

Alberta Boilers Safety Association

#200, 4208 - 97 Street

Edmonton, Alberta, Canada T6E 5Z9

Tel: (780) 437-9100 / Fax: (780) 437-7787

January 24, 2005

Don Taylor
FOUR STAR RESOURCES INC
1906 4 STREET
NISKU, AB T9E 7T8

Dear Don Taylor,

The welding procedures received on January 05, 2005 are accepted for registration as follows:

Reg. No. : WP-2617.2

Accepted on: January 19, 2005

Tracking No. : 2005-00073

Reg Type : New Design

Spec. No. : 1 As Noted

Please note the acceptance of the registration does not allow the use of this welding procedure in the construction, modification, or repair of any boiler, pressure vessel, pressure piping system or fitting in Alberta unless the contractor/manufacturer has registered a Quality Control system for such work with ABSA.

Welding procedures, which specify impact testing, have been accepted in accordance with A.S.M.E. Section IX only. Other A.S.M.E. Code Sections may have additional requirements respecting impact testing.

An invoice covering survey and registration fees will be forwarded from our Revenue Accounts.

Enclosed is a stamped welding procedure for your reference.

Sincerely,

ROSEBERG, BOB, P. Eng.
Design Survey Engineer

07.18.06

WELDING PROCEDURE SPECIFICATIONS NO: 1

WELDING PROCEDURE QUALIFICATION RECORD NO (S): 01, 03

QUALIFIED FOR

Base Metal (Typical): P 1 (GROUPS 1&2 To PGROUPS 1&2)
(SA3336R6 SA-420-WPL6, SA 35D GR.LF2, SA 516GR70, ECT)

Process(es): SMAW Weld Types: Groove & Fillet

Position: All Positions Diameter: All DIA Meters

Filler Metal: E6010, 7018-1

BASE METAL CONDITIONS & THICKNESS RANGE QUALIFIED:

NOTCH TOUGHNESS APPLICATIONS TO -46°C AS WELDED

ASME B31.1 3.2 to 12.7 mm (0.125 to 0.50 in. inclusive)

ASME B31.3 3.2 to 12.7 mm (0.125 to 0.50 in. inclusive)

ASME SECT. VIII, DIV.I 3.2 to 12.7 mm (0.125 to 0.50 in. inclusive)

ALBERTA BOILERS SAFETY ASSOCIATION

PROVINCE OF ALBERTA

SAFETY CODES ACT

WELDING PROCEDURE

Reg. No. WP 2617.2

Spec No. 1

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 12.7 mm PWHT NO

CVN -46°C

Yr. 05 Mo. 01 Day Signed [Signature]

R. ROSEBERG, P.ENG.
WELDING SPECIALIST

QW - 482 WELDING PROCEDURE SPECIFICATION (WPS)

Fourstar Resources Inc.

Welding Procedure Specifications No. 1
Supporting PQR No. (s) 01, 03 Date: December 28, 2004
Welding Process (es) SMAW Type (s) Manual

JOINTS (QW - 402)

Joint Design All AMSE Groove & Fillet, See FIQ 1-15 Attached (SEE CONSTRUCTION DRAWINGS WHERE APPLICABLE)
Backing With or Without Root Opening 3/32"
Retainers Not Required

BASE METALS (QW - 403)

P-Number PI Groups 1&2 To P-Number PI Groups 1&2
Thickness Range: Groove See cover page qualified by governing code
Fillet All base metal thickness
Deposited Weld Metal (Per Pass) 12.7 mm (0.500 in.) Max.

FILLER METALS (QW-404)

A - NO.	<u>1</u>	<u>1</u>
Specification No. (SFA)	<u>SFA 5.1</u>	<u>SFA .51</u>
AWS No. (Class)	<u>E6010</u>	<u>E7018-1</u>
F-No.	<u>F3</u>	<u>F4</u>
Size	<u>3/32 to 5/32 in. inclusive</u>	<u>3/32 to 1/4" Inclusive</u>
Normal Chemical Composition	<u>C: 0.20% Max. MN: 1.60% Max SI: 1.00% Max</u>	
Deposited Weld Metal Thickness Range:		
Groove:	<u>4.78 mm (0.188 in.) Max</u>	<u>7.92mm (0.312in.) Max</u>
Fillet:	<u>All Fillet Sizes</u>	<u>All Fillet Sizes</u>

POSITION (QW-405)

Position of Groove All Positions Position of Fillet All Positions
Weld Progression F3 Vertical Up or Down F4 Vertical Up

PREHEAT (QW-406)

Preheat Temperature (Minimum) 10°C (50°F)
Interpass Temperature (Maximum) 260°C (500°F)
Preheat Maintenance 10°C Prior to welding. Preheat maintenance not required if welding is not required if welding is not interrupted or completed.

TYPICAL GROOVE DESIGNS

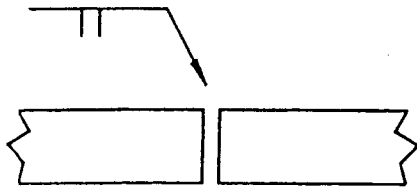


Figure 1
Single Square Butt

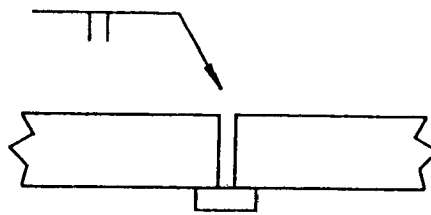


Figure 2
Single Square Butt with Backing Strip

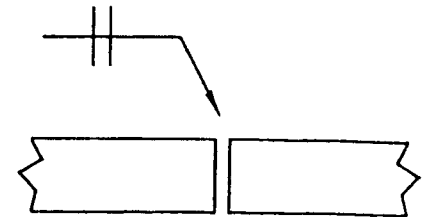


Figure 3
Double Square Butt

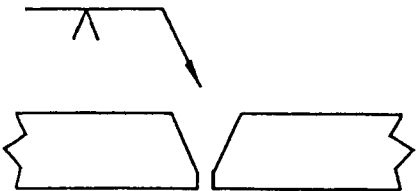


Figure 4
Single Vee Butt

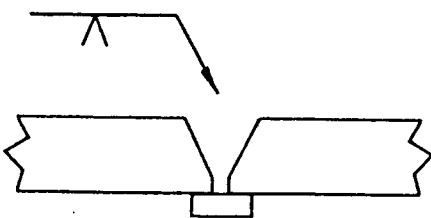


Figure 5
Single Vee Butt with Backing Strip

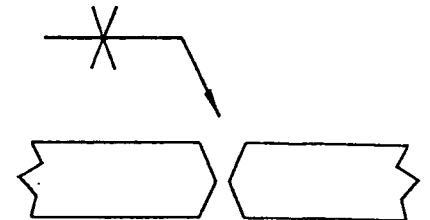


Figure 6
Double Vee Butt

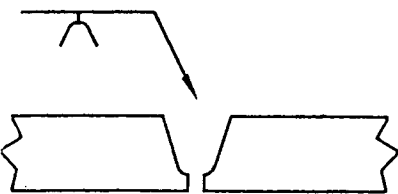


Figure 7
Single U Butt

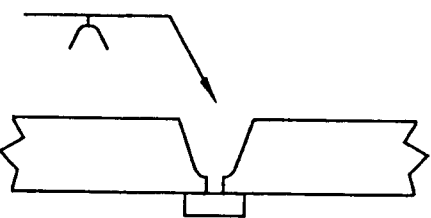


Figure 8
Single U Butt with Backing Strip

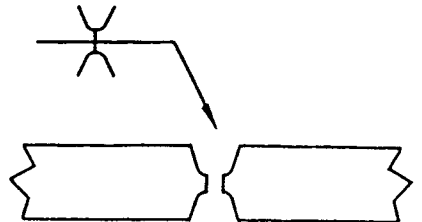


Figure 9
Double U Butt

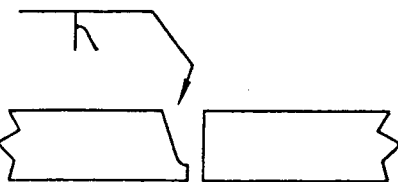


Figure 10
Single J Butt

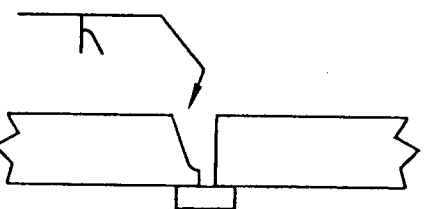


Figure 11
Single J Butt with Backing Strip

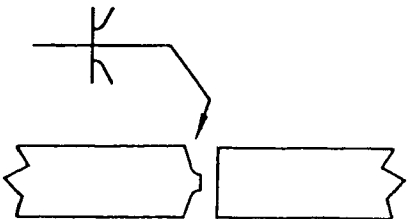


Figure 12
Double J Butt

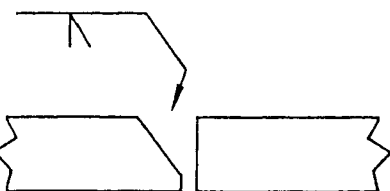


Figure 13
Single Bevel Butt

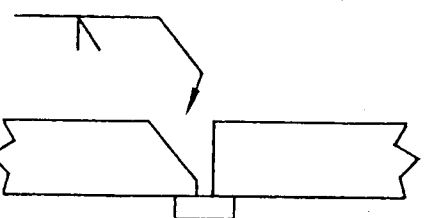


Figure 14
Single Bevel Butt with Backing Strip

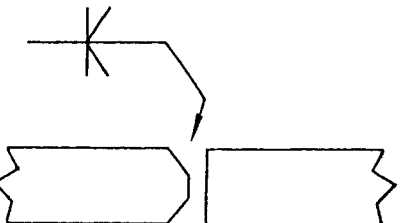


Figure 15
Double Bevel Butt

POST WELD HEAT TREATMENT (QW -407)Temperature Range N/A Time Range N/A**ELECTRICAL CHARACTERISTICS (QW-409)**

Current Direct Polarity Reverse, Electrical, Positive
 Amps See Table #1 Volts See Table #1
 Maximum Heat Input

Base Metal Thickness Range	E 6010 Electrode	E 7018 - 1 Electrode
(0.125 - 0.500 in.)	35230 J/in	63590 J/in

TECHNIQUE (QW - 410)

String or Weave Either Travel Speed See Table #1
 Initial & Interpass Cleaning Brushing, Chipping, Grinding, as required
 Method of Back Gouging Air Carbon ARC, Back Grinding, as required
 Multiple of Single Pass Per Side Either
 Multiple or Single Electrodes Single
 Peening Not required

TABLE 1 - WELDING PARAMETERS

Process	Filler Metal	Diameter Mm/(in.)	Current Type & Polarity	Amperage Range	Voltage Range	Travel Speed Mm/min (imp.)
SMAW	E6010	2.4 (3/32)	DCRP	50 - 100	18 - 24	38-300 (1.5 - 12)
SMAW	E6010	3.2 (1/8)	DCRP	60 - 140	19 - 26	48 - 350 (1.9 - 1.4)
SMAW	E6010		DCRP	115 - 250	21 - 28	104 - 400 (4.1 - 16)
SMAW	E7018-1	2.4 (3/32)	DCRP	60 - 110	18 - 24	25 - 300 (1.0 - 12)
SMAW	E7018-1	3.2 (1/8)	DCRP	90 - 150	19 - 26	41 - 350 (1.6 - 14)
SMAW	E7018-1	4.0 (5/32)	DCRP	110 - 220	21 - 28	56 - 400 (2.2 - 16)
SMAW	E7018-1	5.0 (3/16)	DCRP	160 - 320	22 - 30	84 - 500 (3.3 - 20)
SMAW	E7018-1	5.0 (7/32)	DCRP	240 - 350	23 - 32	132 - 550 (5.2 - 22)
SMAW	E7018-1	6.4 (1/4)	DCRP	300 -400	23 - 32	165 - 550 (6.5 - 22)

Note: Welding parameters shall be adjusted to insure that the maximum heat input value specified in QW - 409 above is not exceeded.

QW - 483 PROCEDURE QUALIFICATION RECORD (PQR)
FOURSTAR RESOURCES INC.

Procedure Qualification Record No. 1 Date December 28, 2004
Welding Procedure Specification No. 01
Welding Process(es) SMAW Type(s) Manual

JOINTS (QW - 402)

Type Butt Joint, Vee Groove, See Next Page

BASE METALS (QW - 403)

Metal Spec Dual Certified 60 -70 Type or Grade SA - 516
P-No. P-1 GR1 To P1 - GR1 Thickness 6.32 mm (0.249 in.)
Diameter N/A Other _____

FILLER METALS (QW - 404)

Specification No. (SFA)	<u>SFA. 1</u>	<u>SFA. 1</u>
AWS No. (Class)	<u>E6010</u>	<u>E7018-1</u>
Filler Metal F-No.	<u>F3</u>	<u>F4</u>
Filler Metal A-No.	<u>* A1</u>	<u>A1</u>
Size of Electrode	<u>See attached sketch</u>	
Nominal Chemical Composition	<u>C: 0.20% Max MN: 1.60% Max Si: 1.00% Max</u>	
Trade Name	<u>Lincoln 5P Plus</u>	
Deposited Weld Metal Thickness	<u>2.39 mm (0.094 in.)</u>	<u>3.94 mm (0.155in)</u>

POSITION (QW - 405)

Position of Groove 5G
Weld Progression Vertical Up

PREHEAT (QW - 406)

Preheat Temperature 10° C (50° F) Interpass Temp. (Max.) 232°C (450° F)

POSTWELD HEAT TREATMENT (QW - 407)

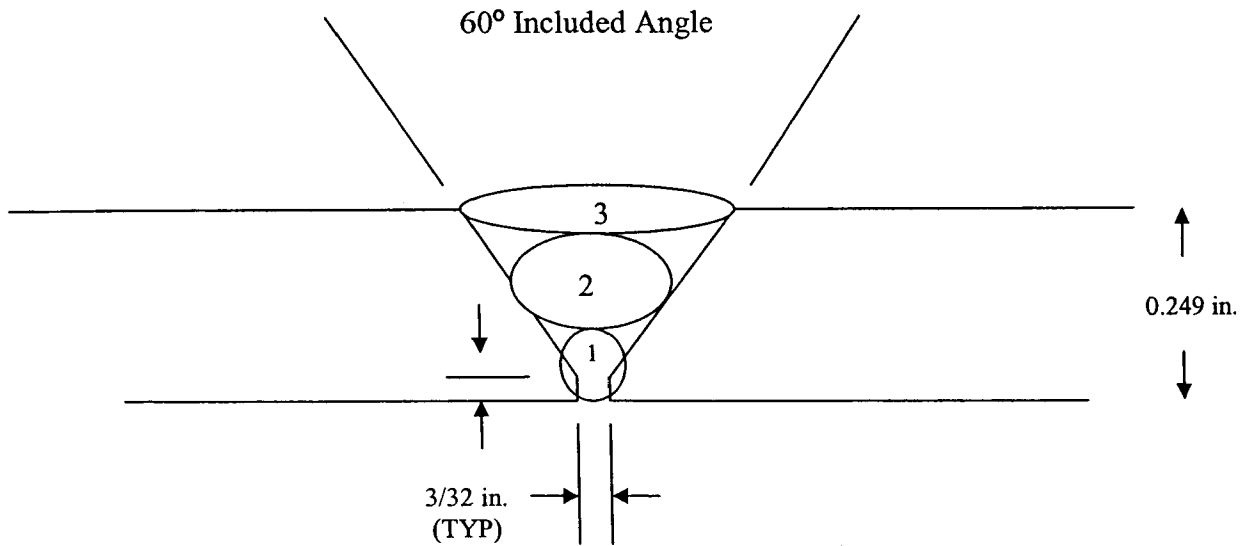
Temperature N/A Time N/A

ELECTRICAL CHARACTERISTICS (QW - 408)

Current	<u>Direct</u>	Polarity	<u>Reverse, Electrode Positive</u>
Amps	<u>See Next Page</u>	Volts	<u>See Next Page</u>
Heat Input	<u>F3 35, 230 J/in. Max</u>	<u>F4 63, 590 J/in. Max</u>	

TECHNIQUE (QW - 409)

String or Weave Root: String - Remainder Weave
Multiple or Single Pass Per Side Multiple
Multiple or Single Electrodes Single



Pass	Process	Filler Metal	Diameter mm(in)	Current & Polarity	Amperage Range	Voltage Range	Travel Speed mm/min (imp)
1	SMAW	E601D	2.5 (3/32)	DCRP	50 -70	24 -26	65 (2.6)
2	SMAW	E7018	2.2 (3/32)	DCRP	85 - 95	21 - 23	47 - 63 (1.9 - 2.5)

TENSILE TEST (QW - 150)

Specimen No.	Width mm (in.)	Thickness mm (in.)	Area Sq. mm (Sq. in)	Ultimate Load Mpa (Psi)	Ultimate Stress Mpa (Psi)	Character & Fracture Loc.

GUIDED BEND TEST (QW - 160)

Type & Figure No.	Result	Type & Figure No.	Result

CHARPY IMPACT TOUGHNESS

Type of Test Charpy V Notch Orientation Transverse
 Test Temperature -50° F Specimen Size 10 x 5 mm

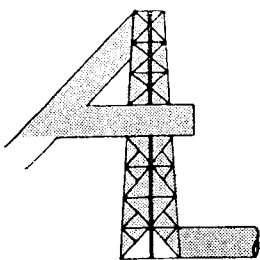
Specimen No.	Notch Location	Impact Values J (ft. lbs.)
1	Weld Zone	23, 23, 22
2	Heat Affected Zone	57, 78, 44
* Attached Report	(Alfor Metallurgical Co. Ltd.)	

OTHER TESTS

Welders Name Don Tauber Certificate File No. W3564
 Test Conducted By Alfor Metallurgical Co. Ltd.
 Laboratory Test No. 04 - 648

We certify the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME code.

Manufacturer Fourstar Resources Inc.
 Date Jan 06 - 05 Signed [Signature]



ALFOR METALLURGICAL COMPANY LTD.

CONSULTING ENGINEERS

FILE #04-648

Four Star Resources Inc.
51103 - Range Road 224
Sherwood Park, Alberta T8C 1H1

December 14, 2004

METAL TEST REPORT

Material Description: ASME SA-516, Grade 70; 0.375"-thick normalized plate; SMAW welded (E6010 Root + E7018-1 Fill & Cap); as-welded condition.

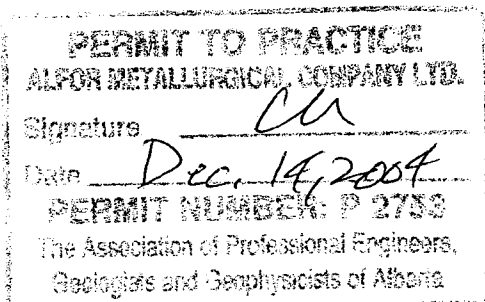
Specimen Type: Reduced-section tensile, as per Figure QW-462.1(a) of the ASME Code; guided side bend, as per Figure QW-462.2 of the ASME Code.

Results:	<u>Sample 1</u>	<u>Sample 2</u>
Width:	0.760 in.	0.753 in.
Thickness:	0.371 in.	0.370 in.
Area:	0.282 sq. in.	0.279 sq. in.
Ultimate Load:	21 800 lb	21 450 lb
Ultimate Tensile Strength:	77 300 psi	77 000 psi
Fracture Character:	Ductile	Ductile
Fracture Location:	Parent	Parent

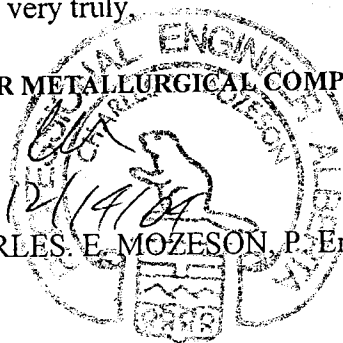
Guided side bend samples 1, 2, 3, and 4: Pass Tests.

Yours very truly,

ALFOR METALLURGICAL COMPANY LTD.



CHARLES E. MOZESON, P. Eng.



QW - 483 PROCEDURE QUALIFICATION RECORD (PQR)

Fourstar Resources Inc.

Procedure Qualification Record No. 03 Date December 28, 2004
Welding Procedure Specification No. 3
Welding Process(es) SMAW Type(s) Manual

JOINTS (QW - 402)

Type Butt Joint Vee Groove, See Figure 1 - 15 Attached

BASE METALS (QW - 403)

Metal Spec SA 516 Type or Grade 70
P-No. P1 GROUP 1 To P1 GROUP 1 Thickness 8.33 (0.375")
Diameter N/A Other N/A

FILLER METALS (QW - 404)

Specification No. (SFA)	<u>SFA 5.1</u>	<u>SFA 5.1</u>	
AWS No. (Class)	<u>E6010</u>	<u>E7018 - 1</u>	
Filler Metal F-No.	<u>F3</u>	<u>F4</u>	
Filler Metal A-No.	<u>* A1</u>	<u>A1</u>	
Size of Electrode	<u>See Attached Sketch</u>		
Nominal Chemical Composition	<u>C: 0.20% Max</u>	<u>Mn: 1.60% Max</u>	<u>SI 1.00% Max</u>
Trade Name	<u>Lincoln 5P Plus</u>		
Deposited Weld Metal Thickness	<u>2.39 mm (0.094 in.)</u>	<u>3.94 (0.155 in.)</u>	

POSITION (QW - 405)

Position of Groove 5G
Weld Progression Vertical Up

PREHEAT (QW - 406)

Preheat Temperature 10° C (50° F) Interpass Temp. (Max.) 232°C (450° F)

POSTWELD HEAT TREATMENT (QW - 407)

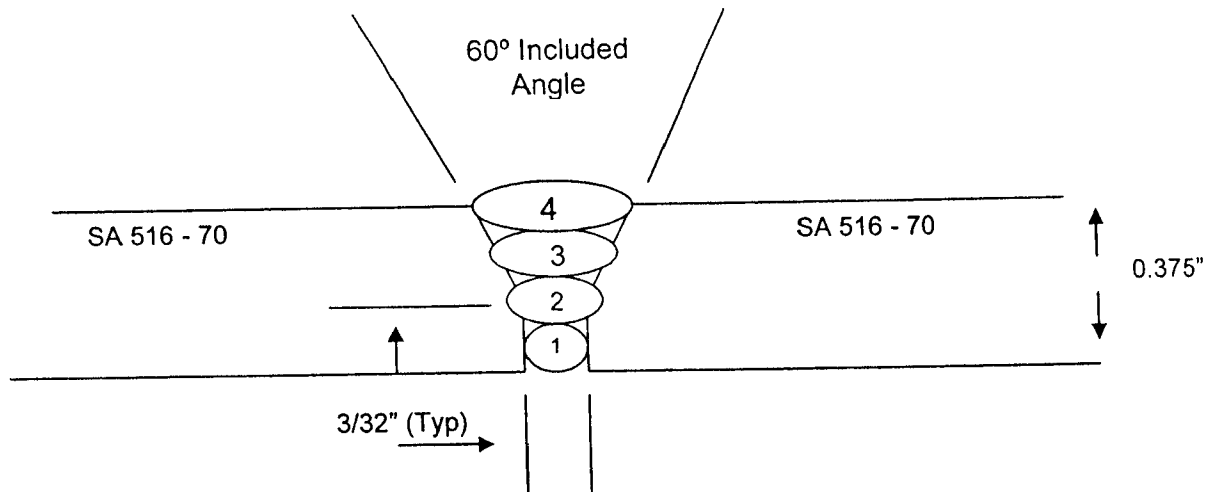
Temperature N/A Time N/A

ELECTRICAL CHARACTERISTICS (QW - 408)

Current <u>Direct</u>	Polarity <u>Reverse, Electrode, Positive</u>
Amps <u>See Next Page</u>	Volts <u>See Next Page</u>
Heat Input <u>F3 - 35230 J/in. Max</u>	<u>F4 - 63590 J/in. Max</u>

TECHNIQUE (QW - 409)

String or Weave Root - String Balance Weave
Multiple or Single Pass Per Side Multiple
Multiple or Single Electrodes Single



Pass	Process	Filler Metal	Diameter mm(in.)	Current & Polarity	Amperage Range	Voltage Range	Travel Speed mm/min (imp)
1	SNAW	F3	2.5 (3/32)	DCRP	50 - 70	24 -26	65 (2.6)
2 - 4	SMAW	F4	2.5 (3/32)	DCRP	85 - 95	21 - 23	47 - 63 (1.9 - 2.5)

PQR No. 03

TENSILE TEST (QW - 150)

Specimen No.	Width mm (in.)	Thickness mm (in.)	Area Sq. mm (Sq. in)	Ultimate Load Mpa (Psi)	Ultimate Stress Mpa (Psi)	Character & Fracture Loc.
1	0.760 in.	0.371 in.	0.282 sq. in.	21800 lb.	77300 psi	Ductile Parent
2	0.753 in.	0.370 in.	0.279 sq. in.	21450 lb.	77000 psi	Ductile Parent

GUIDED BEND TEST (QW - 160)

Type & Figure No.	Result	Type & Figure No.	Result
Side #1	Pass	Side #3	Pass
Side #2	Pass	Side #4	Pass

CHARPY IMPACT TOUGHNESS

Type of Test _____ Orientation _____
Test Temperature _____ Specimen Size _____

[illegible]

OTHER TESTS

Welders Name Don Tauber Certificate File No. W3564
 Test Conducted By Alfor Merallurgical CO. Ltd.
 Laboratory Test No. 04 - 848

We certify the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section IX of the ASME code.

Manufacturer Fourstar Resources Inc.
Date Jan 06-05 Signed [Signature]