



Client	Midstream Equipment	Inspection Date	Jun 6, 2025		
Prov. Reg. #	AB 0514156	Inspection Type	VE / UT / PSV		
Equipment Type	Separator	Location	27 DURUM DRIVE, AB (MIDSTREAM YARD)		
Tag/Equip.		LSD	AB		
Status	Not in Service	Downhole LSD			
Manufacturer	Ifc Industrial Fabrication Corporation	Area			
Serial Number	16091-01	Year Built	2005		
CRN #	T3942.231	Service	Sour		
Comp/Unit Id	UNIT 1029	Manway	Yes		
Nat.Board #		Coating	Painted		
Interim Insp'n		Interim Type			
Next Thorough Insp	2030	Next Insp Type	VI / VE / UT / PSV		
Length		Height			
Volume	205 ft³	Client Reference			
Owner	Midstream Equipment	RT	1	HT	YES
Foreman		RAE Job No.	PR0004444		
ABSA	Plant: R Vessel: P Process: W Special: Z		ASME	Sec. VIII div. 1	
History Log	Vessel relocated as per ESR - previously at Enerflex Yard - entered March 2, 2017. Certificate of Inspection - entered March 22, 2017. AB-25 - entered March 24, 2017. AB-10 - Unit 1029 - Midstream Ownership - 2017-02-13 AB-10 - Unit 1029 Operated in BC - 2018-08-21 Inspection Report Complete - Inspection Date: 2025-June-06 Inspection Type: VE/UT/PSV				

Component	Shell				
MAWP	740.0 PSI @ 100 °F		MDMT	-20 °F @ 740.0 PSI	
Material	SA-516-70N		Material Thickness	1.125 in	
Diameter	48 in		Length	192 in	
Corrosion Allowance	0.125 in				



Valve Tag No	1029 - SEP PSV	Relief Type	Pressure Safety Valve
Manufacturer	Farris	Set Pressure	739.983 PSI
Serial Number	488896-5-A10	Capacity	11378 SCFM
Model	26HA12-120	Last Service	Oct 23, 2022
CRN	0G8442.5C	Next Service	2026
Service Co.	G850034	Service Interval	48 Months
Service Co. Tag	PIMM'S PRODUCTION EQUIPMENT LTD.	Inlet Size	2 in
ASME Stamp	UV	Outlet Size	3 in
NB Stamp	YES	Connection	Threaded
Relief Dest.	To Atmosphere	Valve Loc.	On Vessel
Comments		Client Reference	

Component	Vesel Head 2:1 Concave		
Material	SA-516-70N	Material Thickness	1 in
Corrosion Allowance	0.125 in		

Component	Boot		
MAWP		MDMT	
Material	SA-106-B	Material Thickness	0.844 in
Diameter	12 in	Length	
Corrosion Allowance	0.125 in		

Component	Boot Head 2:1 Concave		
Material	SA-106-B	Material Thickness	0.844 in
Corrosion Allowance	0.125 in		



Comments

The following RAE Procedure(s) was/were used in inspecting this vessel:

INS-624B Unfired Pressure Vessels Procedure

INS-645B PRV Inspection Procedure

NDE Technical Manual

The unit was located at the Midstream Equipment yard located just east of Chestermere, AB.

The unit was not in-service at the time of inspection.

Building Observations

Number of Access Doors:1 Building Supported by: Skid

Gas test port: No Gas Detection: Yes

Fire eye: No Catalytic Heater: Yes

Lighting: Good Floors : Checker plate steel

Drainage/Condition: Acceptable

Equipment placed ergonomically: Yes

The vessel was located in a building identified with a place card "Rental Unit #8000353" attached to the building exterior.

The building was generally in good condition and well supported.

The building has one entry and a window to provide lighting. Both the door and window were functioning well and were in good condition

The building has adequate light which is a combination of natural light and lighting.

The building floor was a checkered steel plate that had paint damage and corrosion and was in overall good condition.

All items are placed economically, and operations can be performed safely.

The building structure was level and situated on a transportation skid.

The cladding was in good condition.

Overall, the building was in acceptable condition.

2025 Observations

Midstream unit number was written on the building door.

Figure: 1



BUILDING

Figure: 2



UNIT NUMBER



Figure: 3



FLOOR

Piping Observations

General condition: Acceptable
Mechanical connections acceptable for service?: Acceptable
Clad: No Painted: Yes Insulated: No
Are there any dead legs: Yes
Support type: U-Bolt
Supported adequately: Yes

The piping was labeled and was well supported.
The attached piping was sufficiently support and was in good condition.
The piping was painted and there was no damage, distortion or stress evident on the piping.
There was no signs of external corrosion on the piping surfaces.
The piping had welded joints and flanged connections that showed no signs of leakage.
The flanged connections were fully bolted and appeared to be in good condition.
Overall the piping appeared to be in good condition.

2025 Observations

There was minor paint chips and minor external corrosion noted on the piping surfaces.



Figure: 4



INLET PIPING

Figure: 5



WATER OUTLET PIPING

Figure: 6



GAS OUTLET PIPING



PSV Observations

Drainage : Acceptable Supports : Acceptable
Bolting : Acceptable Seal wire : Acceptable
Gasket : Acceptable Service tag : Acceptable
CRN : Acceptable Set pressure : Acceptable
Installation vertical : Yes Required Capacity : Not verified
PSV block valves : No
PSV service report available : No

The PSV was identified by the identification tag and nameplate.

There was a service tag attached to the PSV and a metal service company identification tag.

The nameplate was securely attached and legible.

The PSV was installed on the vessel and relieves outside the building.

The relief piping should have a the means to prevent insects, water or debris from entering the piping.

A 90 elbow and pipe should be added to the existing relief piping

The PSV had all the required seals and they were intact.

The was installed in a vertical position with the discharge line grading away from the valve complying with regulatory standards.

There were no valves on the PSV piping.

The PSV was last service on June 14, 2013 and the PSV shall be serviced prior to June 14, 2017.

The PSV service report shall be forwarded to the Chief Inspector for review.

2025 Observations

The relief piping should have a means to prevent insects, water or debris from entering the piping. Recommend that a 90 elbow and pipe should be added to the existing relief piping.

PSV was serviced in 2022.

No additional comments since last inspection.

Figure: 7



PSV

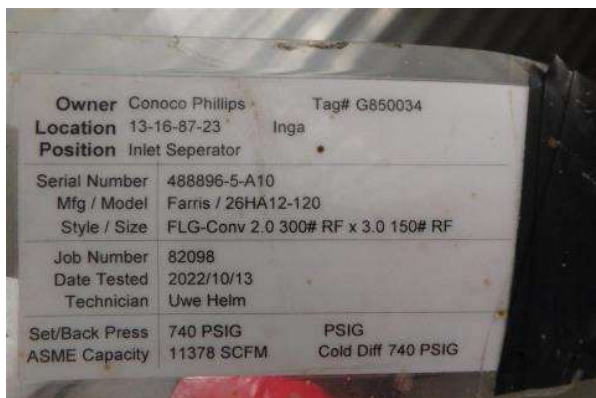
Figure: 8



NAMEPLATE



Figure: 9



SERVICE TAG

External Observations

Installation : Partial
Grounded : Yes
Drains : Automatic
Attachments : Yes
CUI checked : N/A
Vessel Orientation : Horizontal
Manway : Yes
Manway davit arms:
 Free to move : Yes
 Lubricated : Yes
Carry bolt with washer and double Nutted : Yes
Certificate of inspection permit : Yes
Nameplate attached and legible : Yes

Support Structure : Saddles
Securement Type : Bolted
Securement Condition : Acceptable
Ladders/Platforms : N/A
External Covering : Coated

The vessel was identified by the Alberta Registration Number stamped on the nameplate.
The nameplate was legible and securely mounted to the vessel.
The vessel was located inside the building was ergonomically placed.
The manway was located outside the building.
The vessel was adequately supported on saddle supports and was welded to the skid floor.
The heads, shell, nozzles and bolting appeared to be in good condition.
There was no stress evident on piping or nozzle connections and there was no damage or distortion evident on the vessel surface.
The vessel was painted grey and is in acceptable condition.
The gauges were in good condition.
PSV was serviced in 2022.

2025 Observations

No additional comments since last inspection.



Figure: 10



VESSEL

Figure: 11



SUPPORT

Internal Observations

2025 Observations

There was no internal inspection performed at the time of inspection as the internals were not cleaned. It was noted that the unit may be sold and internal inspection is not to be performed at this time. Internal inspection shall be completed prior to placing the unit back into service.

UT1 Observations

See attached UT Report. UT results were reviewed and found to be acceptable.

Recommendations

1. The vessel is fit-for-service provided an internal inspection is completed prior to placing the unit back into service
2. The relief piping should have a means to prevent insects, water or debris from entering the piping. Recommend that a 90 elbow and pipe should be added to the existing relief piping.
3. A permanent Midstream unit label should be affixed to the building door.
4. There should be an installation inspection of the unit after being installed on site to ensure no damage occurred during shipping and to verify proper installation.


Irwin Garcia, P.Eng.
Alberta IPV #A-92199

ABSA ISI-PVPP# A-99351
API 510# 68250
CWB Level II# 12352
SNT UT1 MT2

Inspector: Bryce Motley

Inspector : Irwin Garcia

Reviewed By: Bryce Motley

	RAE Engineering and Inspection Ltd. www.raeengineering.ca Phone: (780) 469-2401 Fax: (780)-469-2401		Inspection Date:		July 08, 2025		<h1>UT Report</h1>								
			Report Number:		IG000083										
			Page:		1 of 5										
Client:		Midstream Equipment		Job Number:		PR0004444									
Facility:		Midstream Yard		Location/LSD:		Midstream Yard									
Equipment Number:		0514156		Client Representative:		Joe Davis									
Equipment Description:		Inlet Separator		Client Contact:		joe.davis@midstreamequipment.com									
Serial / Tag Number:		16091-01		Unit Number:		UNIT 1029									
Equipment Type:		Vessel+Pipe		Measurment Unit:		Inch									
JOB DESCRIPTION															
Procedure:		NDE Tech Manual Rev. 2025 (NDE - 701B)													
Acceptance Code:		ASME Sec. VIII Div. 1 / ASME B31.3			Surface Condition:		Painted								
Material:		Carbon Steel			Surface Temp:		0 - 120 °C								
EQUIPMENT, TECHNIQUE & CALIBRATION															
Instrument Mfr:		GE		Model:		DMS2		S/N:		01X121		Cal. Due:		2026-05-02	
Probe Model	Freq MHz	Angle	Dia. (In)	Probe Type	Manufacturer	Serial #	Cable Length	Vel. (m/sec)	Ref dB	Scan dB	Range (in)				
FH2E	7.5	0	0.250	Single	Stresstel	24E00NGM	6'	2369	60	As Needed	1				
Cal Block S/N			1 or 2 Point Cal		Calibration Range		Couplant		Block Material						
11-1200			2		0.100-1.500"		UTX		Carbon Steel						

Scope:

Conduct 0° straight beam ultrasonic testing on the inlet separator looking for any signs of wall thinning due to corrosion, erosion, laminations or inclusions.

Result:

The measurements obtained from the inspection locations showed the thicknesses of all the components inspected to be at or around nominal. There were no signs of wall thinning, internal corrosion, erosion, laminations or inclusions at the time of inspection. All piping measurements were within the 12.5% mill tolerance, as per ASTM specifications.

Please see the following pages for the pictures of nameplate, the overall view, the isometric drawings, and the thickness measurements.

Conclusion:

No concerns noted at the time of inspection.



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	Report Number:	IG000083	
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Vessel Overview



Nameplate



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Inspection Date:

July 08, 2025

Report Number:

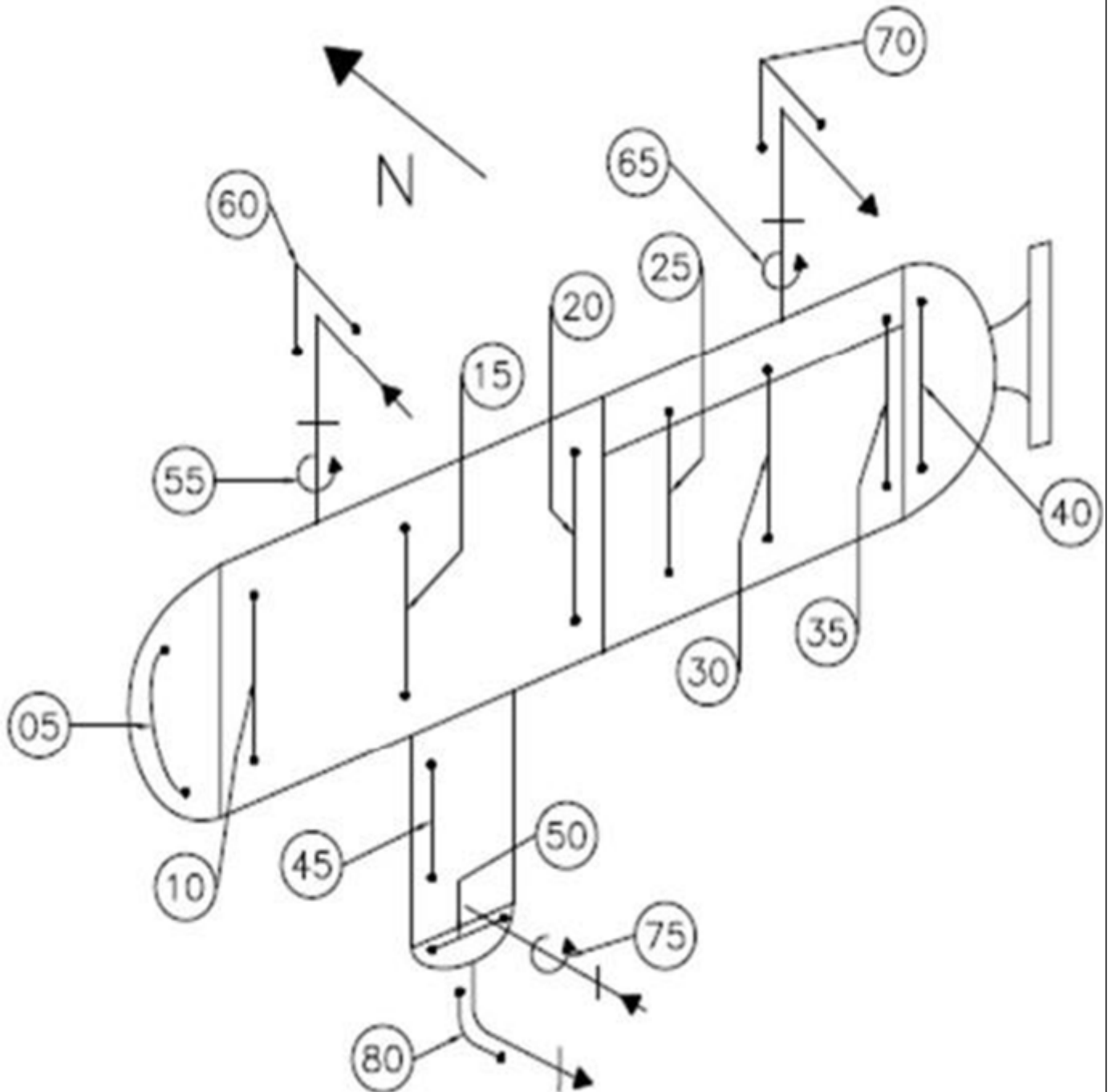
IG000083

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UT Report

ISO Drawing



ISO



RAE Engineering and Inspection Ltd.

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Phone: (780) 469-2401 Fax: (780)-469-2401

Inspection Date:

July 08, 2025

Report Number:

IG000083

Page:

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UT Report

UT Data

#	01	02	03	04	05	06	07	08	09	10	11	12	Min & Avg	
5	Head						Nom	1.000	Mil	0.010	CA	0.125	Min:	1.149
	1.155	1.153	1.155	1.149	1.151	1.151	1.155	1.165	1.169	1.177			Avg:	1.158
10	Mid Shell						Nom	1.125	Mil	0.010	CA	0.125	Min:	1.189
	1.189	1.201	1.200	1.198	1.196	1.196	1.197	1.195	1.191	1.190			Avg:	1.195
15	Mid Shell						Nom	1.125	Mil	0.010	CA	0.125	Min:	1.191
	1.191	1.198	1.197	1.200	1.199	1.197	1.197	1.197	1.197	1.197			Avg:	1.197
20	Mid Shell						Nom	1.125	Mil	0.010	CA	0.125	Min:	1.201
	1.202	1.209	1.205	1.208	1.208	1.208	1.206	1.206	1.205	1.201			Avg:	1.206
25	Mid Shell						Nom	1.125	Mil	0.010	CA	0.125	Min:	1.184
	1.187	1.188	1.188	1.188	1.189	1.190	1.195	1.186	1.185	1.184			Avg:	1.188
30	Mid Shell						Nom	1.125	Mil	0.010	CA	0.125	Min:	1.192
	1.201	1.205	1.196	1.198	1.195	1.193	1.192	1.192	1.195	1.193			Avg:	1.196
35	Mid Shell						Nom	1.125	Mil	0.010	CA	0.125	Min:	1.189
	1.198	1.200	1.201	1.193	1.189	1.191	1.192	1.193	1.195	1.192			Avg:	1.194
40	Head						Nom	1.000	Mil	0.010	CA	0.125	Min:	1.161
	1.178	1.174	1.167	1.163	1.161	1.167	1.164	1.171	1.171	1.176			Avg:	1.169
45	Boot Shell						Nom	0.844	Mil	0.010	CA	0.125	Min:	0.882
	0.896	0.887	0.886	0.882	0.886	0.884	0.888	0.889	0.888	0.891			Avg:	0.888
50	Boot Shell						Nom	0.844	Mil	0.010	CA	0.125	Min:	1.085
	1.346	1.269	1.177	1.113	1.111	1.115	1.098	1.085	1.216	1.287			Avg:	1.182
55	6	XXH	Nozzle				Nom	0.864	Mil	0.108	CA	N/S	Min:	0.893
	0.893	0.908	0.949	0.936									Avg:	0.922
60	6	XH	90° Elbow				Nom	0.432	Mil	0.054	CA	N/S	Min:	0.505
	0.514	0.511	0.505	0.508	0.510	0.512							Avg:	0.510
65	6	XXH	Nozzle				Nom	0.864	Mil	0.108	CA	N/S	Min:	0.945
	0.971	0.967	0.945	0.946									Avg:	0.957
70	6	XH	90° Elbow				Nom	0.432	Mil	0.054	CA	N/S	Min:	0.427
	0.427	0.429	0.436	0.438	0.438	0.437							Avg:	0.434
75	2	160	Nozzle				Nom	0.344	Mil	0.043	CA	N/S	Min:	0.347
	0.402	0.372	0.347	0.377									Avg:	0.375
80	3	XXH	90° Elbow				Nom	0.600	Mil	0.075	CA	N/S	Min:	0.634
	0.662	0.657	0.657	0.635	0.634	0.636							Avg:	0.647

Irwin Garcia, P.Eng.


Alberta IPV #A-92199


Technician 1: Irwin Garcia

SNT RAE-710B-037 UT Level 1 (Expires Sep 30, 2029)

SNT RAE-710B-037 MT Level 2 (Expires Sep 30, 2029)



Method	Level	Expiry Date
UT	1	30-Sep-29
MT	2	30-Sep-29
Corrective Lenses Required: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
By:	Zong Jun Wang	
Title:	NDE Level 3	
Signature:		
Date:	30-Sep-24	

**RAE Engineering and Inspection Ltd.**

Certification Record
This is to certify that:
Irwin Garcia

The above named employee has satisfactorily met the qualification requirements of the RAE Engineering and Inspection Ltd. written practice that meets the requirements of ASNT recommended practice SNT-TC-1A 2020 edition

Certification No.: RAE-710B-037



MetTech

Material Testing Equipment and Supplies

A division of 1067113 Alberta Ltd.

1, 3610 - 29 St. N.E. Calgary, Alberta T1Y 5Z7

Measurement Readings for Calibration of Thickness Gauges

Company: RAE Engineering & Inspection Ltd. - Calgary

Instrument: GE DMS2 UTG

Serial Number: 01X121

Date: 5/2/2025

Range Check against stated reference listed:

Nominal measure	Measured reading	
	Block # 1	Block # 2
1.000"	1.002 "	1.000 "
0.750"	0.752 "	0.751 "
0.500"	0.500 "	0.500 "
0.250"	0.250 "	0.250 "

Allowable tolerance +/- 0.004"

These readings were produced against stated reference block in house and are within the allowable tolerances.

Reference Standards

4 Step 4340 Imperial Steel

Serial # 07-5839

Heat/Lot # G10975K06

ASTM specification E-797

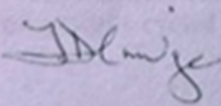
4 Step Imperial Steel

Serial # 11-3909

Heat/Lot # 227L511

ASTM specification E-797

These reference standards have been manufactured in accordance with applicable specifications, and were inspected with instruments calibrated in accordance with ANSI/NCSL Z540-1-94 and traceable to NIST.

Signed by: 

Temperature: 21.2 °C

On this date: 5/2/2025

Rel. Hum. : 28%

Calibration report MET-STEP01 Revision 3 Apr 11/22

Phone: 270-7778

Calgary

Fax: 283-3552

Edmonton

Toll free: 1-888-283-3552



MetTech

Material Testing Equipment and Supplies

A division of 1067113 Alberta Ltd.

1, 3610 - 29 St. N.E. Calgary, Alberta T1Y 5Z7

Certificate of Calibration of Thickness Gauges

Company: Rae Engineering - Calgary

Instrument: GE DMS2 UTG

Serial Number 01X121 :

Date: 5/2/2025

This is to certify that the above instrument meets or exceeds manufacturer's specifications for THICKNESS RESOLUTION, and has been calibrated to reference standards manufactured and inspected in accordance with ISO 902 with instruments calibrated to ANSI/NCSL Z540 and traceable to National Institute of Standards and Technology (NIST).

Reference Standard: 4 Step Imperial Steel

Serial # 07 - 5839

Block #1

Serial # 11 - 3909

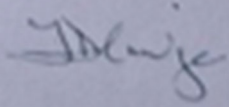
Block #2

These blocks have been manufactured in accordance with applicable specifications, and was inspected with instruments calibrated in accordance with ANSI/NCSL Z540 and traceable to NIST.

NIST certification reference # 11-83834 A & B

10-78221 A & B

Certificate of calibration is current for a period of 12 from date listed. Reference Standard Blocks are periodically cycled out of stock without notice.

Signed by: 

On this date: 5/2/2025