NORDIC NDT CORP.
Box 32 RR2 Site 7
Grande Prairie, AB T8V 2Z9
Phone ----------780-402-0256
FAX ----------780-402-0356
Toll Free -----1-866-888-0256
arrhead -------780-305-3710

NORDIC NDT CORP.

RADIOGRAPHIC EXAMINATION REPORT

3901

Client: BLUESTAR WELDING
Date: FEB 18/05
Location: GRANDE PRAIRIE
Job/AFE#: 10252-P
Description: LINE HEATER MANIFOLD PIPING
P.O.#:
Material: CS

Exposure Device # 1464
Source # 17840B
Ir192 EFSS: .145"
Kodak ☑ AGFA ☐ Class 1

Acceptance Code
☐ ASME B31.3 Normal Serv.
☑ ASME B31.3 Severe Cyclic
☐ ASME Sect. VIII Div.1UW51
☐ ASME Sect. VIII Div.1UW52
☐ CSA Z.662 (sweet service)
☐ CSA Z.662 (sour service)
☐ Other:

Film No.	Size, Location Thickness	Welder Sym.	Tech. No.	SOD Inches	OFD Inches	#of Exp.	Accept	Type and location of inclusions, discontinuities (circle rejectable locations)	Reject
XM-1	3" Ø x .750"	BA	R.3a			4	✓		
2		BA					✓		
3		AW					✓		
4		AW					✓		
5		AW					✓		
6		AW					✓		
7		BC					✓		
8		BC					✓		
9		AW					✓		
10		AW					✓		
11		AW					✓		
12		AW					✓		
13		AW					✓		
14		AW					✓		
15		AW					✓		
16		BC					✓		
17		BC					✓		
18		BC					✓		
19		BC					✓		
20		BC					✓		

Legend: AB - Arc Burns; BT - Burn Through; CK - Crack; MA - MIsalignment; HB - Hollow Bead; IC - Internal Concavity; IP - Inadequate Penetration; EP - Excessive Penetration; LF - Lack of Fusion; LC - Low Cover; IUC - Internal Undercut; EUC - External Undercut; POR - Porosity; SL - Slag

Techniques: Single Wall Exposure: R-1, -2, -2a, -6, -7; Double Wall Exposure: R-3, -3a, -4, -5, -8; *All procedures utilize one film per cassette unless otherwise specified*
SOD = source to object distance; OFD = object to film distance; OFD + SOD = source to film distance

Welds		Film	
	-2" welds		-3.5" x 8.5"
20	-3" welds		-3.5" x 17"
	-4" welds		-4.5" x 8.5"
	-6" welds		-4.5" x 17"
	-8" welds		
	-10 welds		
	-12"welds		

Summary
Unit # 4 Kilometers: 0
In 1000 Out 1400 Hrs. 4
In ____ Out ____ Hrs. ____
Technician: D. Baird
Assistant: L. Karpisek
Cost Estimate: $ 460.00 (+ GST)

Radiograph Interpretation by:
SNT-TC-1A II WAYNE BAIRD (Print)
C.G.S.B. Lev. II
C.G.S.B. No. 3979 (Sign)

Report contents are the interpretation of the technician and do in no way imply a guarantee.

I am in full agreement with report contents:
Client Representative: FEB. 19 2005

NORDIC NDT CORP.

Box 32, R.R.2, Site 7, Grande Prairie AB. T8V 2Z9
Phone: (780) 402-0256 Fax: (780) 402-0356

Natural Resources Canada / Ressources naturelles Canada

This certifies that / *La présente certifie que* **Dwayne Merle Baird**

has qualified according to the CAN/CGSB Standard 48.9712-2000 as follows: / *est qualifié selon la norme CAN/CGSB 48.9712-2000 comme suit:*

METHOD / MÉTHODE	LEVEL / NIVEAU	SECTOR / SECTEUR	CERT DATE / DATE CERT.	RECERT DATE / DATE RECERT.	EXPIRES / EXPIRATION
RT	2	ENG	89/12/01		05/12/31
PT	2	ENG	91/10/11		05/12/31
MT	2	ENG	90/05/22		05/12/31

REG NO / NO MATRICULE 3979 ISSUE DATE / DATE D'ÉMISSION 03/01/23

MANAGER, CERTIFYING AGENCY / GESTIONNAIRE, ORGANISME DE CERTIFICATION

Natural Resources Canada / Ressources naturelles Canada

Your certification card is only valid when presented with this identity card
Votre certificat de poche est valide seulement s'il est présenté avec cette carte d'identité

Name/ Nom: Dwayne Merle Baird

Reg. No./ No. matricule: 3979

Issue Date/ Date d'émission: 2002/02/14

Expiry Date/ Expiration: 2005/12/31

Atomic Energy Control Board / Commission de contrôle de l'énergie atomique

Qualified Operator / **Opérateur qualifié**

DWAYNE BAIRD
NAME

1986.04.18
ISSUE DATE / DÉMISSION

OPERATOR / OPÉRATEUR

SIGNATURE

Canada

Qualified Operator

pursuant to Section 18 of the Atomic Energy Control Regulations, for the purpose of operating an exposure device containing a prescribed substance.

Opérateur qualifié

en vertu de l'article 18 du Règlement sur le contrôle de l'énergie atomique afin d'utiliser un dispositif d'exposition contenant une substance prescrite.

Card Number / No de la carte: 000863

Issuing Officer's Signature / Signature de l'agent responsable

Dwayne Baird
CGSB# 3979

BLUESTAR WELDING

HEAT TREATMENT INSTRUCTIONS

JOB NO.: 10252-P CUSTOMER: Pure Energy

DESCRIPTION: Lineheater Coil

DATE: February 18, 2005

COMPONENT DESCRIPTION:

DWG. NO. AND LINE NO.	DIAMETER	THICKNESS	MATERIAL	LENGHT	WEIGHT
1931-06	4 ½" O.D.	1.031"	AISI 4130	10'	

TYPE OF HEAT TREATMENT: STRESS RELIEVE

Temperature to raised from 800°F (426°C) to 1150°F (621°C) at maximum rate of 400°F

(_____°C) per hour. **NOTE: MUST NOT EXCEED 400°F (222°C) PER HOUR.**

(Calculated rate=400°F/h. Divided by governing metal thickness)

Temperature to be held at 1150°F (621°C) plus or minus 25°F (14°C) for 240minutes.

Temperature to be lowered from 1150°F (621°C) to 800°F (426°C) at a maximum rate of 400°F

(_____°C) per hour. **NOTE: MUST NOT EXCEED 500°F (278°C) PER HOUR.**

(Calculated rate=500°F/h. Divided by governing metal thickness)

Additional requirements:

- **Job number and description required on heat treatment charts along with operator signature & date.**
- **Verification of furnace thermocouple calibration required.**
- **A sufficient number of thermocouples shall be located to control and maintain uniform distribution of temperature on all vessels and parts. Thermocouples shall be directly attached to the item or provision shall be made for thermocouple placement at bottom, center and top of the furnace charge in accordance with the ASME Code.**
- **No welding shall be performed on vessels or parts.**

Furnace Heat Number: 11608

Furnace Operator Signature: D Muller **Date:** Feb 18, 05

Q.C. Inspector Signature: [signature] **Date: February 18, 2005**

JB #10252 BLUESTAR

QCI _____ DATE _____

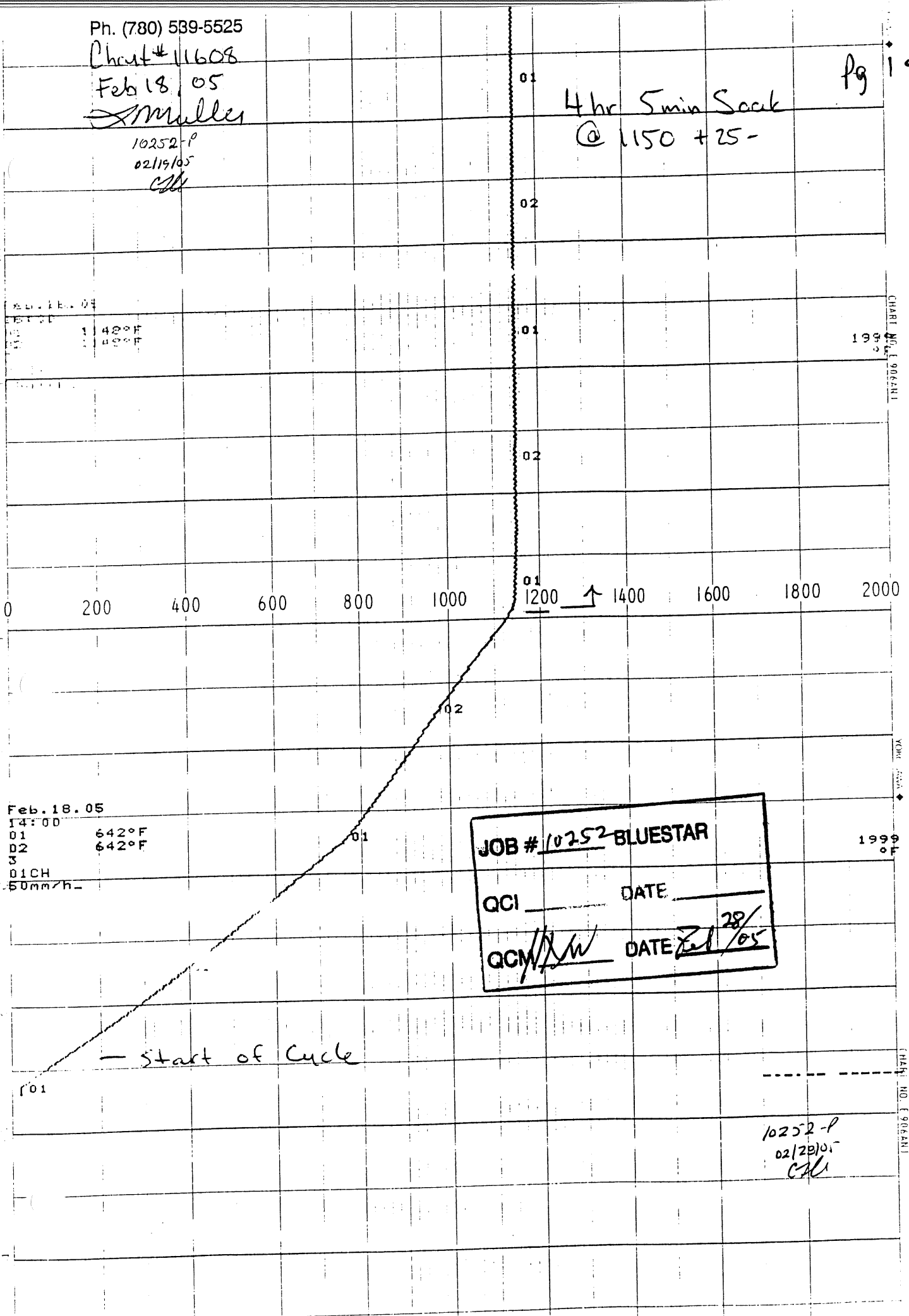
DATE Feb 28/05

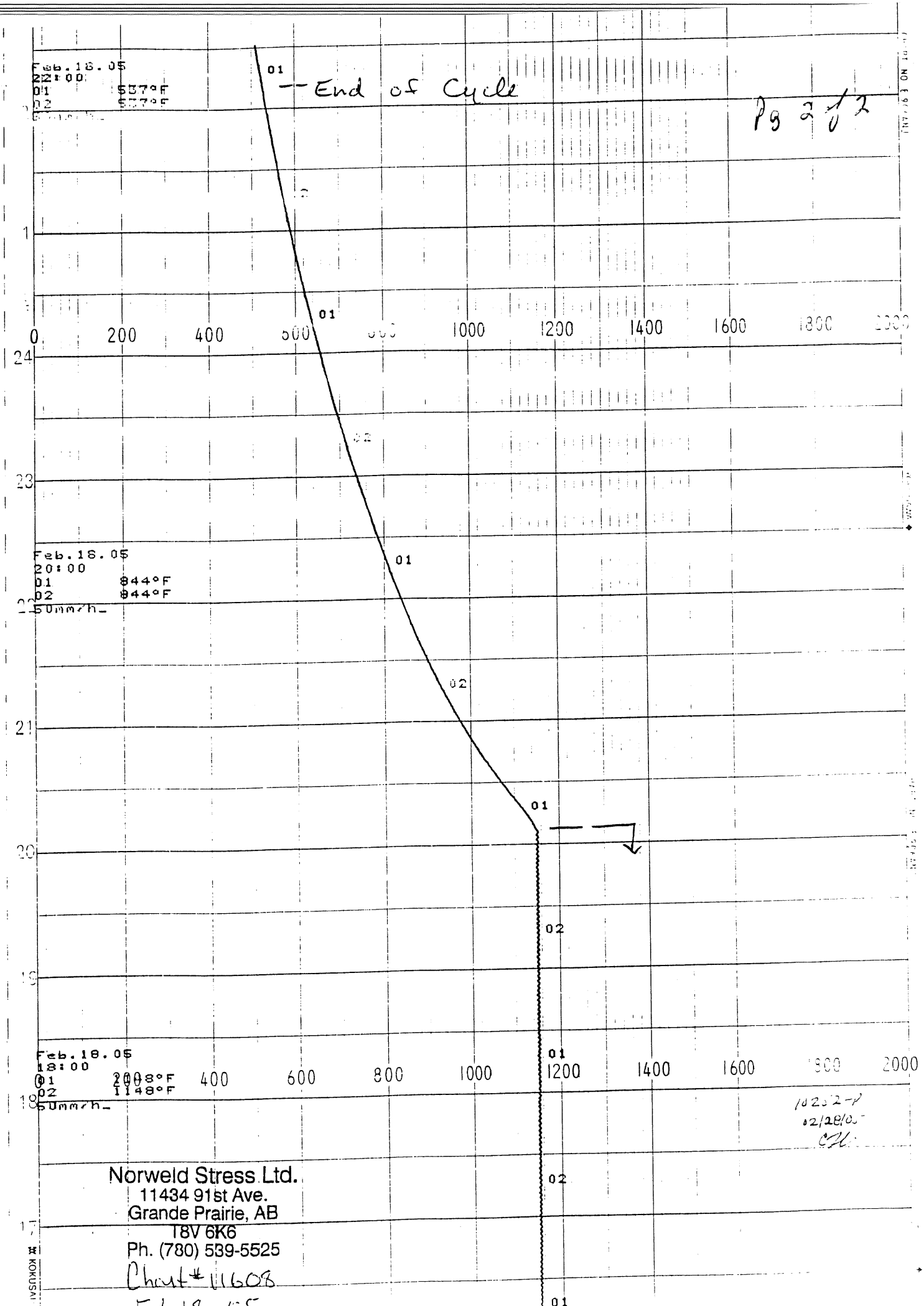
10252-P
02/28/05
CH

Ph. (780) 539-5525
Chart # 11608
Feb 18, 05
Mulley
10252-P
02/19/05
CM

pg 1 of 2

4 hr 5 min Soak
@ 1150 +25-





Pg 2 of 2

10232-P
02/28/05

Norweld Stress Ltd.
11434 91st Ave.
Grande Prairie, AB
T8V 6K6
Ph. (780) 539-5525

Chart # 11608

NORWELD STRESS LTD.

HEAD OFFICE
Box 6333, Fort St. John BC V1J 4H8

TEL: (250) 787-0609 OR 785-1753
FAX: (250) 787-0610
CELL: (250) 787-6882 OR 262-6855

BRANCH OFFICE
Grande Prairie
TEL: (780) 539-5525
FAX: (780) 539-5916

heat treatment report

CHART / SHEET NUMBER 11608

CLIENT Blue Star Welding JOB NO. 10252-P

SHIP STATE/ PROVINCE CUST P.O. NO. FEB 19. 05 cpl

PROCEDURE REFERENCE			
RATE OF RISE UNRESTRICTED	400 °F HR. MAX 800 °F	RATE OF COOL UNRESTRICTED FROM	400 °F HR. MAX 800 °F
SOAK TEMP.	°F 1150 +25-	°F	°F
SOAK PERIOD	HRS. 4 hrs.		MINS. 5 min
PH ϕ °F MIN.	PREHEAT ϕ °F MAX	INSULATION REMOVED AT ϕ °F	
SPECIAL REMARKS	Left in Oven until ambient temp.		
RECORDER NUMBER 12C719126	CHART SPEED 5 cm/h	CALIBRATED July 1/05	

HEAT SPECIFICATIONS
APPROVED BY _____ DATE _____

T/C		T/C	
1	> Oven		
2			

JOB #10252 BLUESTAR
QCI _____ DATE _____
QCM [illegible] DATE Feb 28/05

EQUIPMENT CONSUMABLES	QUANTITY
Stress Oven 35	
Stress relieve Line heat coil as requested	

SIGHT TIME					HOURS
TECH	DATE	START	FINISH	REGULAR	O.T.
L.M.	02/15/05	7 PM			

TRAVEL TIME TECH	DATE	HOURS	VEHICLE	MILEAGE

SIGNED (TECHNICIAN) [signature]

NAME LEE MULLER DATE Feb 15 05

SIGNED (ACCEPTING AUTHORITY) [signature]

NAME CHRIS FLET DATE [illegible]

10252-P

BLUESTAR WELDING
DIVISION OF STEELFAB LTD.

PRESSURE TEST EXAMINATION GUIDE

	PRESSURE TEST PREPARATION	Q.C. INSP.
1.	All punch list items corrected.	✓
2.	Test blinds are of correct thickness.	✓
3.	All items which could be damaged by test isolated or removed (control valves, safety valves, instruments, expansion joints, etc.)	✓
4.	Equipment with internals (i.e. filters) that could be damaged isolated as required.	✓
5.	Vents and drains correctly installed.	✓
6.	Open and Closed position of all valves verified.	✓
7.	Shipping bars in place - bellows.	✓
8.	Hanger stops in place.	✓

JOB #10252 BLUESTAR
QCI _____ DATE _____
QCM [signature] DATE Feb 23/05

	PRESSURE TEST COMPLETION	Q.C. INSP.
1.	All temporary blinds (blanks) removed.	✓
2.	Temporary gaskets changed for correct gaskets.	✓
3.	Temporary supports removed.	✓
4.	Shipping bars removed from bellows.	✓
5.	Spring hanger stops removed - cold setting checked.	✓
6.	Safety valves - "UV" or "V" symbol and correct set pressure and capacity installed.	✓
7.	Safety valve vents are correct size - adequately supported - drain holes and or weather hoods installed.	✓
8.	Screens for pumps and compressors installed (initial start-up and permanent screens).	✓

Q. C. Inspector Signature: [signature] Date: Feb 24. 05

10252-P
02/28/05
[signature]

BLUESTAR WELDING

Hydrostatic Test Report

Date: FEB. 24.2005

Job Number: 10252-P

Customer: PURE ENERGY

Product Used For Test: H2O

Test Conducted By: DALER PRESSURE TEST

Test Pressure: 15,000 PSI

Holding Time @ Test Pressure: 1 HOUR

Results: NO LEAKS

Authorized Inspector Witnessing Test: HARVEY WOODY

Comments:

JOB #10252 BLUESTAR
QCI DATE
QCM RJW DATE Feb 28/05

Quality Control Manager

10252-P
02/28/05

BLUESTAR WELDING
DIVISION OF 570147 ALTA. LTD.

EQUIPMENT CALIBRATION LOG

EQUIPMENT DESCRIPTION: WGI 20,000 PSI PRESSURE GAUGE

IDENTIFICATION NO.: BSPG 20000 1

CALIBRATION INTERVAL:

Calibration Date	Calibration Record Verified	Date of First Use	Calibration Expiry Date
FEB 18. 2005	# 43237	FEB 24. 2005	AUG 2005

Calibration requirements and Instructions:

EQUIPMENT CALIBRATION LOG

EQUIPMENT DESCRIPTION: WGI 20000 PSI PRESSURE GAUGE

IDENTIFICATION NO.: BSPG 20000 2

CALIBRATION INTERVAL:

Calibration Date	Calibration Record Verified	Date of First Use	Calibration Expiry Date
FEB. 18. 2005	# 43237	FEB 24. 2005	AUG 2005

Calibration requirements and Instructions:

JOB # 10252 BLUESTAR
QCI _____ DATE _____
QCM _____ DATE Feb 28/05

10252-P
02/28/05
CPL

WESTERN GAUGE & INSTRUMENTS LTD.

1023-2-P
02/28/05
CL

CERTIFICATE OF CALIBRATION
#43237

BSPG 20000 1

ORDER NO.	**102414**	**AMBIENT TEMPERATURE**	**20C**
SERIAL NUMBER	**JW050217-5**	**DEADWEIGHT**	**SN# 8604**
DIAL SIZE	**4" WGI**	**TEST MEDIUM**	**OIL**
PRESSURE RANGE	**0-20,000 PSI**	**MAXIMUM ERROR**	**+140 PSI**
SUB DIVISIONS	**2000 PSI**	**DATE**	**February 18, 2005**
CONNECTION	**½" NPT**	**LOCATION TESTED**	**9535 – 42 AVE**
INSPECTOR	**G.J.P. WOWK**	**EDMONTON, ALBERTA, T6E 5R2**	

TESTED GAUGE		DEADWEIGHT		UPSCALE ERROR	
0		0		0	
2000	PSI	2000	PSI	0	PSI
4000	PSI	4000	PSI	0	PSI
6000	PSI	6000	PSI	0	PSI
8000	PSI	8000	PSI	0	PSI
10,000	PSI	10,000	PSI	0	PSI
12,000	PSI	12,000	PSI	0	PSI
14,000	PSI	14,000	PSI	0	PSI
16,000	PSI	16,000	PSI	0	PSI
18,000	PSI	17,970	PSI	+30	PSI
20,000	PSI	19,860	PSI	+140	PSI

TECHNICIAN: _____ Michael Kowalski Q.C. Manager: _____ Lynn Wowk

Invoice: PCL-50227

**ALL TEST EQUIPMENT IS TRACEABLE TO N.I.S.T. STANDARDS.

**CUSTOMER STANDARD DOCUMENT CS-004.

WESTERN GAUGE & INSTRUMENTS LTD.

10252-P
02/23/05
CPL

CERTIFICATE OF CALIBRATION
#43223

BSPG 20000 2

ORDER NO.	102414	AMBIENT TEMPERATURE	20C
SERIAL NUMBER	JW050217-6	DEADWEIGHT	SN# 8604
DIAL SIZE	4" WGI	TEST MEDIUM	OIL
PRESSURE RANGE	0-20,000 PSI	MAXIMUM ERROR	-100 PSI
SUB DIVISIONS	2000 PSI	DATE	February 18, 2005
CONNECTION	½" NPT	LOCATION TESTED	9535 – 42 AVE
INSPECTOR	G.J.P. WOWK	EDMONTON, ALBERTA, T6E 5R2	

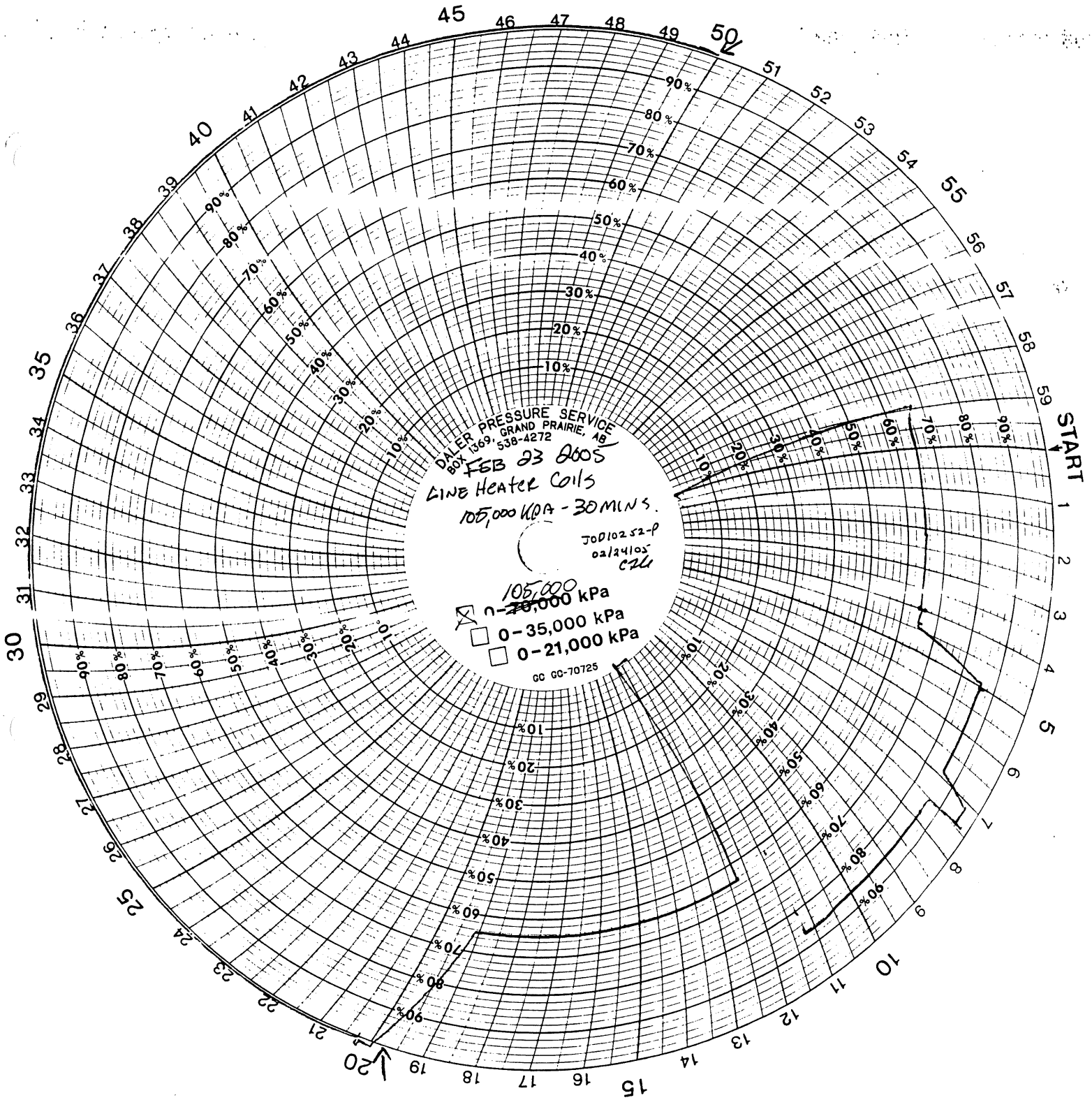
TESTED GAUGE		DEADWEIGHT		UPSCALE ERROR	
0		0		0	
2000	PSI	2100	PSI	-100	PSI
4000	PSI	4030	PSI	-30	PSI
6000	PSI	6000	PSI	0	PSI
8000	PSI	8000	PSI	0	PSI
10,000	PSI	10,000	PSI	0	PSI
12,000	PSI	12,000	PSI	0	PSI
14,000	PSI	14,000	PSI	0	PSI
16,000	PSI	16,000	PSI	0	PSI
18,000	PSI	18,000	PSI	0	PSI
20,000	PSI	20,000	PSI	0	PSI

TECHNICIAN: Michael Kowalski Q.C. Manager: Lynn Wowk

Invoice: PCL-50227

**ALL TEST EQUIPMENT IS TRACEABLE TO N.I.S.T. STANDARDS.

**CUSTOMER STANDARD DOCUMENT CS-004.



10252-P
02/28/05
CH

JOB #10252 BLUESTAR

QCI _____ DATE _____

QCM _____ DATE Feb 28/05

NCR #

NONCONFORMITY REPORT

JOB NUMBER:

DESCRIPTION OF NONCONFORMANCE:

N/A

SIGNATURE OF ORIGINATOR: DATE:

PROPOSED DISPOSITION, REPAIRS OR METHOD OF IDENTIFICATION:

QCM APPROVAL: DATE:

AUTHORIZATION INSPECTORS ACCEPTANCE: DATE:

NONCONFORMANCE RECTIFIED:

QCM VERIFICATION: DATE:

AUTHORIZED INSPECTORS ACCEPTANCE: DATE: