | | |
| **136** | | | | |
| Description: | **Upper Shell** | 9.5 | 3.2 | 6.3 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 9.6 | | | |
| Average: | 9.7 | | | |
| Comments: | | | | |
| **138** | | | | |
| Description: | **Upper Shell** | 9.5 | 3.2 | 6.3 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 9.6 | | | |
| Average: | 9.7 | | | |
| Comments: | | | | |
| **140** | | | | |
| Description: | **Upper Shell** | 9.5 | 3.2 | 6.3 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 9.6 | | | |
| Average: | 9.7 | | | |
| Comments: | | | | |
| **142** | | | | |
| Description: | **Top Shell** | 9.5 | 3.2 | 6.3 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 9.6 | | | |
| Average: | 9.7 | | | |
| Comments: | | | | |
| **144** | | | | |
| Description: | **Circ on 3" Nozzle** | 7.6 | 3.2 | 4.4 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 7.4 | | | |
| Average: | 7.9 | | | |
| Comments: | | | | |
| **146** | | | | |
| Description: | **Circ on 2" Nozzle** | 8.7 | 3.2 | 5.5 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 8.3 | | | |
| Average: | 8.7 | | | |
| Comments: | | | | |
| **148** | | | | |
| Description: | **Circ on 4" Nozzle** | 8.6 | 3.2 | 5.4 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 8.1 | | | |
| Average: | 8.5 | | | |
| Comments: | | | | |

LANCE INSPECTIONS INC.

## UTS Data Sheet

Client: **Fuelled**
Unit #: **n/s**
Equip Description: **Flare Knockout Drum**
Reg A#: **0496015**
Drawing #: **1**

| | | Nominal Thickness (mm) | Corrosion Allowance (mm) | Flag Thickness (mm) |
|---|---|---|---|---|
| **150** | | | | |
| Description: | **Circ on 6" Nozzle** | 11.0 | 3.2 | 7.8 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 10.7 | | | |
| Average: | 11.1 | | | |
| Comments: | | | | |
| **152** | | | | |
| Description: | **6" 90° Nozzle** | 11.0 | 3.2 | 7.8 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 12.2 | | | |
| Average: | 12.5 | | | |
| Comments: | | | | |
| **154** | | | | |
| Description: | **3" 90° Elbow** | 7.6 | 1.0 | 6.6 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 7.7 | | | |
| Average: | 8.0 | | | |
| Comments: | | | | |
| **156** | | | | |
| Description: | **Circ on 3" Pipe** | 7.6 | 1.0 | 6.6 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 7.4 | | | |
| Average: | 7.7 | | | |
| Comments: | | | | |
| **158** | | | | |
| Description: | **3" 90° Elbow** | 7.6 | 1.0 | 6.6 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 7.0 | | | |
| Average: | 7.3 | | | |
| Comments: | | | | |
| **160** | | | | |
| Description: | **3" 90° Elbow** | 7.6 | 1.0 | 6.6 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 6.5 | | | |
| Average: | 7.2 | | | |
| Comments: | | | | |
| **162** | | | | |
| Description: | **Bottom Band on 3" Pipe** | 7.6 | 1.0 | 6.6 |
| Date: | Aug. 11, 25 | | | |
| Minimum: | 7.0 | | | |
| Average: | 7.4 | | | |
| Comments: | | | | |