Client: **CNRL** PO/Job #: **N/A** Contact:
Job location: **Grand Forks** Tel:
07-32-012-13W4M Fax:
Procedure(s): **IRISNDT 19.0 UT Thickness Corrosion Survey / Client specifications**
Code(s): **ASTM SE 797**

Item Inspected: **A2698238 Free Water Knock-Out** Material: **Carbon Steel**
Method: ☒ Contact ☐ Immersion ☐ Other: Surface Temp (C): ☐ < 5° ☒ > 5°/ < 60° ☐ > 60°
Type: ☐ P/E ☐ T/T ☒ Dual ☐ Automated ☐ TOFD Scanning Surface: ☒ OD ☐ ID ☐ Other:
Application: ☐ Laminar ☐ Shear Wave ☐ Volumetric ☒ Thickness Surface Condition: **Good**

Instrumentation: Manufacturer: **Krautkramer** Type: **DMS 2** Instrument Ser. #: **01N0V4**
Calibration: Date: **Nov. 21, 2008** Reference Flaw Size: **N/A** IRISNDT #: **31088**
Calibration Block(s): Type: **Step Wedge - I** IRISNDT #: **32983** Type: IRISNDT #:
Type: IRISNDT #: Type: IRISNDT #:
Couplant: Brand: **Sonotest** Type: **1451** Cable: Type: **Dual** Length: **36"**

PROBE						SETTINGS - dB			RANGE - ☒ INCHES ☐ MM		
Manufacturer	Type	Serial #	Angle	Frequency	Size	Reference Level	Scanning Level	Transfer Value	Screen Size	Skip Value	Beam Travel
Krautkramer	**Dual**	**01MRC3**	**0**	**8.0 MHz**	**0.312**	**48**	**+6 dB**	**N/A**	**1.0**	**N/A**	**N/A**

INSPECTION DETAILS

Scope:

As per client request and specifications: an ultrasonic corrosion thickness survey was performed on A2698238 Free Water Knock-Out.

Isometric sketches were created, and are attached to this report for reference to thickness measurement locations.

Results:

All thickness values recorded were found to be acceptable at the time of the inspection.

See attached pages for complete thickness values with referencing attachments for thickness measurement location.

Assistant:
☐ CGSB ☐ SNT UT Level: ☐ I ☐ II ☐ III No.#:
Unit: Km: Travel Time:
Start: Stop: Work hrs:
☐ OT Meal ☐ Subsistence required Total hrs:
Consumables: **Cold surface couplant - isometric paper**

Technician: **Kris Katryniuk**
☒ CGSB ☐ SNT UT Level: ☐ I ☒ II ☐ III No.#: **12095**
Signature: Digitally signed by Kris Katryniuk DN: CN = Kris Katryniuk, C = CA, O = IRISNDT Date: 2009.11.13 16:56:25 -07'00'

Client Name:
Signature:

IRISNDT

CORROSION INSPECTION SERVICES

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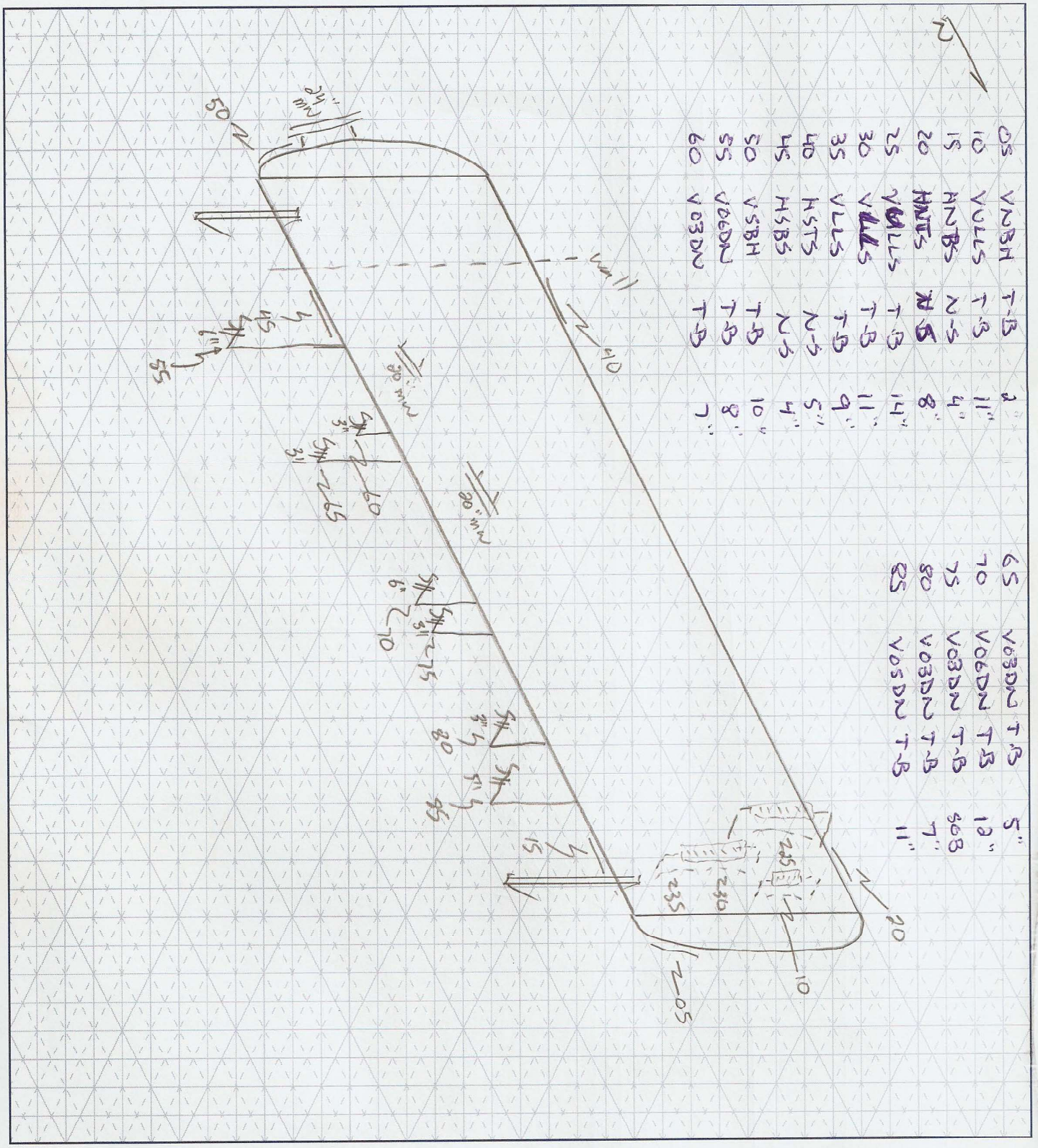

CUSTOMER: CNRL **FACILITY:** GRAND FORKS BATTERY **LSD:** 07-32-012-13W4M

P & ID: — **DRAWN BY:** KK **DATE:** 06-09-09 **DRAWING NO.** 137868-KK-12

VESSEL INFORMATION: FREE WATER KNOCK OUT -

Equip. No. _____ Pro.Req.No (A) A2698238 C.R.N. K3252.2 Serial No P90-003-A Yr. Inst. _____

Code/Div. VW 11A 1/11A5B Size: 120" ID (OD) 36" Manufacturer: Process Industries Yr. Blt. 1991

C. Stamp _____ Service: _____ PWHT: N/L J.E.: _____ Radiography: 12T-2 Full/Spot Insulated: Partial

HEAD:

Top Mat'l 5/16-70 Top Nom .1607" Top C.A. .062" **SHELL:** Material 5/16-70 Nominal .375" C.A. .062"

Btm Mat'l 5/16-70 Btm Nom. .1607" Btm C.A. .062"

BOOT: **CHANNEL:**

Head Mat'l _____ Head Nom _____ Head C.A. _____ Top Mat'l _____ Top Nom _____ Top C.A.