



## Ultrasonic Inspection Report

**Job #:**
**Report #:**
**Inspection Date:**

-

--UT-BV-1

March 28, 2012

<b>Client:</b>	CNRL	<b>Location:</b>	5-21 LSD: 05-21-12-14W4M
<b>Procedure:</b>	UT-0001	<b>Item Inspected:</b>	Vessel Line Heater A0438939
<b>Code:</b>	ASME Section VIII Div 1		

<b>Surface Condition:</b>	Painted <input checked="" type="checkbox"/>	Sandblasted <input type="checkbox"/>	Machined <input type="checkbox"/>	As Cast <input type="checkbox"/>	As Forged <input type="checkbox"/>
	Weldment <input type="checkbox"/>	Other <input type="checkbox"/>	Material: C.S.		

<b>Scanning Surface:</b>	OD <input checked="" type="checkbox"/>	ID <input type="checkbox"/>	Other: <input type="checkbox"/>	<b>Surface Temp (°C):</b>	> 5° / < 60°
--------------------------	--	-----------------------------	---------------------------------	---------------------------	--------------

<b>Method:</b>	Contact <input checked="" type="checkbox"/>	Immersion <input type="checkbox"/>	Other <input type="checkbox"/>		
<b>Type:</b>	P/E <input type="checkbox"/>	T/T <input type="checkbox"/>	Dual <input checked="" type="checkbox"/>	Automated <input type="checkbox"/>	TOFD <input type="checkbox"/>
<b>Application:</b>	Laminar <input checked="" type="checkbox"/>	Shear Wave <input type="checkbox"/>	Volumetric <input type="checkbox"/>	Thickness <input checked="" type="checkbox"/>	

<b>Instrumentation:</b>	Mfg: G.E.	Type: Krautkramer	Equip #: DMS2	Serial #: 020XP6
<b>Calibration:</b>	Date: 01/12/2012		Reference Flaw Size: Backwall	
<b>Calibration Block (s):</b>	Type:	Block#:	Type:	Block#:
	Type: .5" Stepwedge	Block#: 10-2192	Type:	Block#:

<b>Couplant:</b>	Brand: Sono Tech	Type: Echogel	<b>Cable:</b>	Type: Coaxial	Length: 36"
------------------	------------------	---------------	---------------	---------------	-------------

PROBE						Settings - dB			Range - <input type="checkbox"/> IN. <input type="checkbox"/> MM		
Manufacturer	Type	Serial #	Angle	Frequency	Size	Ref Level	Scan Level	Transfer Value	Screen Size	Skip Value	Beam Travel
G.E.	Dual	0200LL	0	7.5Mhz	0	6db					

### Scope and Inspection Results

Carry out UT examination of Line Heater A0438939.  
 Check for corrosion of the End plates, shell and associated piping to verify integrity for service and identify any areas of concern.

**Results:**

UT examination was carried out; all readings taken were 10" band scans with three readings per TML location/band. Minimum, Maximum and Average readings were taken and recorded in each location. All readings were found to be at or above nominal on the End plates, shell and associated piping. See attached Pictures, drawing and UTM Readings for locations and thicknesses recorded.

**Recommendation:**

Continue to carry out UT corrosion survey and Visual inspection at the required inspection frequency.

**Final Comment:**

Line Heater is fit for service.

**Inspection Limitation(s):** None

### Time and Billing Information:

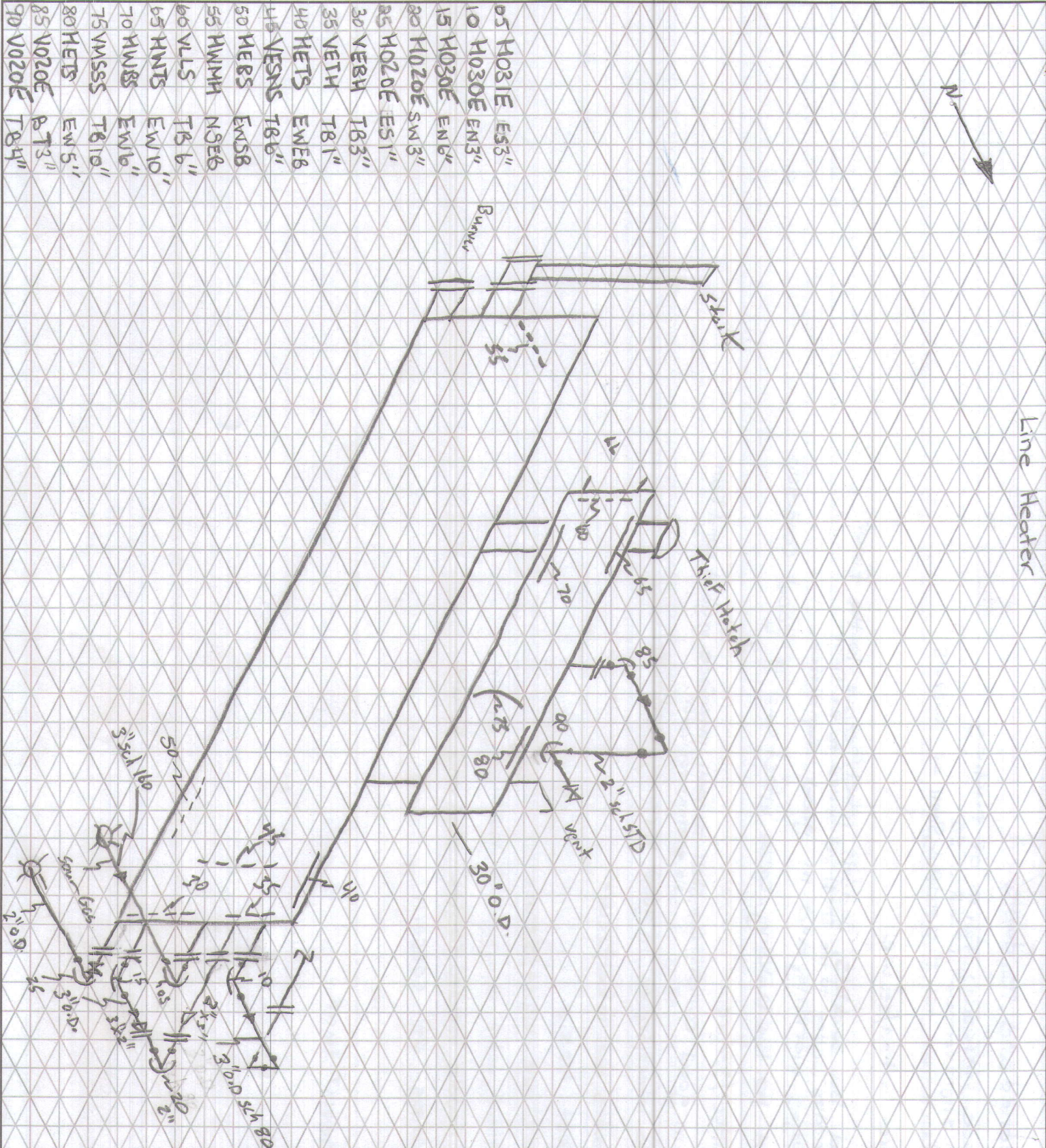
<b>Vehicle #:</b>	001	<b>Kms:</b>		<b>Hrs</b>		<b>Tech. (Name):</b>	Blair Verge	<b>SNT-TC-1A:</b>	1
<b>Time In:</b>	00:00	<b>Time Out:</b>	00:00			<b>Tech. (Sign):</b>		<b>CGSB Level:</b>	I
<b>Time In:</b>	00:00	<b>Time Out:</b>	00:00			<b>Client (Name):</b>		<b>CGSB #:</b>	5586
<b>Personnel:</b>	Ayralee Martin Blair Verge				<b>Client (Sign):</b>				

**Additional Billing Information:** : -



# CORROSION INSPECTION SERVICES

Page \_\_\_\_\_ of \_\_\_\_\_



**CUSTOMER:** CNRL **FACILITY:** \_\_\_\_\_ **LSD:** 05-21-12-14W4M

**P & ID:** \_\_\_\_\_ **DRAWN BY:** B.Verge **DATE:** Mar. 28/12 **DRAWING NO.:** \_\_\_\_\_

**VESSEL INFORMATION:**

Equip. No. \_\_\_\_\_ Pro. Reg. No. (A) A0438939 C.R.N. N9595.213 Serial No. 2133CB3 Yr. Inst. \_\_\_\_\_

Code/Div. \_\_\_\_\_ Size: 60" ID/ODX: \_\_\_\_\_ Manufacturer: Pains oil LTD. Yr. Blt. 1998

C. Stamp: no Service: Sour PWHT: HT J.E.: \_\_\_\_\_ Radiography: RT-100% Insulated: \_\_\_\_\_

**HEAD:** 30" C.O. on 50/50 **SHELL:**

Top Mat'l. SA106-B Top Nom: \_\_\_\_\_ Top C.A. \_\_\_\_\_ Material: SA106-B Nominal: \_\_\_\_\_ C.A. 1.6mm

Btm Mat'l. \_\_\_\_\_ Btm Norm: \_\_\_\_\_ Btm C.A. \_\_\_\_\_

**BOOT:** **CHANNEL:**

Head Mat'l: \_\_\_\_\_ Head Nom. \_\_\_\_\_ Head C.A. \_\_\_\_\_ Top Mat'l. \_\_\_\_\_ Top Nom. \_\_\_\_\_ Top C.A. \_\_\_\_\_

Shell Mat'l: \_\_\_\_\_ Shell Nom. \_\_\_\_\_ Shell C.A. \_\_\_\_\_ Btm Mat'l. \_\_\_\_\_ Btm Norm. \_\_\_\_\_ Btm C.A. \_\_\_\_\_

MAWP Shell Side: PRE 21057 KPa @ Temp. 93°C MAWP Tube Side: \_\_\_\_\_ @ Temp. \_\_\_\_\_

**PIPING INFORMATION:** PRE 13500 K.P.a @ 93°C

Circuit. No. \_\_\_\_\_ Line No. (s) **(PLEASE PUT LINE NUMBERS ON APPLICABLE LINES ON THE DRAWING)**

Piping Class: \_\_\_\_\_ Service: \_\_\_\_\_ Yr. Blt. \_\_\_\_\_

MAWP: \_\_\_\_\_ @ Temp. \_\_\_\_\_ Size & Schedule of Piping **(PLEASE PUT APPROPRIATE SIZES AND SCHEDULES OF PIPING ON DRAWING)**

## UT Readings for Line Heater A0438939

	<u>Minimum</u>	<u>Maximum</u>	<u>Average</u>
LOC 5	0.442	0.453	0.448
LOC 10	0.305	0.333	0.316
LOC 15	0.436	0.449	0.443
LOC 20	0.339	0.349	0.343
LOC 25	0.167	0.191	0.173
LOC 30	0.267	0.268	0.268
LOC 35	0.272	0.277	0.277
LOC 40	0.301	0.302	0.302
LOC 45	0.304	0.307	0.305
LOC 50	0.289	0.289	0.289
LOC 55	0.267	0.275	0.27
LOC 60	0.239	0.258	0.256
LOC 65	0.249	0.252	0.251
LOC 70	0.251	0.252	0.252
LOC 75	0.254	0.255	0.255
LOC 80	0.255	0.256	0.256
LOC 85	0.142	0.174	0.166
LOC 90	0.141	0.162	0.154