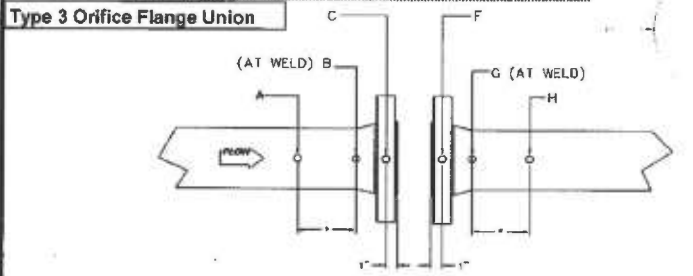
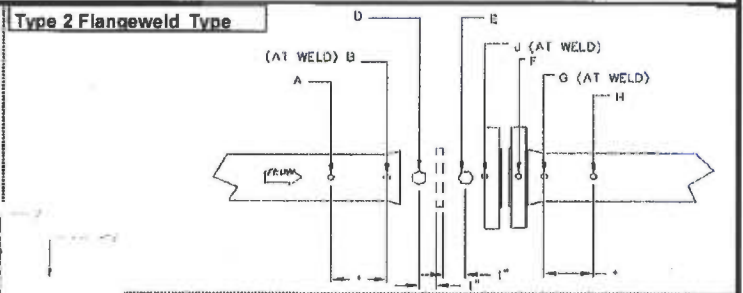
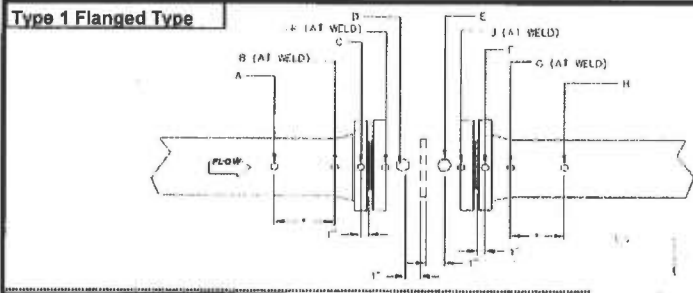


1000038365

Meter Tube Calibration Record
General Specifications

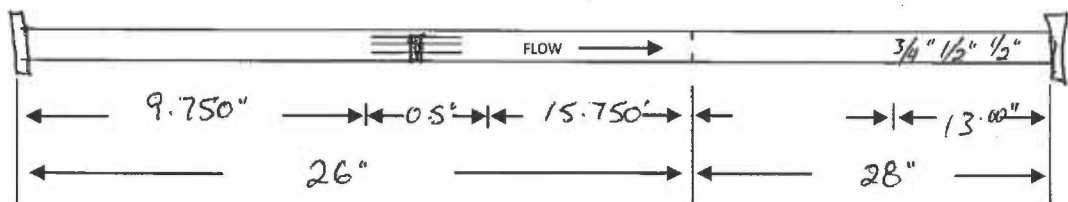
Customer:	RJV Gas Field Svcs	Date:	July 12, 2013
Location:	Husky Energy	P.O. Number:	128512
Serial No.	11282470903	Work Order No.	112824709
Assembly Part No.	9A-MR_52_0133C	Part No.	40552-33221
Orifice Fitting:	2" 600# Sch 80 Dual Chamber Meter Run	Meter Tube Type No.	2
Str. Vane / Flow Cond.:		Yes	X No



Type 4 weldneck Type Valve or Door
 Check Location Point A-B-D on Upstream Tube,
 Point E-G-H on Downstream Tube

*Cross section 'A' and 'H' shall be one pipe diameter
 except if such Cross Section falls within the lifting or weld
 it shall be made 1' inside the pipe

Location	Upstream Meter Tube					Downstream Meter Tube					
	A	B	C	D	K	E	F	G	H	J	
V	1.933	1.943		1.938		1.938	1.951	1.969	1.944	1.937	
LV	1.933	1.942		1.937		1.938	1.951	1.964	1.937	1.936	
RV	1.933	1.941		1.941		1.940	1.951	1.974	1.936	1.940	
H	1.933	1.942		1.942		1.940	1.950	1.964	1.927	1.939	
Average	1.933	1.942		1.940		1.939	1.951	1.968	1.936	1.938	
Upstream Mean Average to Stamp on I.D. Plate	1.940					Downstream Mean Average to Stamp on I.D. Plate	1.939				



AGA/API Figure	3 (2000)	0.70	Meter Tap Location			
Remarks:	68*		Upstream	N/A	Downstream	N/A
			Inspector:			

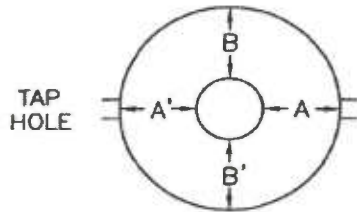


Cameron Measurement Systems
 3707 - 97th Street
 Edmonton, Alberta, Canada T6E 6J2

**QUALITY CONTROL
 INSPECTION REPORT**

Customer: RJV Gas Field Svcs Date: August 15, 2013
 Location: Husky Energy Purchase Order No.: 128512
 Serial No.: 11282470903 Orifice Fitting: 2" 600# Sch 80 Dual Chamber Meter Run
 Assembly No.: 9A-MR_52_0133C Hydrostatic Test Pressure: 2225
 Meter Tube Design Standard API 14.3 Duration: 15 Minutes

ECCENTRICITY



Horizontal $(A - A^1)/2$
 Vertical $(B - B^1)/2$

0.004"	0.002"
0.003"	0.005"

Measurement Instrument: Mitutoyo Dial Indicator

PRESSURE TAP HOLE VARIATION

Distance from Plate & Hole Diameter

Upstream	Hole	Downstream	Hole
1.000"	0.375"	1.004"	0.376"

Measurement Instrument: PAV Electronic Depth Gauge

SURFACE ROUGHNESS

Roughness Measurement Location

Upstream Tube, One Pipe Diameter from Weld
 Upstream at Pressure Tap Hole
 Downstream at Pressure Tap Hole
 Downstream 1" from End of Flange

Microinches
135
83
131
96

Measurement Instrument: Mitutoyo 212 Surftester

DIFFERENTIAL TEST

Water Hydrostatic Method at 50 psi
 Duration 5 Minutes Minimum Visual: No Leaks

Measurement Instrument: McDaniels Gauge 0 -100 psi

Work Order #: 112824709

Lorne Dagg / Leigha Jarvis

NUFLO™ DUAL CHAMBER ORIFICE FITTING

PART NO.	40552-33221		
SERIAL NO.	11282470903		
SIZE	2.0	BORE	1.939
SWP	1480	FLG	600
TRIM	SWEET		

CRN (ASME CODE) 0F01120.2C

 **CAMERON**
EDMONTON, ALBERTA, CANADA

TO REMOVE PLATE FROM CHAMBER

1. CLOSE ORIFICE CHAMBER (INDEX ORIFICE OUT OF OPERATION).
2. OPEN BLEED VALVE.
3. OPEN CHAMBER LID (REMOVE TWO TOP NUTS ONLY).
4. REMOVE ORIFICE PLATE (PRY ON HOLES IN RETAINER HANDLE).


TO PLACE ORIFICE PLATE IN OPERATION

1. REPLACE ORIFICE WITH OUTLET ON PLATE AND SEAL ON RETAINER FACING UPWARD.
2. CLOSE LID.
3. CLOSE BLEED VALVE.
4. OPEN EQUALIZING VALVE.
5. OPEN ORIFICE CHAMBER (INDEX ORIFICE INTO OPERATION).
6. CLOSE EQUALIZING VALVE.

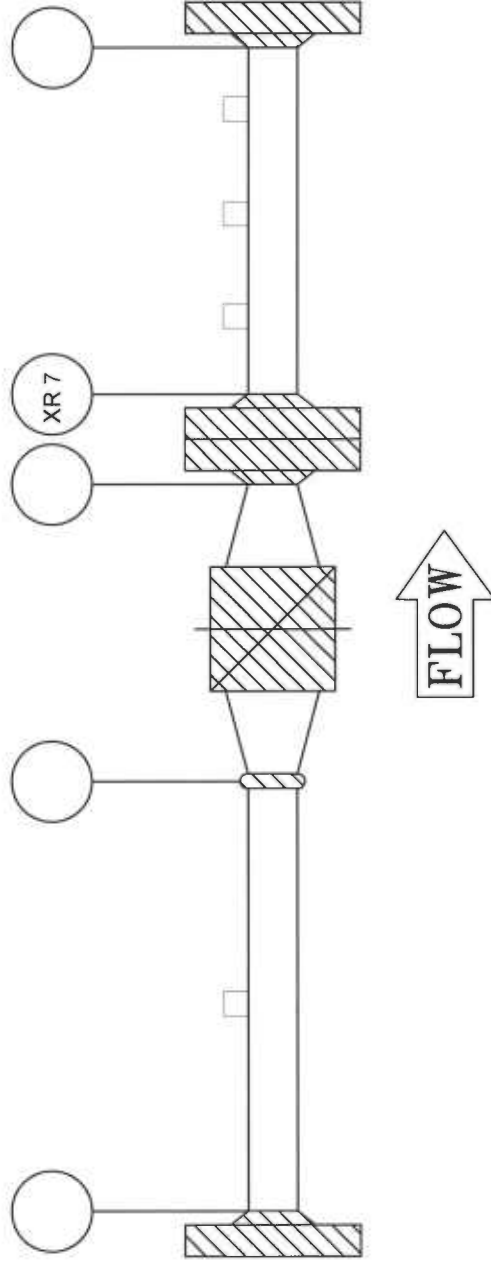
NUFLO™ METER RUN ASSY NO. 9A-MR_52_0133C

SERIAL NO.	11282470903	U/S DIA.	1.940	D/S DIA.	1.939
PIPE SIZE	2.0	SCH.	80	RATING	600
AGA / API	3 (2000)	MATL.	WCB	DATE	08/13
W.O. NO.	112824709	CALIBRATION CERT'D BY	CAMERON		

CRN (ASME CODE) 0F01120.2C

 **CAMERON**
EDMONTON, ALBERTA, CANADA

WELD AND RADIOGRAPHY IDENTIFICATION MAP



CAMERON MEASUREMENT SYSTEMS

7944 - 10th STREET N.E.

CALGARY, AB. T2E 8W1

DESCRIPTION:	2" 600# Sch 80 Dual Chamber Meter Run		
SERIAL No.:	11282470903		
CUSTOMER:	RJV Gas Field Svcs		
P/O No.:	128512	TAG No.:	
W/O No.:	112824709	END USER:	Husky Energy
RADIOGRAPHY UNIT:	Western Inspection		
WELDER:	Jeff Harrington	FILE No.:	W-23651
DATE:	August 2013		Lorne Dagg
SYMBOL:	"T"		QUALITY ASSURANCE INSPECTOR



Certificate of Authorization Permit

Quality Management System

Expiry Date: **December 9, 2013**

Reg. No.: **AQP-5046**

This is to certify that:

**CAMERON
MEASUREMENT SYSTEMS DIVISION
7944 - 10 STREET N.E.
CALGARY, ALBERTA**

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

Manufacture Category 'F' Fittings in accordance with CSA B51

at the above SHOP address.



Dated at Edmonton, this 7th day of December, 2010

Chief Inspector and Administrator

Certificate No.: 7735