



QUALITY CONTROL REPORT

For

Canadian Sub-Surface Energy Services

By

TARA Oilfield Services Ltd.

P.O. Box 1389
Didsbury, Alberta T0M 0W0
Phone: 1-403-335-9158
Fax: 1-403-335-3403
Toll Free: 1-866-FAB-TARA
1-866-322-8272

JOB NUMBER

05-129C

3" Line Heater Spools

Prepared By:

Nicole Normand, Q.C.I.

Date: March 14, 2006

EXHIBIT INDEX

<u>Exhibit #</u>	<u>Description:</u>
1.1	Copy of Certificate of Authorization
8.1	Contract Review
9.1	Pressure Piping Specification Sheet
11.3	Pressure Piping Examination Checklist
11.4	Pressure Piping Examination Guide
11.5	Pressure Test Examination Guide
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22.2	Completion of Construction Declaration (AB-81)
22.3	Construction Data Report for Piping Systems (AB-83) Drawings Material Test Reports



Certificate of Authorization

Quality Control Program

Expiry Date: **August 3, 2008**

Reg. No.: **AQP-1434**

This is to certify that:

TARA OILFIELD SERVICES LTD.
1805 - 19 STREET
DIDSBURY, ALBERTA

having complied with the provisions of the SAFETY CODES ACT, is hereby authorized to:

Construct ASME Section VIII-1 Pressure Vessels

Manufacture, Repair/Alter Category 'A', 'E' & 'H' Fittings in accordance with CSA B51

at the above SHOP address.

Construct, Repair/Alter ASME B31.1 Power Piping and ASME B31.3 Process Piping

Repair/Alter ASME Section VIII-1 Pressure Vessels

at the SHOP and FIELD sites controlled from the above address.



Dated at Edmonton, this 8th day of August, 2005

A handwritten signature in black ink, appearing to read "L. Chan".

Chief Inspector and Administrator
Certificate No.: 4697

TARA OILFIELD SERVICES LTD.

CONTRACT REVIEW

Job Number: 05-129C

Date: September 15, 2005

Owner Company: Canadian Sub-Surface Energy Services

600#, 505 – 8th Ave. S.W. Calgary, AB T2P 1G2

Description of Job: 3" Line Heater Spools

RESPONSIBLE FOR QUALITY SYSTEM FUNCTIONS	OWNER	TARA OILFIELD SERVICES LTD.
Materials Receiving Inspection, Identification and Traceability	No	Yes
Welding Control	No	Yes
Heat Treatment Control	No	Yes
NDE Control	No	Yes
Pressure Test Control	No	Yes
Preparing and Retention of Quality Control Records	No	Yes

The Alberta Design, Construction and Installation of Boilers and Pressure Vessels Act. and Regulations require the owner to have an authorized Quality System Program if they assume any of the Quality System functions listed above. A piping system over 0.5 cubic metres in capacity must be registered with ABSA.

RESPONSIBLE FOR SUPPLY	OWNER	TARA Oilfield Services Ltd.
Material Control	X	Yes
Design Registration with ABSA	X	Yes
Drawing & Specifications	X	Yes
NDE	X	Yes
Heat Treatment	X	Yes

Owner's Representative: Dave Godlien

Date Contracted: September 15, 2005

leo
QC Manager / QC Inspector

Sept 15/05
Date

(For Construction/Repair/Alteration of Pressure Piping Systems Less Than or Equal to 0.5 Cubic Meters, Aggregate Volume)

AQP:1434

Job #:05-129C

(Note: Pneumatic tests must have prior approval from ABSA.)

Tara Oilfield Services Ltd. Signature: [Signature] Date: Sept 15/05

TARA OILFIELD SERVICES LTD.
PRESSURE PIPING EXAMINATION CHECKLIST

PRESSURE PIPING EXAMINATION CHECKLIST			
JOB NUMBER: 05-129C			
NO.	FUNCTION	SIGNATURE OR INITIAL AND DATE	
		Q.C. INSPECTOR	OWNER'S INSPECTOR OR
1	DRAWINGS: ABSA registration over 0.5 Cu. M. Approved by Owner. Approved for Construction (signed & dated).	leo 09/15/05	
2	Owner's Inspector notified.	leo	
3	Registered Welding Procedures, Q.C. Manual and Forms available at site, Job File started.	leo	
4	Welders qualified for Procedures and have valid Performance Qualification cards. Welders Log completed. WPS reviewed with welders.	leo	
5	Material checked against P.O., drawings, and specifications. Identification confirmed. Colour coding applied.	leo	
6	Sample of each welder's work examined, including root spacing, alignment, cleaning, joint preparation, preheat and electrode control.	leo	
7	Nondestructive Examination completed. Reports and radiographs reviewed, signed by Level II or III, Radiograph I.D. detailed on drawings.	leo 10/24/05	
8	Visual Examination of all completed welds. Welders I.D. stamped and recorded on drawings.	leo	
9	Heat Treatment verified and recorded on drawings.	leo 02/24/06	
10	Each system checked against specifications and drawings before test.	leo	
11	All deficiencies recorded and signed off by Q.C.I. and Owner's Inspector before test.	leo	
12	Pressure Test checked. Gauge calibration verified, gauge #'s recorded.	leo 03/01/06	
13	System checked after test. Deficiencies recorded and corrected.	leo	
14	Construction data reports (AB-83) prepared and signed by Q.C.I. and Owner's Inspector.	leo	
15	Declaration form (AB-81) submitted to ABSA	leo	
16	As built drawings accepted by Owner.	leo	

TARA OILFIELD SERVICES LTD.
PRESSURE PIPING EXAMINATION GUIDE

PRESSURE PIPING EXAMINATION GUIDE	Q.C. INSP. ✓
EXAMINATION PRIOR TO PRESSURE TEST (PUNCHING)	
1. Pipe Material; schedule and specification correct.	✓
2. Flanges; ratings, schedule and material specification correct.	✓
3. Fittings; tees, return bends, reducers, couplings and weld-o-lets etc. Correct schedule and material specification.	✓
4. Valves; identification – Manufacturer's name tag, etc., correct.	✓
5. Valves; installed correctly, flow direction, accesses, rising stems free from obstructions, clearance for removal adequate.	✓
6. Lubrication fittings, drains, etc., installed as required.	✓
7. Bolts, Studs, Nuts; length and material correct. Studs at least flush with heads (max. Thread exposure beyond nut should be about 2 threads)	✓
8. Gaskets are correct type, material, size, etc.	✓
9. All welding satisfactory and traceable to welder's symbol.	✓
10. Seal welding complete - threads covered.	✓
11. All attachment welds satisfactory.	✓
12. All N.D.E., heat treatment complete, records filed.	✓
13. Guide anchors and shoes required installed correctly. (High temp. lines)	✓
14. Line supports adequate - supports to be checked against drawings.	✓
15. Spring hangers - correct type, correct installation.	✓
16. Lines have adequate allowance for expansion.	✓
17. Bellows type expansion joints - correct type, pressure rating and correct installation.	✓
18. Required cold spring applied.	✓
19. Orifice runs have specified straight length of pipe - located correctly etc.	✓
20. All deficiencies recorded on Punch List.	✓
Q.C. Inspector Signature: <u>leo</u> Date: <u>02/27/06</u>	

TARA OILFIELD SERVICES LTD.
PRESSURE TEST EXAMINATION GUIDE

PRESSURE TEST EXAMINATION GUIDE	Q.C. INSP. ✓
PRESSURE TEST PREPARATION	
1. All punch list items corrected.	✓
2. Test blinds correct thickness.	✓
3. All items which could be damaged by test isolated or removed (control valves, pressure relief valves, instruments, expansion joints, etc.)	✓
4. Equipment with internals (e.g., 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.	✓
PRESSURE TEST COMPLETION	
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. Pressure Relief 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: <u>Lee</u> Date: <u>02/27/06</u>	

Welders Name (File Number)	Symbol	T.O.S. Proc. #	Process/ Method	Base Metals	"F" #	Backing	Min. O.D.	Deposit Thickness	Pos.	Uphill/ Downhill	Cored/ Solid	Insert	Backing Gas	GTAW Current	GMAW X-Fer	Expiry Date
Doug Weigum (W-4123)	D	TOS-1&2	SMAW	P1	3	Optional	1.0"	.188"	All	Uphill	N/A	N/A	N/A	N/A	N/A	1/10/2006
			Manual	P1	4			.684"								
Nicholas Vogel (W-21228)	U	TOS-1&2	SMAW	P1	3	Yes	25mm	6.35mm	All	Uphill	N/A	N/A	N/A	N/A	N/A	05/13/2007
			Manual	P1	4	No		15.65mm								
Ryan Zimmer (W-22692)	T	TOS-1&2	SMAW	P1	3	Yes	25mm	6.35mm	All	Uphill	N/A	N/A	N/A	N/A	N/A	07/22/2007
			Manual	P1	4	No		15.65mm								
	M		SMAW	P1	3	Yes	2.5"	6mm	All	Uphill	N/A	N/A	N/A	N/A	N/A	07/22/2007
			Manual	P11	4	No		16mm								
George Gannon (W-14190)	M	TOS-1&2	SMAW	P1	3	Optional	1.0"	.188"	All	Uphill	N/A	N/A	N/A	N/A	N/A	7/8/2007
			Manual	P1	4			.684"								
	M		SAW	P1	6	With	N/A	Max.	Flat	N/A	N/A	N/A	N/A	N/A	N/A	05/27/2007
			Manual													
	M		GMAW	P1	6	Optional	2.875"	.110"	0-45,F	Downhill	N/A	N/A	NO	N/A	SC	05/24/2007
			SMAW		4			Max.	F, V	Uphill						
	M		GMAW	P1	6	Optional	1.0"	.100"	0-45,F	Downhill	N/A	N/A	NO	N/A	SC	05/25/2007
			FCAW			With		.672"	F, V	N/A						
	S	TOS-1&2	SMAW	P1	3	Optional	1.0"	.188"	All	Uphill	N/A	N/A	N/A	N/A	N/A	
			Manual	P1	4			.684"								
	S		SAW	P1	6	With	N/A	Max.	Flat	N/A	N/A	N/A	N/A	N/A	N/A	05/27/2007
			Manual													
Martin Sheridan (W-17163)	S		GMAW	P1	6	Optional	1.0"	.100"	0-45,F	Downhill	N/A	N/A	NO	N/A	SC	05/25/2007
			FCAW			With		.672"	F, V	N/A						
	S		GTAW	P1	6	Optional	1.0"	.188"	Flat	N/A	N/A	N/A	N/A	N/A	N/A	3/5/2007
			SMAW	4130				.672"								
	S		GTAW	P8	5	Optional	1.0"	0.2"	Flat	N/A	N/A	N/A	N/A	N/A	N/A	07/27/2007
			SMAW			With		.488"	1G							

Weiders Name (File Number)	Symbol	T.O.S. Proc.#	Process/ Method	Base Metals	"F" #	Backing	Min. O.D.	Deposit Thickness	Pos.	Uphill/ Downhill	Cored/ Solid	Insert	Backing Gas	GTAW Current	GMAW X-Fer	Expiry Date
Daniel Hill (W-5190)	H	TOS-1&2	SMAW	P1	3	Optional	1.0"	.188"	All	Uphill	N/A	N/A	N/A	N/A	N/A	10/1/2007
			Manual	P1	4			.684"								
		TOS-1&2	SMAW	P1	3	Optional	1.0"	.188"	All	Uphill	N/A	N/A	N/A	N/A	N/A	08/29/2005
			Manual	P1	4			.684"								
			SMAW	P1	3	Optional	1.0"	.104"	All	Downhill	N/A	N/A	N/A	N/A	N/A	09/20/2006
			Manual	P1	4	With		8.0"		Uphill						
Tim Smith (W-18841)	A		GTAW	P1	6	Optional	1.0"	.500"	All	Uphill	N/A	N/A	N/A	N/A	N/A	05/13/2007
			SMAW		4	With		.372"								
			GTAW	P1	6	Optional	25mm	6mm	All	Uphill	N/A	N/A	N/A	N/A	N/A	04/29/2007
			SMAW		4	With		12mm								
			SMAW	P1	3	Optional	1.0"	.188"	All	Uphill	N/A	N/A	N/A	N/A	N/A	05/27/2007
			SMAW	P1	4	With		.684"								
Martin Sheridan (W-17163)	S		SAW	WPS	6	With	WPS	Max.	Flat	N/A	N/A	N/A	N/A	N/A	N/A	05/27/2007
			Manual	Limits			Limits									
			GMAW	P1	6	Optional	1.0"	.110"	O-45,F	Downhill	N/A	N/A	NO	N/A	N/A	05/25/2007
			FCAW			With		.672"	F, H	N/A						
Ron Rempel (W20370)	R	TOS1&2	SMAW	P1	3	None	25mm	6.35mm	All	Uphill	N/A	N/A	N/A	N/A	N/A	1/4/2007

WELD PROCEDURE CERTIFICATE



TARA OILFIELD SERVICES LTD.

P.O. Box 99, Didsbury, Alberta T0M 0W0
Phone 403-335-9158 Cell 403-507-1482

WELDING PROCEDURE SPECIFICATION NO: TOS-2

WELDING PROCEDURE QUALIFICATION RECORD NO(S): PQ2, PQ3

QUALIFIED FOR

Base Metal (Typical): P1 Groups 1 & 2 to P1 Groups 1 & 2 (SA 333 Gr. 6, SA 420 WPL6, SA 350 Gr. LF2, SA 516 Gr. 70 etc.)
Process(es): SMAW Weld Types: GROOVE & FILLET
Position: ALL POSITIONS Diameter: ALL DIAMETERS
Filler Metal: E6010, E7018-1

BASE METAL CONDITIONS & THICKNESS RANGE QUALIFIED:

NOTCH TOUGHNESS APPLICATIONS TO -46°C WITH P.W.H.T.

ASME B31.1	<u>3.2 to 25.4 mm (0.125 to 1.00 in.) inclusive.</u>
ASME B31.3	<u>3.2 to 25.4 mm (0.125 to 1.00 in.) inclusive.</u>
ASME SECT. VIII, DIV.1	<u>3.2 to 25.4 mm (0.125 to 1.00 in.) inclusive.</u>

ALBERTA BOILERS SAFETY ASSOCIATION
PROVINCE OF ALBERTA
SAFETY CODES ACT
WELDING PROCEDURE

Reg. No. WP 2081.2
Spec No. TOS-2
Weld Process SMAW
Matl. Gr. P No. 1 Gr 12 to P No. 1 Gr 12
Elec. Gr. F No. 3+4 A No. 1
Th. Qual For 3.2 to 25.4 mm P.W.H.T. YES
CVN-46°C

91 Mo. 2 Day 25 Signed [Signature]
R. ROSEBERG, P.ENG.
WELDING SPECIALIST

PROVINCIAL REGISTRATION

TARA OILFIELD SERVICES LTD.

CERTIFYING STATEMENT

May 31, 2005

I have reviewed the written practices, procedures, personnel records and certifications, in the SNT Manual (Copy #101 Dated May 30,2005) of:

Gamma-Tech Inspection Ltd.
Box: 1346
Crossfield, Alberta
T0M 0S0

Based upon my review of the above referenced procedures, it is my opinion that they are in accordance with ASME Section V requirements as referenced by the applicable construction Code, and that the written practice complies in all respects with the requirements of SNT-TC-1A.

In addition I hereby certify that the demonstration of procedure(s) to the satisfaction of the AI , as required by the ASME Code, Section V, paragraph T-150, has been completed as specified within the TARA Oilfield Services Ltd. Written quality system.

Gamma-Tech Inspections Ltd. are appointed to perform (RT, MT, and PT) Non-Destructive Examinations for Tara Oilfield Services Ltd.

Debra Ross is by this statement, appointed to act as the Level III person to be responsible for RT, MT, and Dennis Nagy Level III for PT, Non-Destructive Examinations for TARA Oilfield Services Ltd.



Leo Dussault, Quality Control Manager



Gamma-Tech
Inspection Ltd.
Box 1346
Crossfield, Alberta T0M 0S0
Phone: (403) 946-0464
Fax: (403) 946-0457
Calgary: (403) 235-2454

RADIOGRAPHIC REPORT

R - 13223

CLIENT: <u>TARA PROJECTS</u>	MATERIAL TYPE: <u>CS</u>	THICKNESS RANGE: <u>0.600"</u>	LEGEND	DATE: <u>OCT. 24.05</u>
LOCATION: <u>DIDSBURY</u>	SOURCE OF RADIATION: <u>IR-192</u>	FOCAL SPOT (F): <u>3.5mm</u>	WELDERS SYMBOL	PAGE: <u>1 OF 2</u>
GTIL JOB No. <u>05-03-0029</u>	CONTRACTOR:	TECHNIQUE: <u>SWE</u> <input type="checkbox"/> <u>DWE</u> <input checked="" type="checkbox"/> <u>SW</u> <input checked="" type="checkbox"/> <u>DWV</u> <input type="checkbox"/>	ACCEPTABLE	PROCEDURE: <u>C</u>
CLIENT'S P.O. <u>3</u>	FILM TYPE: <u>AGFA D5</u>	* ONLY 1 FILM / CASSETTE	BORDERLINE	CODE: <u>ASME</u>
CLIENT JOB No. <u>05-129-</u>			REJECT	<u>B 31.3 S/C</u>

IDENTIFICATION	PIPE SIZE	PIPE SCHEDULE	t	# OF EXP	CRK	LF	IP	P	S	UC	CR	EP	%	*	DEFECT LOCATION AND REMARKS	ACCEPT	REJECT
1. 3-1 X-1	3"	X-XH	.600	4													
2. 1																	
3. 1																	
4. 3-2																	
5. 1																	
6. 1																	
7. 3-3																	
8. 3-4																	
9. 3-5																	
10. 1																	
11. 2-1																	
12. 1																	
13. 1																	
14. 2-2																	
15. 1																	
16. 1																	
17. 2-3																	
18. 2-4																	
19. 2-5																	
20. 1																	

FINAL FILM INTERPRETATION IS THE RESPONSIBILITY OF THE CLIENT.
I AM IN FULL AGREEMENT WITH THE ABOVE DETAILS AND ACKNOWLEDGE
RECEIPT OF FILM.

FILM USED: 80 PCS.
FILM SIZE: 5x35

DTR #: 007
VEHICLE #: 007

CLIENT REPRESENTATIVE: B. WELLS

TECHNICIAN (SIGN): K. WELLS

TECHNICIAN (PRINT): K. WELLS ASNT LEVEL II

ASSISTANT (PRINT): B. WELLS

SSOFD: <u>3.95"</u>	Source Side of Object to Film Distance
SOD: <u>2.9"</u>	Source to Object Distance

Furnace Work Order

Client: TARA OILFIELD SERVICES LTD.
Address: P.O. BOX 1389
DIDSBURY, AB
T0M 0W0

Date: Friday February 24, 2006
Phone: (403) 335-9158
Date Required: Monday February 27, 2006

Client Reference:
Furnace: 2

P.O.: Leo

Attention: MARTY SHERIDAN
Furnace Load: CF06-6213

Description	Quantity
Coil	1
Spools	5

Total Overtime Hours = 0

@ \$0.00

Per Hour = \$0.00

Furnace Charges: \$600.00

Other Charges(s): \$0.00

COST: \$600.00

GST: \$42.00

TOTAL COST: \$642.00

Heat Cycle (In Degrees Celsius)

Material: Carbon Steel (P1) <= 1" W/T **Code:** Customer Spec.
Heat from Ambient to: 425° at a Moderate Rate.
Heat from 425° to 621° at 222° per Hour max.
Soak at 621° +/- 14° for 1 Hours.
Cool to 425° at 277° per Hour max.
Cool from to at per Hour max.
From 425° Air cool in furnace.

Comments:

- NOTE:**
1. An extra charge will apply for any additional supporting or blocking required.
 2. Customer will not hold Continental Stress Relieving Services Ltd. responsible for any damage of distortion caused by heat treatment process.

Thank you for the opportunity of quoting.
Continental Stress Relieving Services Ltd.

Name: Aaron Thompson

Signed:





CONTINENTAL STRESS RELIEVING

RECORDING INSTRUMENTSCERTIFICATE of CONFORMANCECERTIFIED BY: KINGSWAY SCIENTIFIC AND INDUSTRIAL INSTRUMENTS INC.TEST NUMBER: B 6510DATE OF CALIBRATION: Jan. 12/06INSTRUMENT MFG. ChinoMODEL NUMBER: EA100-24SSERIAL NUMBER: EA77C001RECORDER NUMBER: R 29CALIBRATION DUE: April 12/06

THIS INSTRUMENT HAS BEEN CALIBRATED AND IT IS WITHIN THE
MANUFACTURES SPECIFICATIONS.

REFERENCE STANDARDSL&N MODEL 8686 SERIAL # 1768189 CERTIFICATION DATE: May 4/05Hewlett Packard 3458A Ser. #2823A16911 CERTIFICATION DATE: Feb. 8/05FLUKE 5520A CALIBRATOR Ser. #7990016 CERTIFICATION DATE: Feb 24/05

CERTIFICATION DATE: _____

RE-CERTIFICATION DATE: Annually

THE CALIBRATION OF ALL STANDARDS AND MEASURING INSTRUMENTS USED IN THIS
CALIBRATION ARE TRACEABLE TO THE NATIONAL RESEARCH COUNCIL OF CANADA IN
OTTAWA OR TO THE NATIONAL BRUEAU OF STANDARDS IN WASHINGTON, D.C.

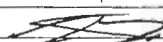
KINGSWAY SCIENTIFIC & IND. INSTR. INC.

CALIBRATED BY:

SIGNATURE:

CONTINENTAL STRESS RELIEVING SERVICES LTD.
Telephone: (403) 273-5105

Date: February 24, 2006
Client: Tara Oilfield Services
Owning Co.: N/A
Chart Speed: 30 Lines/Hour
Material: As Per Customer Specifications
Procedure: PWHT
Furnace Load #: CF06-6213
Client Job #:
P.O. #: Leo
Comments: 1-Coil
5-Spools

Operator Name: Aaron Thompson
Operator Signature: 
Temperature in °C: ☒ Recorder #: R 29.

JOB # 05-129C
LINE HEATER BUNDLES
AND SPOOLS

End the Soak

Start the Soak



Red Deer Ltd.
6785 - 52nd Ave.
Red Deer, Alta., T4N 4K8

Ph. 343-2822, Fax: 347-1470
Email: info@kingmeter.com
Web: www.kingmeter.com

PRESSURE GAUGE CALIBRATION TEST CERTIFICATE

We certify that the gauge identified below has been tested and calibrated using precise test equipment and that this instrument is accurate to within 1/2% of its full scale reading.

MODEL & RANGE: 4" Wika 10,000 / 69,000

GAUGE NO.: W 952

This gauge meets all King's Meter Gauge Calibration Standards.

TEST GAUGE READINGS

GAUGE READINGS

1000 PSI	1000 PSI
2000 "	2000 "
3000 "	3000 "
4000 "	4000 "
5000 "	5000 "
6000 "	6000 "
7000 "	7000 "
8000 "	8000 "
9000 "	9000 "
10,000 "	10,000 "

TECHNICIAN: [Signature]

DATE: Oct 20, 2005

CERTIFICATE OF TRACEABILITY

PERMA-CAL GAUGE MODEL -100NTM18B21, S/N-010328005-01-001 CALIBRATED AGAINST
WIKI 342.11 15,000 S/N Z7003J0 CERTIFICATION #6432.

TRACEABLE TO N.I.S.T. (I.N.M.S)

Calibration Date: January 5, 2005, Expiry Date January 5, 2006



Red Deer Ltd.
6785 - 52nd Ave.
Red Deer, Alta., T4N 4K8

Ph. 343-2822, Fax: 347-1470
Email: info@kingmeter.com
Web: www.kingmeter.com

PRESSURE GAUGE CALIBRATION TEST CERTIFICATE

We certify that the gauge identified below has been tested and calibrated using precise test equipment and that this instrument is accurate to within 1/2% of its full scale reading.

MODEL & RANGE: 4" Wiha 10,000 / 68,000

GAUGE NO.: WX01

This gauge meets all King's Meter Gauge Calibration Standards.

TEST GAUGE READINGS

GAUGE READINGS

1000 PSI	1000 PSI
2000 "	2000 "
3000 "	3000 "
4000 "	4000 "
5000 "	5000 "
6000 "	6000 "
7000 "	7000 "
8000 "	8000 "
9000 "	9000 "
10000 "	10000 "

TECHNICIAN: [Signature]

DATE: Oct 20-2005

CERTIFICATE OF TRACEABILITY

PERMA-CAL GAUGE MODEL -100NTM18B21, S/N-010328005-01-001 CALIBRATED AGAINST
WIKA 342.11 15,000 S/N Z7003J0 CERTIFICATION #6432.

TRACEABLE TO N.I.S.T. (I.N.M.S)

Calibration Date: January 5, 2005, Expiry Date January 5, 2006

TARA OILFIELD SERVICES LTD.

HYDROSTATIC TEST REPORT

Date: March 1, 2006

Job Number: 05-129C

Customer: Canadian Sub-Surface Energy Services

Description of Product: 5000psi Line Heater Spools

Tests Conducted By: Warren Tersigni, Q.C.I. & Leo Dussault, QCM

Test Pressure: 7500psi

Test Medium: H2O

Holding Time at Test Pressure: 60 minutes

Results: PASS AQP-1434

Owner's Inspector Witnessing Test: _____

Comments: _____

Leo

Leo Dussault, Q.C.M.

Signature of Owner's Inspector

Diane Sears ABSA

Signature of ABSA Safety Codes Officer (if applicable)

COMPLETION OF CONSTRUCTION

DECLARATION

NOTE: This declaration shall be completed and signed by the person responsible, in whole or in part, for the construction, installation, testing and inspection of the pressure piping system and forwarded to the Administrator/Chief Inspector.

- (1) Owner of Plant: Canadian Sub-Surface Energy Services
600#, 505 - 8th Avenue S.W. Calgary, Alberta
(Name and Address)
- (2) Engineer or Contractor: TARA Oilfield Services Ltd.
1805 - 19th Street Didsbury, Alberta
(Name and Address)
- (3) Type of Plant: Line Heater Spools
- (4) Location of Plant: Portable
(Sec, TWP, Rge)
- (5) Description of Pressure Piping System(s): 3" Sch XXH A333-GR6, A350 LF2 CL1
& A420 WPL6 Fittings

STATEMENT OF COMPLIANCE

I, the undersigned, declare that the described pressure piping system, approved under design registration number _____, complies in all respects with the regulations for construction, installation, testing and inspection and that all applicable pressure piping test data reports have been delivered to the owner.



(Signature)

Nicole Normand
(Print Name)

Q.C.I.
(Title)

March 13, 2006
(Date)

TARA Oilfield Services LTD.
(Company)

1805 - 19th Street
(Address)

Didsbury, AB T0M 0W0
(City, Postal Code)

In accordance with the provisions of the Safety Codes Act

Shop Construction ☒; Field Construction ☐; Final Data Report ☐;
Partial Data Report ☐ (from one ABSA-authorized Contractor to another
ABSA- authorized Contractor).

Complete both sides of this Form

1. Constructed By: TARA Oilfield Services Ltd. Owner's Job No: 05-129C
(Name of ABSA authorized primary contractor or subcontractor)
P.O. Box 1389 Didsbury, AB T0M 0W0
(Address)
Alberta Quality Program No. AQP-1434 Expiry Date: August 03, 2008
2. Constructed For: Canadian Sub-Surface Energy Services.
(Name of primary contractor if different from above)
600#, 205 - 8th Avenue S.W. Calgary. Alberta
(Address)
Alberta Quality Program No. AQP- N/A Expiry Date: N/A
(Required when the primary contractor undertakes some/all of the quality functions, e.g., Mat'l supply, NDE, PWHT, Tie-in, fabrication, hydro test, final assembly etc.)
3. Owner: Canadian Sub-Surface Energy Services
(Name and address)
Portable
(Location of installation)
Alberta Quality Program No. AQP- N/A Expiry Date: N/A
(Required when the owner undertakes some/all of the quality functions, e.g., Mat'l supply, NDE, PWHT, Tie-in, fabrication, hydro test, final assembly etc.)
4. Piping Design Alberta Registration No.: PP- N/A
(Required if aggregate piping volume is over 0.5m³)
5. WP No.: WP-2081.2 ; Company: TARA Oilfield Services Ltd. ; Owner's WP No. (If used): WP-N/A
(Alberta Registration No.) (Alberta Registration No.)
WPS No(s). used: TOS-2 ; Owner's WPS No(s). (If used): N/A
6. Code: ASME B31.1 Non Boiler External Piping ☐; ASME B31.1 Boiler External Piping ☐;
ASME B31.3 ☒ - Service category: Normal ☐, D ☐, M ☐, High Pressure ☒; B31.5 ☐; B31.9 ☐

[illegible]

Partial Data Reports, properly identified and certified by ABSA-authorized contractors, as listed below are attached to and form part of this Data Report ☐

No.	Line No.	Spool No.	Drg. No. (with Rev. No.)	Contractor (Name)	AQP No.	Expiry date

Remarks: Provide additional comments including noting any code work that was not performed by the ABSA-authorized contractor(s) supplying this document as a Partial Data Report but which must be completed by another ABSA-authorized contractor who assumes overall responsibility for conformance with the Safety Codes Act & Regulations and applicable ASME Codes, and who assures that all required code work is completed prior to putting the piping system into service.

Endorse certificate 'A' or 'B'

A. CERTIFICATE OF COMPLIANCE

Signed by the subcontractor when supplying this certificate as a
Partial Data Report

We certify that the statements in this Data Report are correct and that materials, construction and workmanship of the piping fabrication conform to the registered quality system and the applicable Piping code(s).

Date: _____
Subcontractor

Print Authorized Representative's Name Signature

This certificate is not valid unless it forms part of a Final Data Report signed by Primary Contractor

B. CERTIFICATE OF COMPLIANCE

Signed by the primary contractor when supplying this certificate as a
Final Data Report

We certify that the statements in this Data Report are correct and that piping job no. 05-129C

described in this Data Report was constructed in accordance with the Province of Alberta Safety Codes Act and Regulations, and applicable ASME Piping Code(s).

Date: Mar. 13, 2006 TARA Oilfield Services Ltd.

Primary Contractor

Nicole Normand, Q.C.I.

Print Authorized Representative's Name Signature

CERTIFICATE OF INSPECTION

I, the undersigned, employed by _____ have inspected the piping

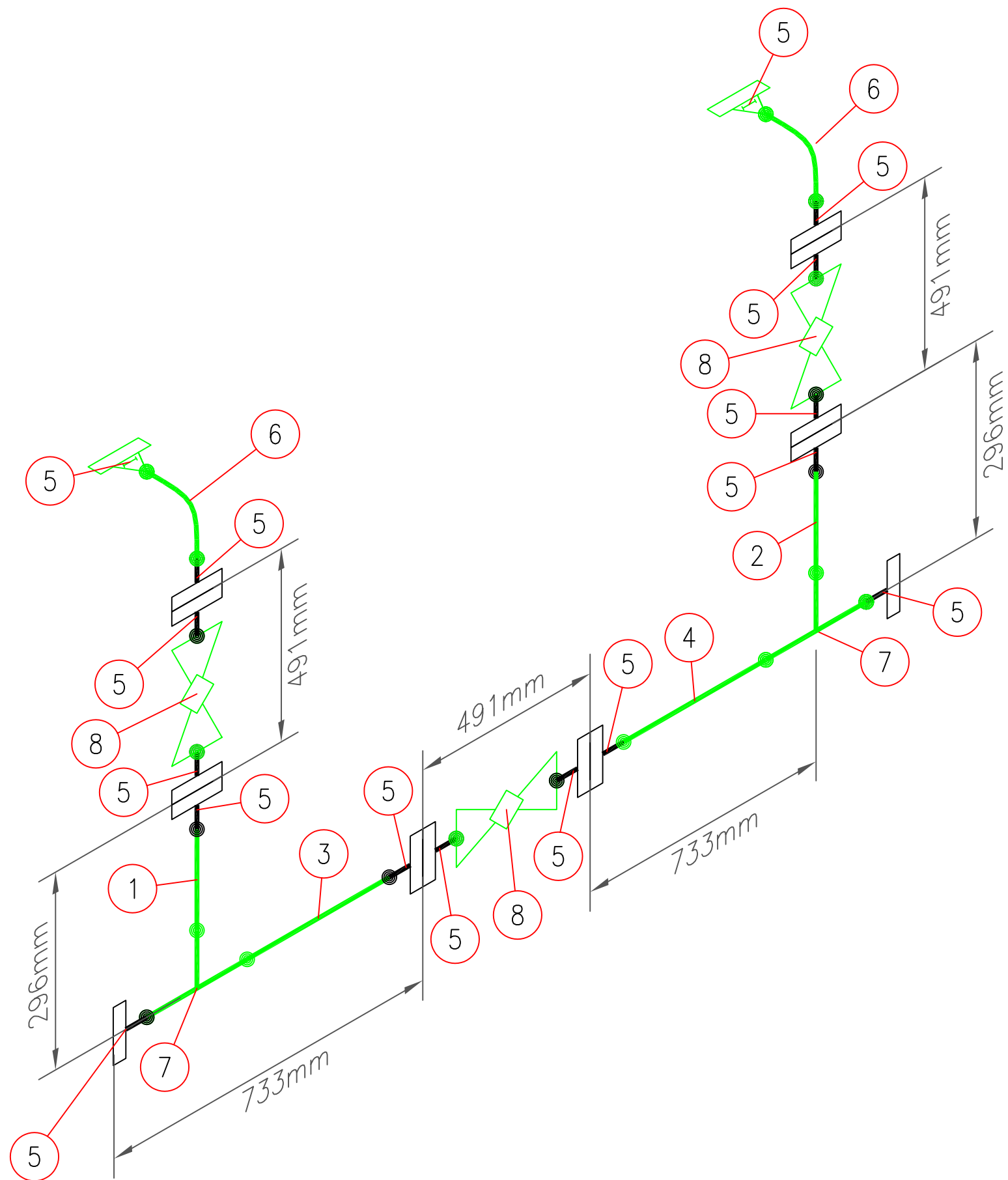
job no. _____ described in this Construction Data Report and state that, to the best of my knowledge and belief, the Contractor has constructed this piping in accordance with the applicable Sections of the ASME Piping Codes and Province of Alberta Safety Codes Act and Regulations.

Date: _____ Date: _____

Print Owner's Inspector's Name Owner's Inspector's Signature


Name: _____ Sign.: _____

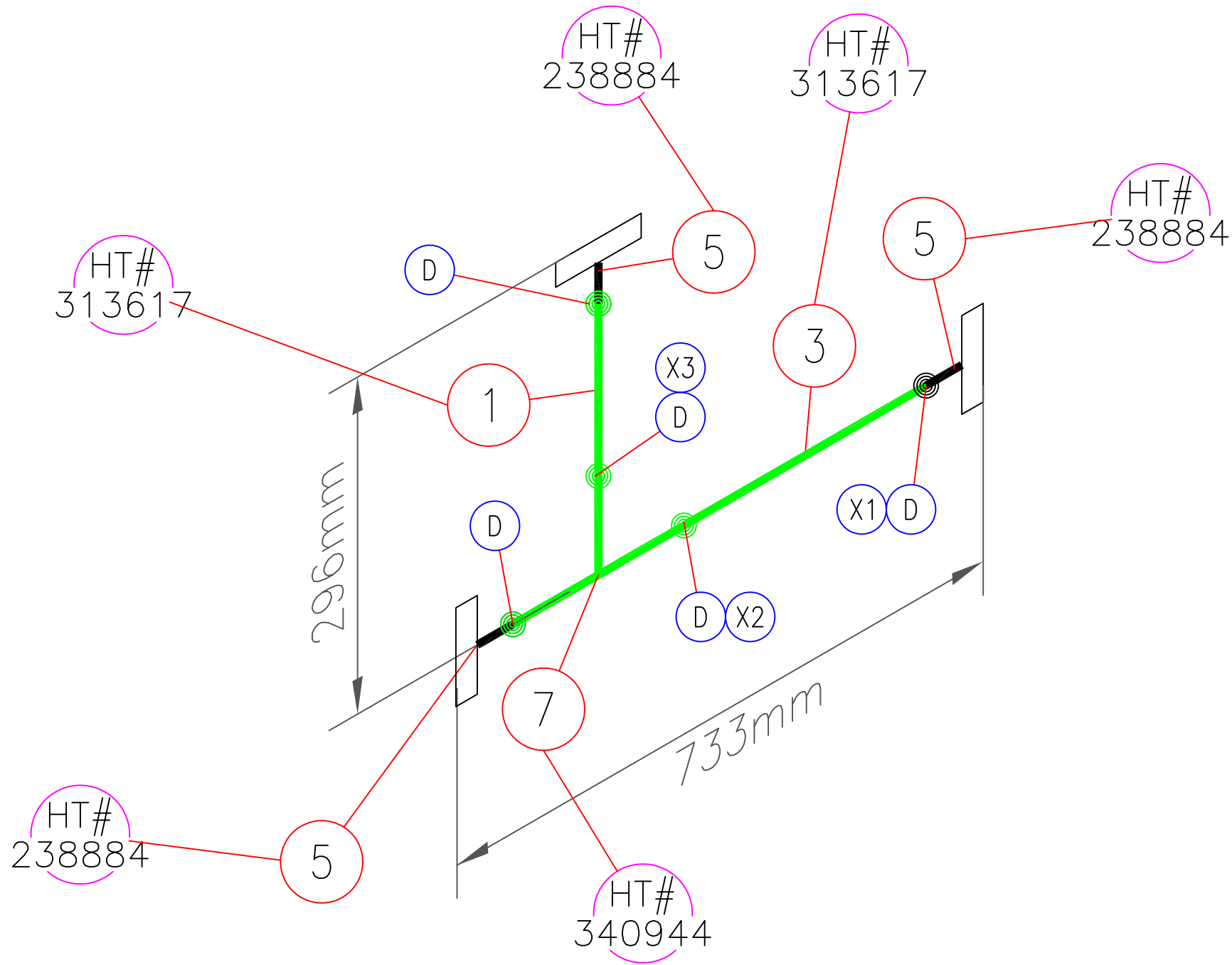
ABSA Safety Codes Officer
(BOILER EXTERNAL PIPING ONLY)



BILL OF MATERIAL							
PIPE							
MK	CUT LENGTH	SIZE	SCHEDULE	DESCRIPTION	MATERIAL	S/F	
1	85mm	3"	XXH.	PIPE SMLS	A333 GR. 6	S	
2	85mm	3"	XXH.	PIPE SMLS	A333 GR. 6	S	
3	311mm	3"	XXH.	PIPE SMLS	A333 GR. 6	S	
4	311mm	3"	XXH.	PIPE SMLS	A333 GR. 6	S	
FLANGES							
MK	QTY	SIZE	RATING	SCHEDULE	DESCRIPTION	MATERIAL	S/F
5	16	3 1/8"	5000	XXH.	R35 API FLANGE	A350-LF2	
WELD FITTINGS							
MK	QTY	SIZE	SCHEDULE	DESCRIPTION	MATERIAL	S/F	
6	2	3"	XXH.	90° ELBOW LR BW	A420 WPL6	S	
7	2	3" X 3"	XXH.	STRAIGHT TEE BW	A420 WPL6	S	
VALVES							
MK	QTY	SIZE	RATING	DESCRIPTION	MATERIAL	VALVE TAG	S/F
8	3	3"	5000#	SAND MAX PLUG VALVE RP	A350-LF2	FLOWMAX	S

DESIGN SPECIFICATION	
Q.C.P.: AQP-1434	
M.A.W.P. : 5000 PSI.	
M.D.M.T. : -46°C	
CORROSION ALLOWANCE : NIL.	
B31.3 SERVICE CATEGORY : HIGH PRESSURE - SEVERE CYCLIC	
N.D.E. : 50% RADIOGRAPHY	
HYDROTEST PRESSURE : 7500 PSI.	HOLD TIME : 30 min.
HYDROTEST MEDIUM : H2O	
P.W.H.T. TEMP. : 621°C	HOLD TIME : 60 min.
WPS# : TOS-2	

1	FOR CONSTRUCTION	10/12/05	LD
0	FOR APPROVAL	10/11/05	LD
TARA PROJECTS TARA Oilfield Services Ltd. 1805-19th STREET DIDSBURY, AB PH: 403-335-9158 FAX: 403-335-3403			
2.5 MILLION BTU LINE HEATER DRESS DOWN PIPING LAYOUT DRAWING		CANADIAN Sub-Surface Energy Services Inc.	
TARA JOB#: 05-129	UNIT: LH-01	DWG #: DRESSDOWN1-0	DWG. BY: L. DUSSAULT
DATE: 10/11/05		REV: 1	

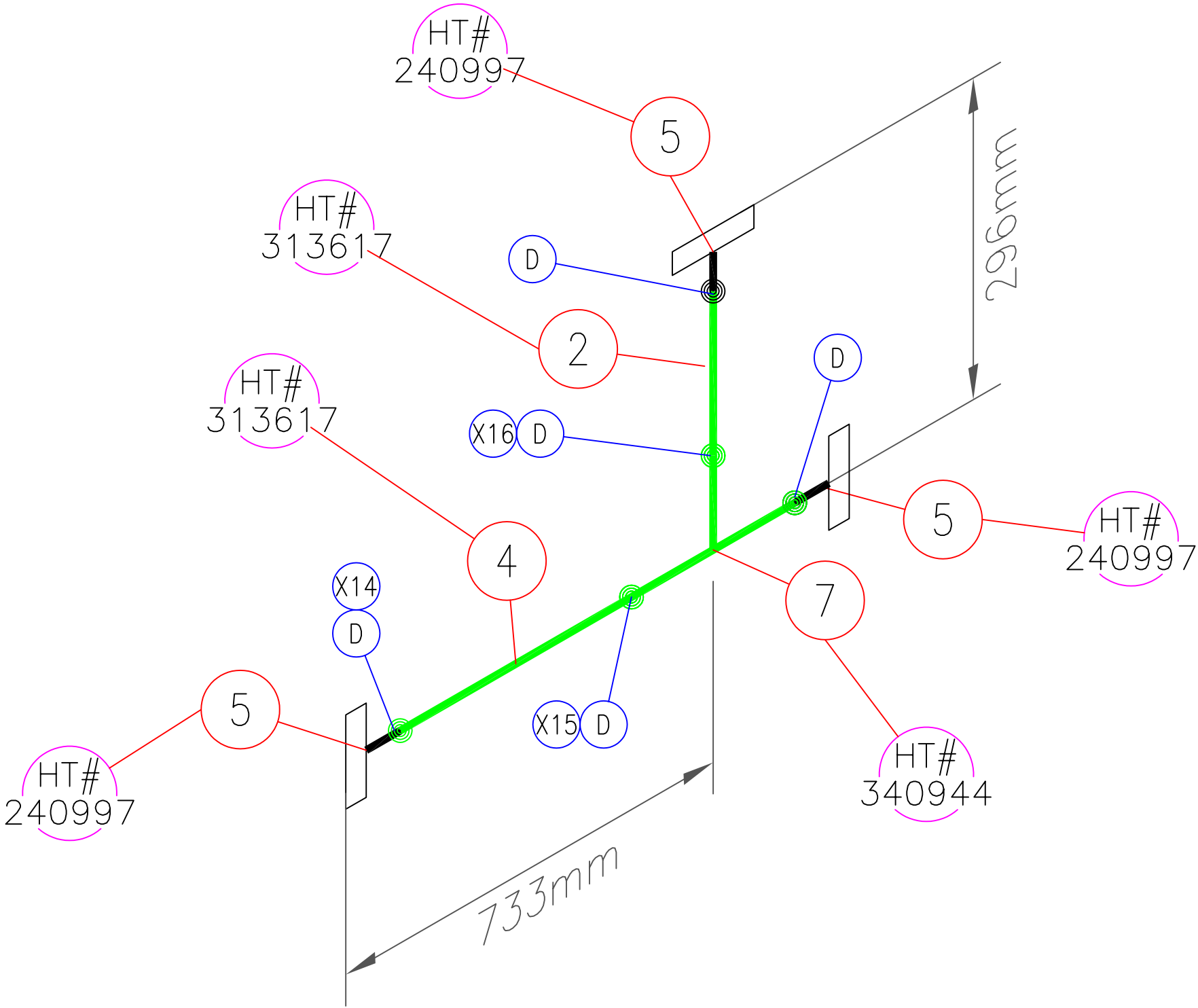


ISO-05-129C-1

BILL OF MATERIAL						
PIPE						
MK	CUT LENGTH	SIZE	SCHEDULE	DESCRIPTION	MATERIAL	S/F
1	85mm	3"	XXH.	PIPE SMLS	A333 GR. 6	S
2	85mm	3"	XXH.	PIPE SMLS	A333 GR. 6	S
3	311mm	3"	XXH.	PIPE SMLS	A333 GR. 6	S
4	311mm	3"	XXH.	PIPE SMLS	A333 GR. 6	S
FLANGES						
MK	QTY	SIZE	RATING	SCHEDULE	DESCRIPTION	MATERIAL
5	16	3 1/8"	5000	XXH.	R35 API FLANGE	A350-LF2
WELD FITTINGS						
MK	QTY	SIZE	SCHEDULE	DESCRIPTION	MATERIAL	S/F
6	2	3"	XXH.	90° ELBOW LR BW	A420 WPL6	S
7	2	3" X 3"	XXH.	STRAIGHT TEE BW	A420 WPL6	S
VALVES						
MK	QTY	SIZE	RATING	DESCRIPTION	MATERIAL	VALVE TAG
8	3	3"	5000#	SAND MAX PLUG VALVE RP	A350-LF2	FLOWMAX

DESIGN SPECIFICATION	
Q.C.P.: AQP-1434	
M.A.W.P. : 5000 PSI.	
M.D.M.T. : -46°C	
CORROSION ALLOWANCE : NIL.	
B31.3 SERVICE CATEGORY : HIGH PRESSURE - SEVERE CYCLIC	
N.D.E. : 50% RADIOGRAPHY	
HYDROTEST PRESSURE : 7500 PSI. HOLD TIME : 30 min.	
HYDROTEST MEDIUM : H2O	
P.W.H.T. TEMP. : 621°C HOLD TIME : 60 min.	
WPS# : TOS-2	

2	ADDED NDT & HEAT NUMBERS	10/25/05	LD
1	FOR CONSTRUCTION	10/12/05	LD
0	FOR APPROVAL	10/11/05	LD
TARA PROJECTS TARA Oilfield Services Ltd. 1805-19th STREET DIDSBURY, AB PH: 403-335-9158 FAX: 403-335-3403			
2.5 MILLION BTU LINE HEATER DRESS DOWN PIPING SPOOL DRAWINGS		----- -----	
TARA JOB#: 05-129	UNIT: LH-01	DWG #: 05-129C-1	DWG. BY: L. DUSSAULT
DATE: 10/11/05		REV: 2	



ISO-05-129B-2

BILL OF MATERIAL							
PIPE							
MK	CUT LENGTH	SIZE	SCHEDULE	DESCRIPTION	MATERIAL	S/F	
1	85mm	3"	XXH.	PIPE SMLS	A333 GR. 6		S
2	85mm	3"	XXH.	PIPE SMLS	A333 GR. 6		S
3	311mm	3"	XXH.	PIPE SMLS	A333 GR. 6		S
4	311mm	3"	XXH.	PIPE SMLS	A333 GR. 6		S
FLANGES							
MK	QTY	SIZE	RATING	SCHEDULE	DESCRIPTION	MATERIAL	S/F
5	16	3 1/8"	5000	XXH.	R35 API FLANGE	A350-LF2	
WELD FITTINGS							
MK	QTY	SIZE	SCHEDULE	DESCRIPTION	MATERIAL	S/F	
6	2	3"	XXH.	90° ELBOW LR BW	A420 WPL6		S
7	2	3" X 3"	XXH.	STRAIGHT TEE BW	A420 WPL6		S
VALVES							
MK	QTY	SIZE	RATING	DESCRIPTION	MATERIAL	VALVE TAG	S/F
8	3	3"	5000#	SAND MAX PLUG VALVE RP	A350-LF2	FLOWMAX	S

DESIGN SPECIFICATION	
Q.C.P.: AQP-1434	
M.A.W.P. : 5000 PSI.	
M.D.M.T. : -46°C	
CORROSION ALLOWANCE : NIL.	
B31.3 SERVICE CATEGORY : HIGH PRESSURE - SEVERE CYCLIC	
N.D.E. : 50% RADIOGRAPHY	
HYDROTEST PRESSURE : 7500 PSI.	HOLD TIME : 30 min.
HYDROTEST MEDIUM : H2O	
P.W.H.T. TEMP. : 621°C	HOLD TIME : 60 min.
WPS# : TOS-2	

2	ADDED NDT & HEAT NUMBERS	10/25/05	LD
1	FOR CONSTRUCTION	10/12/05	LD
0	FOR APPROVAL	10/11/05	LD

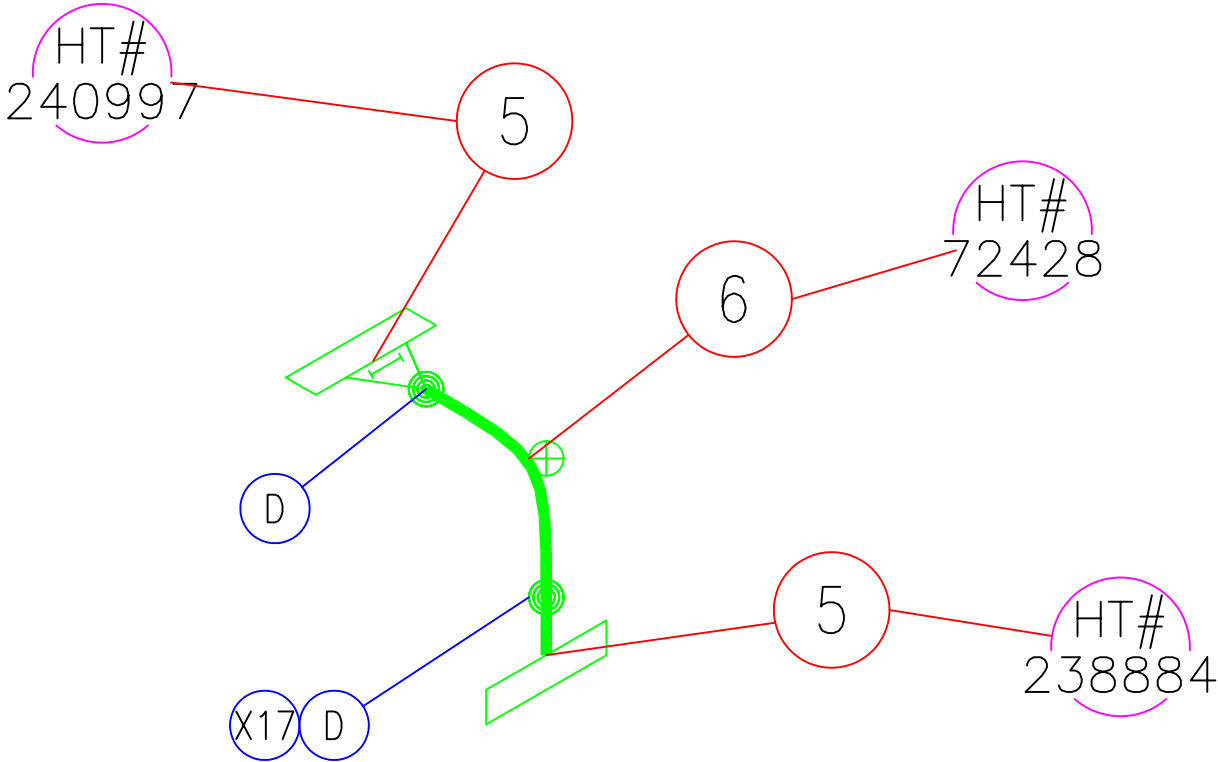
TARA PROJECTS
TARA Oilfield Services Ltd.
1805-19th STREET DIDSBURY, AB
PH: 403-335-9158 FAX: 403-335-3403



2.5 MILLION BTU LINE HEATER
DRESS DOWN PIPING
SPOOL DRAWINGS

CANADIAN Sub-Surface
Energy Services Inc.

TARA JOB#: 05-129	UNIT: LH-02	DWG #: 05-129C-2	DWG. BY: L. DUSSAULT	DATE: 10/11/05	REV: 2
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ISO-05-129B-3

BILL OF MATERIAL							
PIPE							
MK	CUT LENGTH	SIZE	SCHEDULE	DESCRIPTION	MATERIAL	S/F	
1	85mm	3"	XXH.	PIPE SMLS	A333 GR. 6		S
2	85mm	3"	XXH.	PIPE SMLS	A333 GR. 6		S
3	311mm	3"	XXH.	PIPE SMLS	A333 GR. 6		S
4	311mm	3"	XXH.	PIPE SMLS	A333 GR. 6		S
FLANGES							
MK	QTY	SIZE	RATING	SCHEDULE	DESCRIPTION	MATERIAL	S/F
5	16	3 1/8"	5000	XXH.	R35 API FLANGE	A350-LF2	
WELD FITTINGS							
MK	QTY	SIZE	SCHEDULE	DESCRIPTION	MATERIAL	S/F	
6	2	3"	XXH.	90° ELBOW LR BW	A420 WPL6		S
7	2	3" X 3"	XXH.	STRAIGHT TEE BW	A420 WPL6		S
VALVES							
MK	QTY	SIZE	RATING	DESCRIPTION	MATERIAL	VALVE TAG	S/F
8	3	3"	5000#	SAND MAX PLUG VALVE RP	A350-LF2	FLOWMAX	S

DESIGN SPECIFICATION	
Q.C.P.: AQP-1434	
M.A.W.P. : 5000 PSI.	
M.D.M.T. : -46°C	
CORROSION ALLOWANCE : NIL.	
B31.3 SERVICE CATEGORY : HIGH PRESSURE - SEVERE CYCLIC	
N.D.E. : 50% RADIOGRAPHY	
HYDROTEST PRESSURE : 7500 PSI.	HOLD TIME : 30 min.
HYDROTEST MEDIUM : H2O	
P.W.H.T. TEMP. : 621°C	HOLD TIME : 60 min.
WPS# : TOS-2	

2	ADDED NDT & HEAT NUMBERS	10/25/05	LD
1	FOR CONSTRUCTION	10/12/05	LD
0	FOR APPROVAL	10/11/05	LD

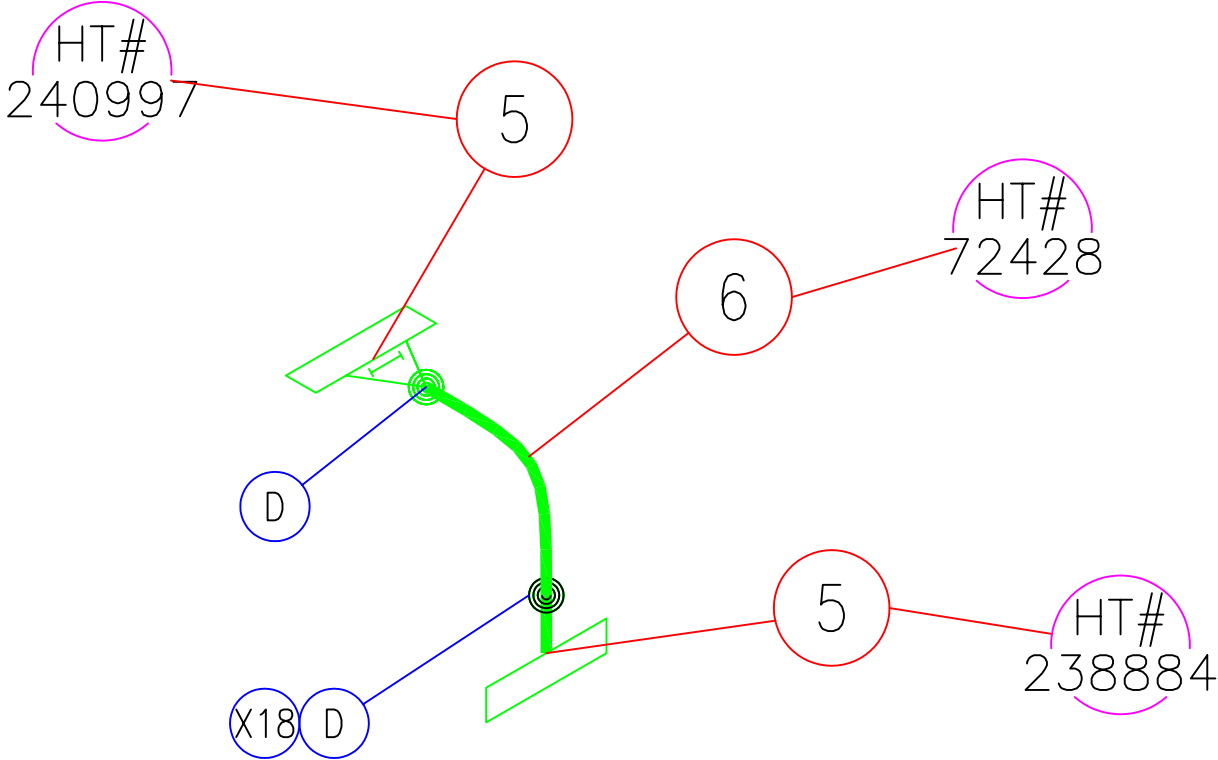
TARA PROJECTS
TARA Oilfield Services Ltd.
1805-19th STREET DIDSBURY, AB
PH: 403-335-9158 FAX: 403-335-3403



2.5 MILLION BTU LINE HEATER
DRESS DOWN PIPING
SPOOL DRAWINGS

CANADIAN Sub-Surface
Energy Services Inc.


TARA JOB#: 05-129	UNIT: LH-02	DWG #: 05-129C-3	DWG. BY: L. DUSSAULT	DATE: 10/11/05	REV: 2
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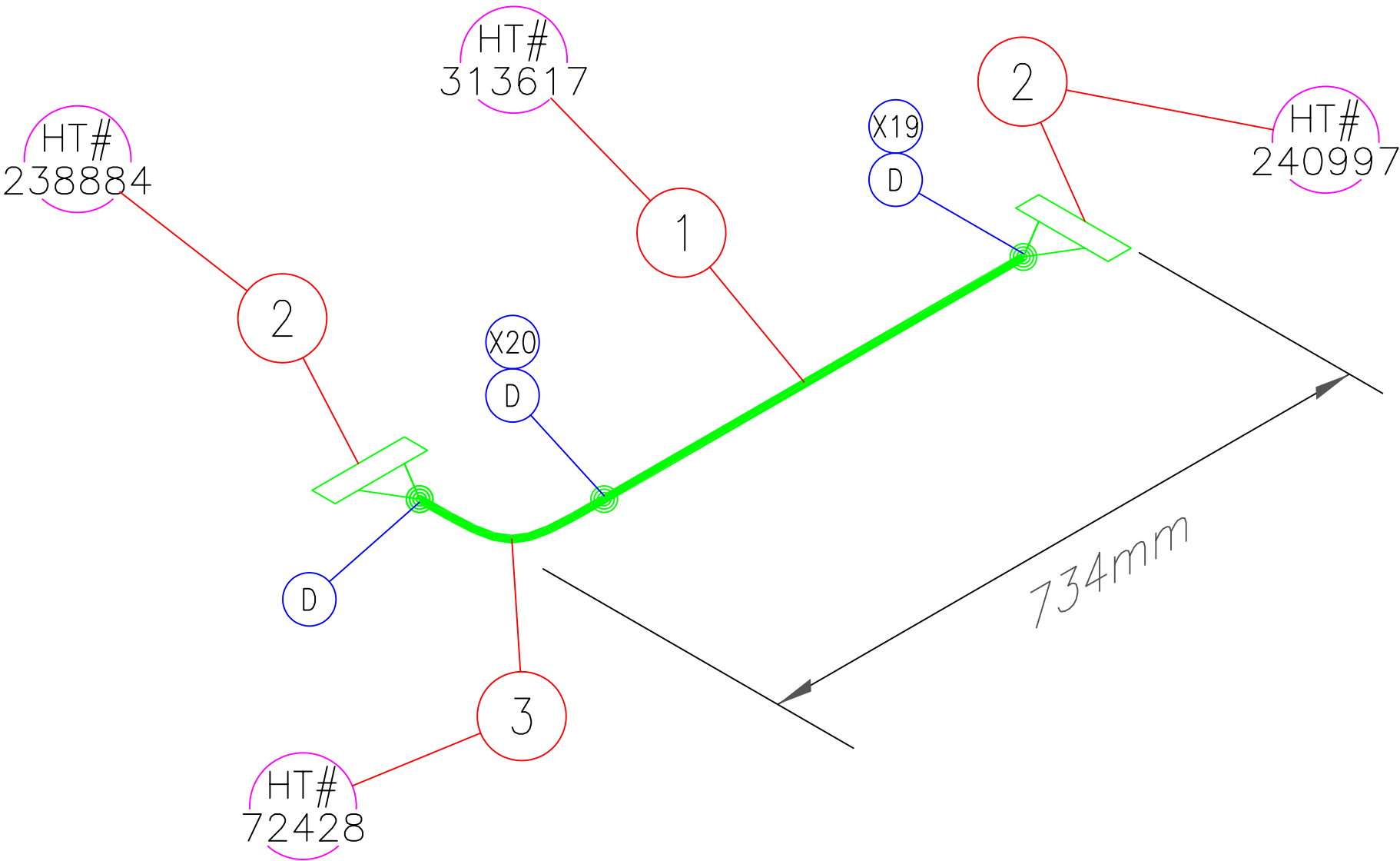


ISO-05-129B-4

BILL OF MATERIAL							
PIPE							
MK	CUT LENGTH	SIZE	SCHEDULE	DESCRIPTION	MATERIAL	S/F	
1	85mm	3"	XXH.	PIPE SMLS	A333 GR. 6	S	
2	85mm	3"	XXH.	PIPE SMLS	A333 GR. 6	S	
3	311mm	3"	XXH.	PIPE SMLS	A333 GR. 6	S	
4	311mm	3"	XXH.	PIPE SMLS	A333 GR. 6	S	
FLANGES							
MK	QTY	SIZE	RATING	SCHEDULE	DESCRIPTION	MATERIAL	S/F
5	16	3 1/8"	5000	XXH.	R35 API FLANGE	A350-LF2	
WELD FITTINGS							
MK	QTY	SIZE	SCHEDULE	DESCRIPTION	MATERIAL	S/F	
6	2	3"	XXH.	90° ELBOW LR BW	A420 WPL6	S	
7	2	3" X 3"	XXH.	STRAIGHT TEE BW	A420 WPL6	S	
VALVES							
MK	QTY	SIZE	RATING	DESCRIPTION	MATERIAL	VALVE TAG	S/F
8	3	3"	5000#	SAND MAX PLUG VALVE RP	A350-LF2	FLOWMAX	S

DESIGN SPECIFICATION	
Q.C.P.: AQP-1434	
M.A.W.P. : 5000 PSI.	
M.D.M.T. : -46°C	
CORROSION ALLOWANCE : NIL.	
B31.3 SERVICE CATEGORY : HIGH PRESSURE - SEVERE CYCLIC	
N.D.E. : 50% RADIOGRAPHY	
HYDROTEST PRESSURE : 7500 PSI.	HOLD TIME : 30 min.
HYDROTEST MEDIUM : H2O	
P.W.H.T. TEMP. : 621°C	HOLD TIME : 60 min.
WPS# : TOS-2	

2	ADDED NDT & HEAT NUMBERS		10/25/05	LD
1	FOR CONSTRUCTION		10/12/05	LD
0	FOR APPROVAL		10/11/05	LD
TARA PROJECTS TARA Oilfield Services Ltd. 1805-19th STREET DIDSBURY, AB PH: 403-335-9158 FAX: 403-335-3403				
2.5 MILLION BTU LINE HEATER DRESS DOWN PIPING SPOOL DRAWINGS			CANADIAN Sub-Surface Energy Services Inc.	
TARA JOB#: 05-129	UNIT: LH-02	DWG #: 05-129C-4	DWG. BY: L. DUSSAULT	DATE: 10/11/05
				REV: 2



BILL OF MATERIAL						
PIPE						
MK	CUT LENGTH	SIZE	SCHEDULE	DESCRIPTION	MATERIAL	S/F
1	658mm	3"	XXH.	PIPE SMLS	A333 GR. 6	S
FLANGES						
MK	QTY	SIZE	RATING	SCHEDULE	DESCRIPTION	MATERIAL
2	2	3 1/8"	5000	XXH.	R35 API FLANGE	A350-LF2
WELD FITTINGS						
MK	QTY	SIZE	SCHEDULE	DESCRIPTION	MATERIAL	S/F
3	1	3"	XXH.	90° ELBOW SR BW	A420 WPL6	S

DESIGN SPECIFICATION	
Q.C.P.: AQP-1434	
M.A.W.P. : 5000 PSI.	
M.D.M.T. : -46°C	
CORROSION ALLOWANCE : NIL.	
B31.3 SERVICE CATEGORY : HIGH PRESSURE - SEVERE CYCLIC	
N.D.E. : 50% RADIOGRAPHY	
HYDROTEST PRESSURE : 7500 PSI. HOLD TIME : 30 min.	
HYDROTEST MEDIUM : H2O	
P.W.H.T. TEMP. : 621°C HOLD TIME : 60 min.	
WPS# : TOS-2	

2	ADDED NDT & HEAT NUMBERS	10/27/05	LD
1	FOR CONSTRUCTION	10/12/05	LD
0	FOR APPROVAL	10/11/05	LD

TARA PROJECTS

TARA Oilfield Services Ltd.
1805-19th STREET DIDSBURY, AB
PH: 403-335-9158 FAX: 403-335-3403

2.5 MILLION BTU LINE HEATER DRESS DOWN PIPING SPOOL DRAWINGS		CANADIAN Sub-Surface Energy Services Inc.	
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TARA JOB#: 05-129	UNIT: LH-02	DWG #: 05-129C-5	DWG. BY: L. DUSSAULT	DATE: 10/11/05	REV: 2
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VALLOUREC & MANNESMANN TUBES (A01) VALLOUREC & MANNESMANN TUBES Tubaria de St Sauve rue du Galibot 21 n°4 - BP 2 59880 Saint-Sauve France (tel: 03.27.23.13.01) (fax: 03.27.23.15.63)		MATERIAL TEST REPORT INSPECTION CERTIFICATE EN 10204 3.1.B		ISO 9001 (A03) REF: 26-05-138026 103 (A08) N° V&M: LA0993/005																																																																											
<p>(A06) Purchaser: CCTF CORPORATION (A07) Order n°: VM1401 / 4872628-00 (B01) SEAMLESS STEEL PIPE, HOT FINISHED (KILLED STEEL) (B02) NORMALIZED 1697°F 0 H 10 MIN (B03) END BEVELLED 37.5° ANTI-RUST COATING DRY VARNISH (B04) Specification: ASTM A 333 (1001/99)+ASME SA 333 (01/07/01) +GRADE 1 AND 6+CSA Z345-1 (01/03/98)+GRADE 290 CAT II+NACE MR0175 ISO 1516 +CEC N-4 Rev. D +ASME SECT. II PART A PART D (07/01) ADD (2003)+ASTM A 530 (01/10/04)+ASME SA 530 (01/07/04) (B05-340) VALLOUREC & MANNESMANN FRANCE A333 Z345-1 1 + 6 + 290 CAT II HPS LT 51 P 3 0.600 SOUR HT HEAT NUMBER VM1401 / 4872628-00</p> <p>Standard marking: Ⓢ VALLOUREC & MANNESMANN FRANCE A333 Z345-1 1 + 6 + 290 CAT II HPS LT 51 P 3 0.600 SOUR HT HEAT NUMBER VM1401 / 4872628-00</p> <p>QUANTITY PER ITEM</p>																																																																															
<table border="1"> <thead> <tr> <th>Y/R</th> <th>O/R</th> <th>(B11-B12) Size</th> <th>(B13) single length</th> <th>(B10) Quantity</th> <th>(B14) Weight item ref. lb</th> <th>(B08) Heat</th> </tr> </thead> <tbody> <tr> <td>05</td> <td>05</td> <td>NPS 3 xxs 88.90 X 15.24 MM</td> <td>06096MM 240.0 (in)</td> <td>32</td> <td>12004 SKU No 2532003</td> <td>313617</td> </tr> </tbody> </table>		Y/R	O/R	(B11-B12) Size	(B13) single length	(B10) Quantity	(B14) Weight item ref. lb	(B08) Heat	05	05	NPS 3 xxs 88.90 X 15.24 MM	06096MM 240.0 (in)	32	12004 SKU No 2532003	313617	<p>(C71-C92) LADLE ANALYSIS CB = C + P (MN/6 + Si/24 + Cu/15 + Ni/20 + (CR + MO + V + Nb) / 5 + 5 B) < 0.40%; HEAT 313617 = 0.33%</p> <table border="1"> <thead> <tr> <th>(C70) Process Heat</th> <th>(B08)</th> <th>C</th> <th>Si</th> <th>Mn</th> <th>P</th> <th>S</th> <th>Cr</th> <th>Mo</th> <th>Ni</th> <th>Cu</th> <th>Ti</th> <th>Nb</th> <th>V</th> <th>B</th> </tr> </thead> <tbody> <tr> <td>MIN.</td> <td></td> <td>0.24</td> <td>0.50</td> <td>1.35</td> <td>0.025</td> <td>0.025</td> <td></td> <td></td> <td>0.11</td> <td>0.11</td> <td>0.11</td> <td>0.11</td> <td>0.001</td> <td>3</td> </tr> <tr> <td>MAX.</td> <td></td> <td>%</td> <td>%</td> <td>%</td> <td>%</td> <td>%</td> <td>%</td> <td>%</td> <td>%</td> <td>%</td> <td>%</td> <td>%</td> <td>%</td> <td>%</td> </tr> <tr> <td>L</td> <td>313617</td> <td>0.15</td> <td>0.18</td> <td>1.04</td> <td>0.016</td> <td>0.002</td> <td>0.11</td> <td>0.01</td> <td>0.03</td> <td>0.04</td> <td>0.02</td> <td>0.00</td> <td>0.00</td> <td>6.933</td> </tr> </tbody> </table> <p>FOR EACH REDUCTION OF 0.01% CARBON BELOW 0.30%, AN INCREASE OF 0.05% MANGANESE ABOVE 1.06% WOULD BE PERMITTED TO A MAXIMUM OF 1.35% MANGANESE</p>				(C70) Process Heat	(B08)	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	Nb	V	B	MIN.		0.24	0.50	1.35	0.025	0.025			0.11	0.11	0.11	0.11	0.001	3	MAX.		%	%	%	%	%	%	%	%	%	%	%	%	%	L	313617	0.15	0.18	1.04	0.016	0.002	0.11	0.01	0.03	0.04	0.02	0.00	0.00	6.933
Y/R	O/R	(B11-B12) Size	(B13) single length	(B10) Quantity	(B14) Weight item ref. lb	(B08) Heat																																																																									
05	05	NPS 3 xxs 88.90 X 15.24 MM	06096MM 240.0 (in)	32	12004 SKU No 2532003	313617																																																																									
(C70) Process Heat	(B08)	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	Nb	V	B																																																																	
MIN.		0.24	0.50	1.35	0.025	0.025			0.11	0.11	0.11	0.11	0.001	3																																																																	
MAX.		%	%	%	%	%	%	%	%	%	%	%	%	%																																																																	
L	313617	0.15	0.18	1.04	0.016	0.002	0.11	0.01	0.03	0.04	0.02	0.00	0.00	6.933																																																																	
<p>(C10-C01-C03) RECTANGULAR SPECIMEN LONGITUDINAL TENSILE TEST AT ROOM TEMPERATURE</p> <table border="1"> <thead> <tr> <th>(C00) Test MIN. MAX.</th> <th>(B08) Heat</th> <th>width mm</th> <th>thick. mm</th> <th>secl. mm2</th> <th>(C11) Y.S. 42000</th> <th>(C12) T.S. 60000</th> <th>(C13) Elong. 2"</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>22.2</td> <td>15.0</td> <td>338.47</td> <td>44249</td> <td>67172</td> <td>%</td> </tr> <tr> <td>(B10) 317</td> <td>313617</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>44</td> </tr> </tbody> </table>		(C00) Test MIN. MAX.	(B08) Heat	width mm	thick. mm	secl. mm2	(C11) Y.S. 42000	(C12) T.S. 60000	(C13) Elong. 2"			22.2	15.0	338.47	44249	67172	%	(B10) 317	313617						44	<p>CONFORMS ASME 2004 EDITION SECTION II PART A DATE: 03/01/06 QC1: 11/11/06</p>																																																					
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(B10) 317	313617						44																																																																								

(A01)



VALLOUREC & MANNESMANN TUBES

(A01) V&M FRANCE
Tuberies de St Sauverue du Calvaire ZI n°4 - BP 2
59460 Saint-Sauve FRANCE
tel.: 03.27.23.13.01
fax: 03.27.23.15.53

MATERIAL TEST REPORT

ISO 9001

INSPECTION CERTIFICATE EN 10204 3.1.B

(A03)R&E: 26-05-138026 2 / 3
(A08)N°V&M: LA0993705

(C00) Test	(B08) Heat	width	thick.	sect.	(C11) Y.S.	(C12) T.S.	(C13) Elong. 2"
MIN.					42000	60000	
MAX.							
02DM537	313617	mm 22.0	mm 15.2	mm ² 339.83	psi 43524	psi 67172	% 43

ROCKWELL C HARDNESS < OR = 22 GUARANTEED

(C01-C02-C41)

CHARPY V LONGITUDINAL IMPACT TEST

(C00) Test	(B08) Heat	(C03) temp.	width	height	sect.	(C42) EI	(C42) E2	(C42) E3	(C43) mean	(C42) shear1	(C42) shear2	(C43) shear
MIN.						16	16	16	20	60	60	60
MAX.												
01DM537	313617	°F -51	mm 10.00	mm 10.00	mm ² 0.80	ft.lbf 129	ft.lbf 124	ft.lbf 108	ft.lbf 120	% 85	% 80	% 65

(D01-D99)

NON DESTRUCTIVE TESTS

test	test rate	specification	pressure psi	hold time sec	result
APPEARANCE & DIMENSIONS	100% LOT				OK
EDDY CURRENT TEST	100% LOT	CSA Z245.1			OK
HYDROSTATIC TEST	100% LOT		3000	5	OK

(C50-C69)

TECHNOLOGICAL TESTS

test	result
FLATTENING TEST	OK

<p>(A01) V&M VALLOUREC & MANNESMANN TUBES V&M FRANCE Tubaria de St. Sauter rue du Général ZI n° 4 - BP 2 59880 Saint-Saulve FRANCE</p> <p>(tel: 03.27.23.13.01) fax: 03.27.23.15.63</p>	<p>MATERIAL TEST REPORT</p> <p>INSPECTION CERTIFICATE EN 10204 3.1.B</p>	<p>ISO 9001</p> <p>(A03)Réf: Z6-05-138026 3/3 (A03)N°V&M: LA0993/05</p>
<p>(201) 18/05/2005</p>		
<p>(A05) The authorized expert in Quality Control Section Mr SKORUPKA</p> <p><i>Skorupka</i></p>	<p>(Z02) Original computer copy - authenticity is guaranteed by the V&M logo. All the pipes/tubes conform to the requirements of the order and standard regarding the grade, quality and heat treatment throughout their whole length.</p>	



Five Star Metals, Inc.

POSTED

P.O. Box 800460 • Houston, Texas 77280-0460 • 713 466-1491 • FAX 713 466-6027

CUSTOMER: CRC WELLHEAD

3771 -74TH AVENUE
EDMONTON ALB CANADA T6B 2T7

CERT. NO.: 238884
REC. DATE: 02/15/2005
SHIP DATE: 02/15/2005
W.O. NO.: 20186-1
P.O. NO.: WS18504

QTY.	FSM NO.	DESCRIPTION	WT. EA.
321 PCS.	CRC17025-6	ASTM A350 LF2 LOW CARBON STEEL 3-1/8"-5M WN SOLID FLANGE FORGING PER CPP-136, REV. 1, DTD 2/95 CHARPIES 15/12 @ -50 DEG. F, & DWG#FSS-865, REV. A, DTD 10/09/98 (NAFTA 7307.91)	78 LBS.

TEST BAR SIZE: SACRIFICIAL BAR DIA: 0.502
MELT PRACTICE: ELECTRIC FURNACE
REDUCTION RATIO 5:1 MIN. NO WELD REPAIR.

NOTE: ALL FORGINGS HAVE BEEN HEAT TREATED IN THE SAME HEAT TREAT LOT
UNLESS OTHERWISE STATED, YIELD STRESS IS 0.2% OFFSET. GAUGE
LENGTH IS 2" FOR 1/2" BAR.

CHEMICAL ANALYSIS

HEAT NO.: 238884
MILL: SMI
C: 00.21
MN: 00.90
PH: 00.010
SU: 00.015
SI: 00.23
NI: 00.10
SN: 00.014
B: 00.0004
:
:
:
:
:
:
:

CODE: RRV

CR: 00.10
MO: 00.040
CU: 00.27
AL:
VA: 00.043
CB: 00.001
TI: 00.001
CE: 00.42
:
:
:
:
:
:
:

PHYSICAL PROPERTIES

YIELD STRENGTH: 54,200
TENSILE STRENGTH: 77,700
ELONGATION: 31.10%
RED. OF AREA: 60.90%
TEST BAR BRINELL: 153/153
FORGING BRINELL: 146/163
10MMX 10MM CHARPY: 19/24/22
TEST TEMP.: -50F LCVN
JOULES:
M L E: 13/17/15
SHEAR FRAC.: 15/20/20
DELTA FERRITE:
RETAINED AUSTENITE:

HEAT TREATED @ REPUBLIC HEAT TREAT.

HEAT TREATMENT: FORGINGS

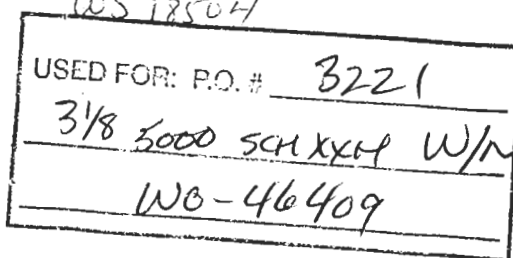
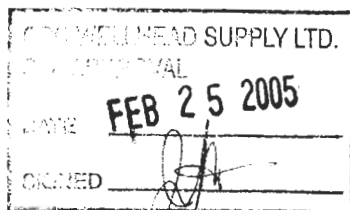
NORMALIZED: 1675F 04.00 HRS AIR

HEAT TREATMENT: TEST BAR

NORMALIZED: 1675F 04.00 HRS AIR

We hereby certify that all test results and procedure information
contained herein are correct and true as contained in the records of the
company.

BY: 



POSTED



Five Star Metals, Inc.

P.O. Box 800460 • Houston, Texas 77280-0460 • 713 466-1491 • FAX 713 466-6027

CUSTOMER: CRC WELLHEAD

3771 -74TH AVENUE
EDMONTON ALB CANADA T6B 2T7CERT. NO.: 240997
REC. DATE: 08/02/2005
SHIP DATE: 08/02/2005
W.O. NO.: 20804
P.O. NO.: WS19083

QTY.	FSM NO.	DESCRIPTION	WT. EA.
420 PCS.	CRC17025-6	ASTM A350 LF2 LOW CARBON STEEL 3-1/8"-5M WN SOLID FLANGE FORGING PER CPP-136, REV. 1, DTD 2/95, CHARPIES 15/12 @ -50 DEG. F, & DWG# FSS-865, REV. A, DTD 10/09/98 (NAFTA 7307.91)	78 LBS.

TEST BAR SIZE: SACRIFICIAL BAR DIA: 0.503

MELT PRACTICE: ELECTRIC FURNACE

REDUCTION RATIO 5:1 MIN. NO WELD REPAIR.

NOTE: ALL FORGINGS HAVE BEEN HEAT TREATED IN THE SAME HEAT TREAT LOT
UNLESS OTHERWISE STATED, YIELD STRESS IS 0.2% OFFSET. GAUGE
LENGTH IS 2" FOR 1/2" BAR.

CHEMICAL ANALYSIS

PHYSICAL PROPERTIES

HEAT NO.: 240997

CODE: SGK

MILL: SMI

C: 00.19

CR: 00.08

MN: 00.90

MO: 00.035

PH: 00.009

CU: 00.32

SU: 00.014

AL:

SI: 00.22

VA: 00.044

NI: 00.11

CB: 00.001

SN: 00.013

TI: 00.001

B: 00.0003

CE: 00.40

:

:

:

:

:

:

YIELD STRENGTH: 54,500

TENSILE STRENGTH: 77,600

ELONGATION: 30.80%

RED. OF AREA: 59.50%

TEST BAR BRINELL: 163/163

FORGING BRINELL: 163/163

10MM X 10MM CHARPY: 40/27/26

TEST TEMP.: -50F LCVN

JOULES:

M L E: 32/19/17

SHEAR FRAC.: 35/30/25

DELTA FERRITE:

RETAINED AUSTENITE:

HEAT TREATMENT: FORGINGS & TEST BAR
NORMALIZED: 1700F 04.00 HRS AIRWe hereby certify that all test results and procedure information
contained herein are correct and true as contained in the records of the
company.BY: *Rene M. [Signature]*

USED FOR: P.O. # <u>3221</u>
<u>3/8 5000 SCH X H W/W</u>
<u>WO-46409</u>

CRC WELLHEAD SUPPLY LTD.
Q.A. APPROVAL
DATE <u>AUG 04 2005</u>
SIGNED <u>[Signature]</u>



3" XXH STRAIGHT TEE WPL6 HT#340944

HEAT NUMBER : 340944
TRANS AM PIPING PRODUCTS - REV'D BY:
Shipment/Seq #1 S 5 - 1098 30

erne fittings gmbh A-6924 Schönl Hauptstrasse 48 Austria/Europe Telefon +43/5524 501-0 Telefax +43/5524 501-830 Reg. Nr. 12 100 3054		Abnahmeprüfzeugnis Inspection Certificate EN 10204 - 3.1B		Zeugnisnummer [certificate no.] Rev. 18/07	
erne fittings A-6924 Schönl Hauptstrasse 48 Austria/Europe Telefon +43/5524 501-0 Telefax +43/5524 501-830 Reg. Nr. 12 100 3054		Ihre Bestellnummer [your order no.] EO4405DD		Unsere Auftrags.Nr. [our order no.] 76127-MS-0141	
Kunde [customer] WFF Fittings & Flanges (Canada) LTD K-7000 5 St Se CDN-T2H 2G3 Calgary AB, Alberta		Ihre Artikelnummer [your item no.] 76127-MS-0141		Schmelze Nr. [heat no.] 72428	
Menge [quantity] 50		Artikelbezeichnung [designation] elbows LR-80-S-WPL6-3'-XXS		Anforderungen [requirements] ASME B16.9-2001 LR.WPL6.ASTM A 420/A 420M-01, ASME Sec. II Part A, NACE MR-01-75, EN 10204/3.1B, Manufacture standard	
Hersteller [manufacturer] V&M		Dichtheitsprüfung [leakage test] ASTM E309		J-Faktor [J-Factor]: (S + Mn) * (P + Sn) * 10000 CEQ [CEQ]: C + (Mn / 6) + (Cr + Mo + V) / 5 + (Cu + Ni) / 15	
Mech.-technologische Prüfung [mech. technological test]					
Proben Nr. 2835/05		Zugversuch [tensile test] Kerbschlagbiegeversuch [notched bar impact test] Form: Charpy-V notch		Härteprüfung [hardness test] 142-144 HB	
Pr.-Lage [pos. of sample] Temp. +20 °C		PR.-Lage [pos. of sample] Temp. -50° C		Kerbschlagarbeit [impact values] (J) 140-122-148	
Dehng. [yield str.] Rp 0.2 317		Dehnung [elongation] Z' (%) 35.1		Wärmebehandlung [heat treatr.] normalized temperature 920 °C Holding Time 30 min. Cooling in still air	
Index 1		Erschmelzungsart [melting process] C 0.16		N 0.002	
Si 0.23		Mn 1.00		Ti 0.002	
P 0.017		S 0.002		B 0.0003	
Cr 0.06		Mo 0.01		Ni 0.001	
Ni 0.01		Cu 0.00		V 0.00	
Mn 1.00		Si 0.23		C 0.16	
Mn 1.00		P 0.017		S 0.002	
Cr 0.06		Mo 0.01		Ni 0.001	
Ni 0.01		Cu 0.00		V 0.00	
P 0.017		S 0.002		B 0.0003	
Si 0.23		Mn 1.00		Ti 0.002	
C 0.16		Erschmelzungsart [melting process] C 0.16		N 0.002	
Si 0.23		Mn 1.00		Ti 0.002	
P 0.017		S 0.002		B 0.0003	
Cr 0.06		Mo 0.01		Ni 0.001	
Ni 0.01		Cu 0.00		V 0.00	
Mn 1.00		Si 0.23		C 0.16	
Mn 1.00		P 0.017		S 0.002	
Cr 0.06		Mo 0.01		Ni 0.001	
Ni 0.01		Cu 0.00		V 0.00	
P 0.017		S 0.002		B 0.0003	
Si 0.23		Mn 1.00		Ti 0.002	
C 0.16		Erschmelzungsart [melting process] C 0.16		N 0.002	
Si 0.23		Mn 1.00		Ti 0.002	
P 0.017		S 0.002		B 0.0003	
Cr 0.06		Mo 0.01		Ni 0.001	
Ni 0.01		Cu 0.00		V 0.00	
Mn 1.00		Si 0.23		C 0.16	
Mn 1.00		P 0.017		S 0.002	
Cr 0.06		Mo 0.01		Ni 0.001	
Ni 0.01		Cu 0.00		V 0.00	
P 0.017		S 0.002		B 0.0003	
Si 0.23		Mn 1.00		Ti 0.002	
C 0.16		Erschmelzungsart [melting process] C 0.16		N 0.002	
Si 0.23		Mn 1.00		Ti 0.002	
P 0.017		S 0.002		B 0.0003	
Cr 0.06		Mo 0.01		Ni 0.001	
Ni 0.01		Cu 0.00		V 0.00	
Mn 1.00		Si 0.23		C 0.16	
Mn 1.00		P 0.017		S 0.002	
Cr 0.06		Mo 0.01		Ni 0.001	
Ni 0.01		Cu 0.00		V 0.00	
P 0.0					

2000