



**APPLICATION FOR REGISTRATION AS A REGISTERED SERVICE COMPANY**

Public Service Commission  
SFN 51277 (2/2014)



**TYPE OR PRINT - AN INCOMPLETE OR ILLEGIBLE APPLICATION WILL BE REJECTED**

<b>Name of Company</b> Magellan Midstream Partners, L.P.	<b>Email Address</b> mark.haugen@magellanlp.com	<b>Application Date</b> 10/5/17	
<b>Mailing Address</b> 902 Main Ave East	<b>City</b> West Fargo	<b>State</b> ND	<b>Zip Code</b> 58078
<b>Telephone Number</b> 320-762-1193 Ext. 21	<b>Cell Phone Number</b> 320-808-6352	<b>Fax Number</b> 320-762-2539	

Select below all device types your company will certify:

<b>Scales (include maximum capacity, if applicable)</b>	<b>Liquid (include maximum flow rate, if applicable)</b>
<input type="checkbox"/> 1. Rail <input type="checkbox"/> 2. Truck <input type="checkbox"/> 3. Livestock <input type="checkbox"/> 4. Hopper: Max. Capacity: _____ <input type="checkbox"/> 5. Belt <input type="checkbox"/> 6. Over 30 lbs.: Max. Capacity: _____ <input type="checkbox"/> 7. 30 lbs. or less <input type="checkbox"/> 8. Class II (indicate on your calibration report which weight kit is Class II certified) <input checked="" type="checkbox"/> 9. Other: Please List:  900 gallon open top prover tank.	<input type="checkbox"/> 1. Retail Fuel (less than 20 gal. per minute) <input type="checkbox"/> 2. High Flow Retail Fuel (20 gal. per minute or greater) <input type="checkbox"/> 3. Vehicle Tank: Max. Flow Rate: _____ <input type="checkbox"/> 4. Stationary Bulk (fuel or oil): Max. Flow Rate: _____ <input type="checkbox"/> 5. LPG <input type="checkbox"/> 6. Stationary LPG <input type="checkbox"/> 7. Fertilizer: Max. Flow Rate: _____ <input type="checkbox"/> 8. Chemical <input checked="" type="checkbox"/> 9. Anhydrous <input checked="" type="checkbox"/> 10. Loading Rack <input type="checkbox"/> 11. Other: Please List:

List below all persons employed by your company as a North Dakota Registered Service Person and the device types they are registered to certify (attach a separate sheet to list additional employees):

<b>Permit No.</b>	<b>Employee</b>	<b>Device Types Registered to Certify (list using device type numbers from above)</b>
<i>e.g. 1001</i>	<i>e.g. John Doe</i>	<i>e.g. Scales - 2, 3, 6, 8; e.g. Liquid - 1, 2, 6</i>
1447	Perry Palm	9. Other 10. Liquid
1695	Dan Lewin	9. Other 10. Liquid
1746	Micheal Tanhoff	9. Other 10. Liquid

Continued on Page 2

Application for Registration as a Registered Service Company  
Page 2

List below all field standards (attach current calibration reports):

See Attached Reports.	

Additional Application Items (initial where appropriate):

Standardized Test Report	<input type="checkbox"/> Copy enclosed
	<input type="checkbox"/> No change in report filed previously
Tested and Approved Sticker	<input type="checkbox"/> Copy enclosed
	<input type="checkbox"/> No change in sticker filed previously
Photocopy of Crimped Lead Wire Seal	<input type="checkbox"/> Copy enclosed
	<input checked="" type="checkbox"/> No change in crimped lead wire seal filed previously

Public Company Listing:

Include my company information on your registered service company list for public contact.

Yes     No

I Mark Haugen, and have authority to represent this company. By signing this application, I declare that I have examined this form and accompanying documentation, and to the best of my knowledge and belief, the facts stated and documentation provided is true, correct, and complete.

Mark Haugen  
Signature

Send Completed Application and Related Documents To:

Public Service Commission  
600 E Boulevard Ave Dept 408  
Bismarck ND 58505-0480  
Telephone: (701) 328-2400  
Fax: (701) 328-2410

North Dakota

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SECRETARY

# SECRETARY OF STATE NORTH DAKOTA

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## MAGELLAN MIDSTREAM PARTNERS, L.P.

### Partnership Details

**System ID:** 18153200      **Phone:** (888) 934-6571  
**Type:** Limited Partnership  
**Status:** Active & Good Standing  
**Original File Date:** 06/11/2002      **Effective Date:** 06/11/2002  
**State of Origin:** Delaware

### Principal Office

ONE WILLIAMS CENTER  
TULSA, OK 74172-0140

### Registered Agent

**C T CORPORATION SYSTEM**  
314 E THAYER AVE  
BISMARCK, ND 58501-4018  
**Established Date:** Aug 27, 2008

### Nature of Business

OWNS AND OPERATES PETROLEUM PIPELINE

### General/Managing Partners

**MAGELLAN GP, LLC**  
ONE WILLIAMS CENTER MD28-1  
PO BOX 22186  
TULSA, OK 74121-2186

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*Audit File  
copy*



Customer	Magellan
Location	Fargo, ND
Designation	Truck Rack
Serial	3461-538
Prover Type	Atmospheric Tank
Date Completed	7/24/2017



# Certificate of Calibration

7/24/2017

This is to certify that Meter Engineers, Inc. calibrated subject Atmospheric Tank meter prover and established the volume at 60 degrees fahrenheit and atmospheric pressure, to be:

### New Prover Volume

If No corrections Needed		WITH Corrections	
Tank Volume gal	899.973	Tank Volume gal	
Tank Volume inches	207,893.748	Tank Volume inches	
Tank Volume barrels	21.428	Tank Volume barrels	

The calibrating medium used was water and the calibration was performed in accordance with the latest edition of the API Standards Chapters 4, 11, & 12 by Mike Norman and certified by the undersigned. Test performed using trailer unit number 134.

### Certified Test Measures Used:

Measure #	Gal	NIST #
1	100	7241
2	100	7240
3	50	7242

Signed Rob Jack



Customer	Magellan
Location	Fargo, ND
Designation	Truck Rack
Serial	3461-538
Prover Type	Atmospheric Tank
Date Completed	7/24/2017

## Tank Run Comparisons

### Established Prover Volume

Tank Volume gal	900
Tank Volume inches	207900
Tank Volume barrels	21.4285714

These values represent the design or initial volumes before any needed corrections.

### Check Runs

Run 1 = 207,894.8999	}	0.0011 %	Avg	Volume Diff 1 & 2 to Established %
Run 2 = 207,892.595			207,893.748	-0.003 %

### Calibration Calculations

Established Vol	Avg Run Volume	Linear Measurement of Scale	
207900	- 207893.748	<b>X</b>	= ?

Scale Reading

Temp of Can

Scale was moved up ? inches which corresponds to the prover volume correction needed of 6.2525 cubic inches. Measure volume of can is temperature compensated.

### Verification Runs (After Correction if any)

Run =	}	-100 %	Avg	Volume Diff & to Established %
Run =				

### New Prover Volume

If No corrections Needed	WITH Corrections
Tank Volume gal	Tank Volume gal
Tank Volume inches	Tank Volume inches
Tank Volume barrels	Tank Volume barrels



Customer	Magellan
Location	Fargo, ND
Designation	Truck Rack
Serial	3461-538
Prover Type	Atmospheric Tank

## Prover Information

Prover Type	Atmospheric Tank
Designation	Truck Rack
Serial	3461-538
Mfg of Prover	Metric
Coated?	Yes
Insulated?	No
Metallic Composition	Carbon Steel
Coefficient of Cubical Expansion	.0000186
Modulus of Elasticity	30000000
Notes	

Prover Information Verified By:

*Paul Klabynde*

Customer Representative - Print Name

### Methodology

CTL Temperature Correction Factor is based on API Petroleum Measurement manual Chapter 11.2.3

CTS Metal Correction Factor =  $(1 + ((\text{Can Temp in F} - 60) \text{ times the Can Coefficient of Expansion}))$   
divided by  $(1 + ((\text{Prover Temp in F} - 60) \text{ times the Prover Coefficient of Expansion}))$

Meter Engineers, Inc.



Customer	Magellan
Location	Fargo, ND
Designation	Truck Rack
Serial	3461-538
Prover Type	Atmospheric Tank
Date Completed	7/24/2017

## Run Calculation Summary

Mike Norman

### Run # 1 (Tank)

Measure	Certified Volume	Scale Reading	Actual Volume	Prover Temp	Can Temp	CTL Temp Correction	CTS Metal Correction	Adjusted Volume
Can # 3 50 gal	11,548.56	0	11,548.56	74.6	74.8	0.999973	1.000120	11,549.6340
Can # 1 100 gal	23,093.63	0	23,093.63	74.6	74.7	0.999987	1.000118	23,096.0548
Can # 2 100 gal	23,092.99	0	23,092.99	74.6	74.8	0.999973	1.000120	23,095.1376
Can # 3 50 gal	11,548.56	1	11,549.56	74.6	74.7	0.999987	1.000118	11,550.7727
Can # 1 100 gal	23,093.63	2	23,095.63	74.6	74.8	0.999973	1.000120	23,097.7778
Can # 2 100 gal	23,092.99	0	23,092.99	74.6	74.8	0.999973	1.000120	23,095.1376
Can # 3 50 gal	11,548.56	0	11,548.56	74.6	74.8	0.999973	1.000120	11,549.6340
Can # 1 100 gal	23,093.63	2	23,095.63	74.6	74.8	0.999973	1.000120	23,097.7778
Can # 2 100 gal	23,092.99	-1	23,091.99	74.6	74.9	0.999960	1.000123	23,093.9065
Can # 3 50 gal	11,548.56	-1	11,547.56	74.6	74.9	0.999960	1.000123	11,548.5184
Can # 1 100 gal	23,093.63	25	23,118.63	74.6	74.9	0.999960	1.000123	23,120.5487

Temperature Adjusted Volume This Run

207,894.8999

### Run # 2 (Tank)

Measure	Certified Volume	Scale Reading	Actual Volume	Prover Temp	Can Temp	CTL Temp Correction	CTS Metal Correction	Adjusted Volume
Can # 3 50 gal	11,548.56	0	11,548.56	74.8	75.6	0.999891	1.000138	11,548.8947
Can # 1 100 gal	23,093.63	0	23,093.63	74.8	75.7	0.999877	1.000141	23,094.0453
Can # 2 100 gal	23,092.99	0	23,092.99	74.8	75.7	0.999877	1.000141	23,093.4053
Can # 3 50 gal	11,548.56	0	11,548.56	74.8	75.6	0.999891	1.000138	11,548.8947

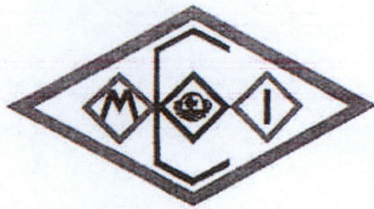
### Run Calculation Summary (cont)

Can # 1 100 gal	23,093.63	2	23,095.63	74.8	75.6	0.999891	1.000138	23,096.2994
Can # 2 100 gal	23,092.99	0	23,092.99	74.8	75.6	0.999891	1.000138	23,093.6593
Can # 3 50 gal	11,548.56	0	11,548.56	74.8	75.7	0.999877	1.000141	11,548.7677
Can # 1 100 gal	23,093.63	5	23,098.63	74.8	75.7	0.999877	1.000141	23,099.0454
Can # 2 100 gal	23,092.99	-1	23,091.99	74.8	75.8	0.999863	1.000144	23,092.1512
Can # 3 50 gal	11,548.56	0	11,548.56	74.8	75.8	0.999863	1.000144	11,548.6406
Can # 1 100 gal	23,093.63	35	23,128.63	74.8	75.8	0.999863	1.000144	23,128.7914

Temperature Adjusted Volume This Run

**207,892.5950**

Meter Engineers, Inc.



# WaterDraw Calibration Worksheet

Customer: Magellan  
 Location: Fargo, ND  
 Designation: Truck Rack  
 Serial: 3461-538  
 Prover Type: Atmospheric Tank

Technician: Mike Norman  
 Scale Reading: 52.3 cubic inches  
 Tolerance: 41.6 cubic inches

Date: 07-24-17      1 74.6      2 74.8      3

Measure	Run 1			Run 2			Run 3		
	Can #	Scale Reading	Temp	Can #	Scale Reading	Temp	Can #	Scale Reading	Temp
Can # 3 50 gal	3	Ø	74.8	3	Ø	75.6	3		
Can # 1 100 gal	1	Ø	74.7	1	Ø	75.7	1		
Can # 2 100 gal	2	Ø	74.8	2	Ø	75.7	2		
Can # 3 50 gal	3	1	74.7	3	Ø	75.6	3		
Can # 1 100 gal	1	2	74.8	1	2	75.6	1		
Can # 2 100 gal	2	Ø	74.8	2	Ø	75.6	2		
Can # 3 50 gal	3	Ø	74.8	3	Ø	75.7	3		
Can # 1 100 gal	1	2	74.8	1	3	75.7	1		
Can # 2 100 gal	2	-1	74.9	2	-1	75.8	2		
Can # 3 50 gal	3	-1	74.9	3	Ø	75.8	3		
Can # 1 100 gal	1	+25	74.9	1	+35	75.8	1		

28 Total      41 Total      \_\_\_\_\_ Total

Thermometer Numbers: 496153 1630273

Witnesses: [Signature] (Company) MEI  
[Signature] (Company) PRK

Witnesses: \_\_\_\_\_ (Company) \_\_\_\_\_  
 \_\_\_\_\_ (Company) \_\_\_\_\_



UNITED STATES DEPARTMENT OF COMMERCE  
National Institute of Standards and Technology  
Gaithersburg, Maryland 20899-8361

# REPORT OF CALIBRATION

FOR

**A ONE HUNDRED (100) GALLON VOLUME PROVER  
(Graduated Neck Type)**

**February 25, 2014**

Manufacturer: Seraphin  
Rancocas, NJ

NIST Seal Number: 7240  
NIST Valve Seal No.: 001058  
Material: Stainless Steel  
Serial Number: 2470-B

submitted by

Meter Engineers, Inc.  
7718 W. 53<sup>rd</sup> St. N  
Maize, KS 67101

(Reference: Purchase Order Number 007468; dated February 4, 2014)

The volume of the prover described above was measured by the gravimetric method [1] and the standards used in this calibration are traceable to the System International through national standards. The gravimetric method uses the weight of the fluid necessary to fill the prover and the fluid density to calculate the volume. The fluid used was water from a reverse osmosis system and the prover was leveled using the vertical surface of the neck.<sup>#</sup>

The contained volume was drained from the prover by opening the valve at the bottom of the vessel. When this flow finished, the valve was held open for 30 seconds to complete the drain procedure. The delivered volume is for the scale reading of zero (0) and has been corrected for the reference temperature in Table 1 assuming a volumetric coefficient of expansion of 0.0000477 per °C (0.0000265 per °F) for the prover material.

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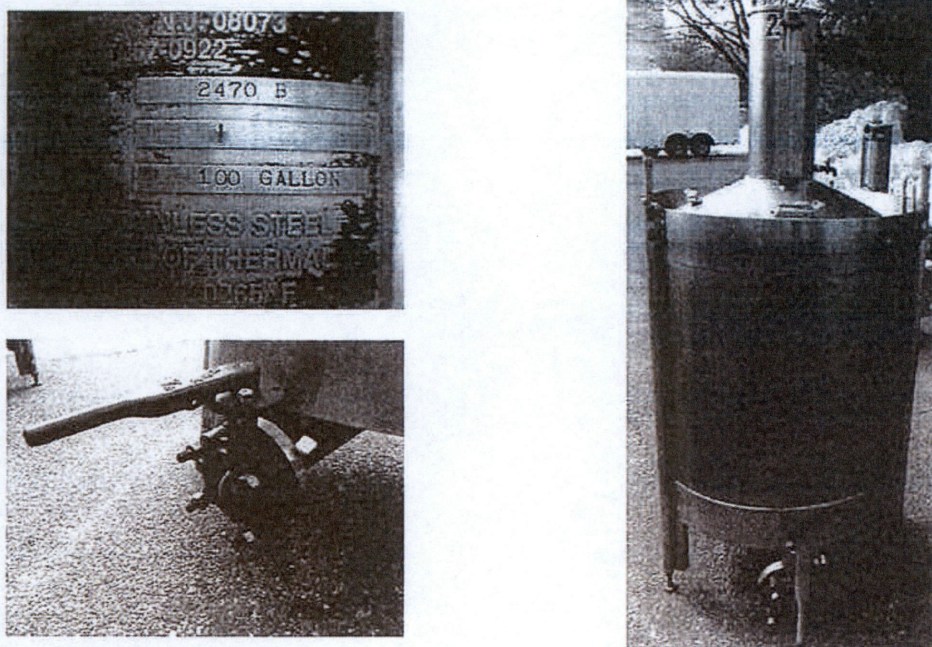
1 Bean, V. E., Espina, P. I., Wright, J. D., Houser, J. F., Sheckels, S. D., and Johnson, A. N., "NIST Calibration Services for Liquid Volume," NIST Special Publication 250-72, National Institute of Standards and Technology, November 24, 2009.

<sup>#</sup> One level indication was made in line with the neck scale and the other 90° to that indication, as stated in API MPMS Chapter 4.7. The levels on the can were not used.

**Table 1.** Delivered volume for the tested vessel for a scale reading of zero.

	Volume Delivered
gal at 60 °F	99.9696
in <sup>3</sup> at 60 °F	23092.99

The volume measurement procedure was repeated 5 times with the neck scale filled approximately to zero each time. The repeatability of the 5 measurements was 30 parts in 10<sup>6</sup> and the expanded uncertainty in the measured volume is  $\pm 0.009\%$ . It was calculated according to References [1] and [2] with a 95 % confidence level<sup>†</sup> and is traceable to NIST mass, temperature, pressure, and humidity standards, and a NIST water density determination.



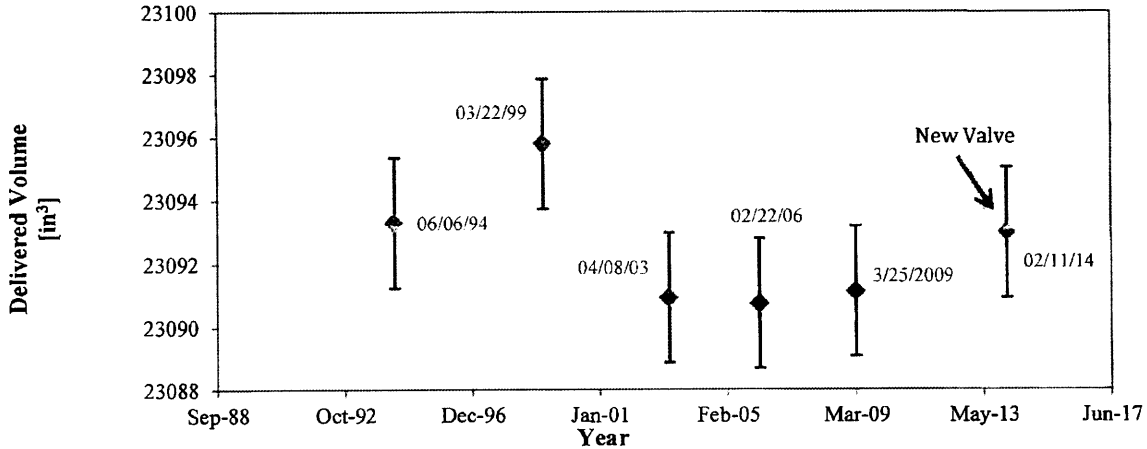
**Figure 1.** Photographs of the volume prover.

The input data used for calculation of the prover volume are given in the spreadsheet attached to this report. The calibration and uncertainties presented here are only valid over the range of the

<sup>2</sup> Taylor, B. N. and Kuyatt, C. E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results," NIST Technical Note 1297, National Institute of Standards and Technology (January 1993).

<sup>†</sup> Coverage factor of 2.12 for 16 effective degrees of freedom.

NIST calibration of this test measure. When the test measure is applied by the customer to measure liquid volume, uncertainties beyond the NIST calibration must be considered, for example: leveling of the test measure, reading the meniscus, cleanliness of the test measure interior, drainage effects due to liquid viscosity, etc.



**Figure 2.** Calibration control chart for 100 gallon graduated neck test measure SN 2470-B

**Table 2.** Results of prior calibrations for the delivered volume.

<i>Date</i>	<i>Delivered Volume [in<sup>3</sup>]</i>	<i>Difference from Prior [in<sup>3</sup>]</i>	<i>Degree of Equivalence [-]</i>
02/11/14	23092.99	2.26	0.38
03/25/09	23091.12	0.39	0.07
02/22/06	23090.74	-0.19	-0.03
04/08/03	23090.93	-4.87	-0.83
03/22/99	23095.80	2.50	0.42
06/06/94	23093.30	-	-

For the Director,  
 National Institute of Standards and Technology

Dr. John D. Wright  
 Project Leader  
 Fluid Metrology Group  
 Physical Measurement Laboratory  
 National Institute of Standards and Technology

Sherry Sheckels  
 Calibration Technician  
 Fluid Metrology Group  
 Physical Measurement Laboratory  
 National Institute of Standards and Technology



UNITED STATES DEPARTMENT OF COMMERCE  
National Institute of Standards and Technology  
Gaithersburg, Maryland 20899-8361

# REPORT OF CALIBRATION

FOR

**A ONE HUNDRED (100) GALLON VOLUME PROVER  
(Graduated Neck Type)**

**February 25, 2014**

Manufacturer: Seraphin  
Rancocas, NJ

NIST Seal Number: 7241  
NIST Valve Seal No.: 001059  
Material: Stainless Steel  
Serial Number: 2470-A

submitted by

Meter Engineers, Inc.  
7718 W. 53<sup>rd</sup> St. N  
Maize, KS 67101

(Reference: Purchase Order Number 007468; dated February 4, 2014)

The volume of the prover described above was measured by the gravimetric method [1] and the standards used in this calibration are traceable to the System International through national standards. The gravimetric method uses the weight of the fluid necessary to fill the prover and the fluid density to calculate the volume. The fluid used was water from a reverse osmosis system and the prover was leveled using the vertical surface of the neck.<sup>#</sup>

The contained volume was drained from the prover by opening the valve at the bottom of the vessel. When this flow finished, the valve was held open for 30 seconds to complete the drain procedure. The delivered volume is for the scale reading of zero (0) and has been corrected for the reference temperature in Table 1 assuming a volumetric coefficient of expansion of 0.0000477 per °C (0.0000265 per °F) for the prover material.

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1 Bean, V. E., Espina, P. I., Wright, J. D., Houser, J. F., Sheckels, S. D., and Johnson, A. N., "NIST Calibration Services for Liquid Volume," NIST Special Publication 250-72, National Institute of Standards and Technology, November 24, 2009.

<sup>#</sup> One level indication was made in line with the neck scale and the other 90° to that indication, as stated in API MPMS Chapter 4.7. The levels on the can were not used.

**Table 1.** Delivered volume for the tested vessel for a scale reading of zero.

	Volume Delivered
gal at 60 °F	99.9724
in <sup>3</sup> at 60 °F	23093.63

The volume measurement procedure was repeated 5 times with the neck scale filled approximately to zero each time. The repeatability of the 5 measurements was 23 parts in 10<sup>6</sup> and the expanded uncertainty in the measured volume is  $\pm 0.008\%$ . It was calculated according to References [1] and [2] with a 95 % confidence level<sup>†</sup> and is traceable to NIST mass, temperature, pressure, and humidity standards, and a NIST water density determination.



**Figure 1.** Photographs of the volume prover.

The input data used for calculation of the prover volume are given in the spreadsheet attached to this report. The calibration and uncertainties presented here are only valid over the range of the

<sup>2</sup> Taylor, B. N. and Kuyatt, C. E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results," NIST Technical Note 1297, National Institute of Standards and Technology (January 1993).

<sup>†</sup> Coverage factor of 2.09 for 21 effective degrees of freedom.

NIST calibration of this test measure. When the test measure is applied by the customer to measure liquid volume, uncertainties beyond the NIST calibration must be considered, for example: leveling of the test measure, reading the meniscus, cleanliness of the test measure interior, drainage effects due to liquid viscosity, etc.

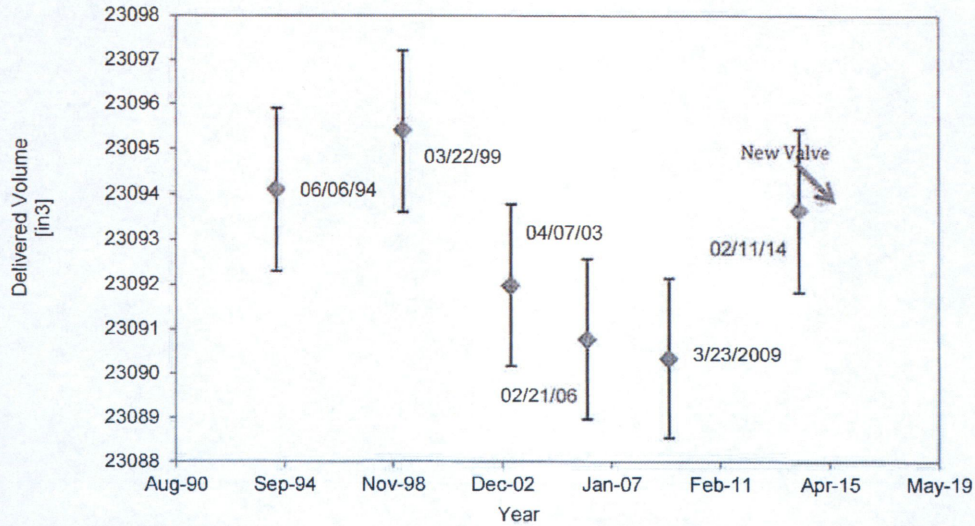


Figure 2. Calibration control chart for 100 gallon graduated neck test measure SN 2470-A

Table 2. Results of prior calibrations for the delivered volume.

Date	Delivered Volume [in <sup>3</sup> ]	Difference from Prior [in <sup>3</sup> ]	Degree of Equivalence [-]
02/11/14	23093.63	2.86	0.49
03/23/09	23090.34	-0.43	-0.07
02/21/06	23090.77	-1.20	-0.20
04/07/03	23091.97	-3.43	-0.58
03/22/99	23095.40	1.30	0.22
06/06/94	23094.10	-	-

For the Director,  
National Institute of Standards and Technology

Dr. John D. Wright  
Project Leader  
Fluid Metrology Group  
Physical Measurement Laboratory  
National Institute of Standards and Technology

Sherry Sheckels  
Calibration Technician  
Fluid Metrology Group  
Physical Measurement Laboratory  
National Institute of Standards and Technology



UNITED STATES DEPARTMENT OF COMMERCE  
National Institute of Standards and Technology  
Gaithersburg, Maryland 20899-8361

# REPORT OF CALIBRATION

FOR

**A FIFTY (50) GALLON VOLUME PROVER**  
(Graduated Neck Type)

**February 25, 2014**

Manufacturer: Seraphin  
Rancocas, NJ

NIST Seal Number: 7242  
NIST Valve Seal No.: 001060  
Material: Stainless Steel  
Serial Number: 7293-C

submitted by

Meter Engineers, Inc.  
7718 W. 53<sup>rd</sup> St. N  
Maize, KS 67101

(Reference: Purchase Order Number 007468; dated February 4, 2014)

The volume of the prover described above was measured by the gravimetric method [1] and the standards used in this calibration are traceable to the System International through national standards. The gravimetric method uses the weight of the fluid necessary to fill the prover and the fluid density to calculate the volume. The fluid used was water from a reverse osmosis system and the prover was leveled using the vertical surface of the neck.<sup>#</sup>

The contained volume was drained from the prover by opening the valve at the bottom of the vessel. When this flow finished, the valve was held open for 30 seconds to complete the drain procedure. The delivered volume is for the scale reading of zero (0) and has been corrected for the reference temperature in Table 1 assuming a volumetric coefficient of expansion of 0.0000477 per °C (0.0000265 per °F) for the prover material.

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1 Bean, V. E., Espina, P. I., Wright, J. D., Houser, J. F., Sheckels, S. D., and Johnson, A. N., "NIST Calibration Services for Liquid Volume," NIST Special Publication 250-72, National Institute of Standards and Technology, November 24, 2009.

<sup>#</sup> One level indication was made in line with the neck scale and the other 90° to that indication, as stated in API MPMS Chapter 4.7. The levels on the can were not used.

Table 1. Delivered volume for the tested vessel for a scale reading of zero.

	Volume Delivered
gal at 60 °F	49.9937
in <sup>3</sup> at 60 °F	11548.56

The volume measurement procedure was repeated 5 times with the neck scale filled approximately to zero each time. The repeatability of the 5 measurements was 17 parts in 10<sup>6</sup> and the expanded uncertainty in the measured volume is  $\pm 0.010\%$ . It was calculated according to References [1] and [2] with a 95 % confidence level<sup>†</sup> and is traceable to NIST mass, temperature, pressure, and humidity standards, and a NIST water density determination.

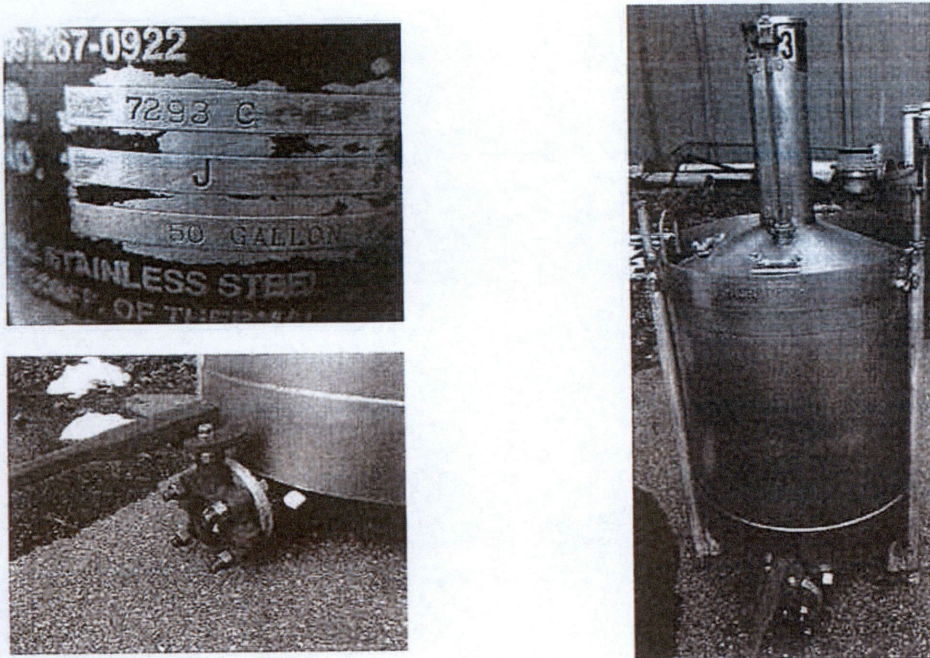


Figure 1. Photographs of the volume prover.

The input data used for calculation of the prover volume are given in the spreadsheet attached to this report. The calibration and uncertainties presented here are only valid over the range of the

<sup>2</sup> Taylor, B. N. and Kuyatt, C. E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results," NIST Technical Note 1297, National Institute of Standards and Technology (January 1993).

<sup>†</sup> Coverage factor of 1.97 for 339 effective degrees of freedom.

NIST calibration of this test measure. When the test measure is applied by the customer to measure liquid volume, uncertainties beyond the NIST calibration must be considered, for example: leveling of the test measure, reading the meniscus, cleanliness of the test measure interior, drainage effects due to liquid viscosity, etc.

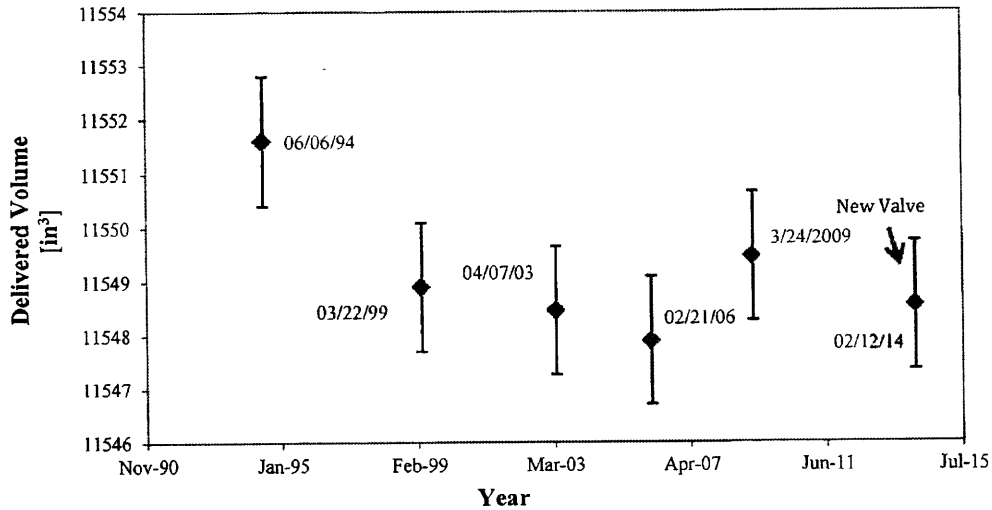


Figure 2. Calibration control chart for 50 gallon graduated neck test measure SN 7293-C

Table 2. Results of prior calibrations for the delivered volume.

Date	Delivered Volume [in <sup>3</sup> ]	Difference from Prior [in <sup>3</sup> ]	Degree of Equivalence [-]
02/12/14	11548.56	-0.91	-0.26
03/24/09	11549.47	1.57	0.18
02/21/06	11547.90	-0.56	-0.24
04/07/03	11548.46	-0.44	0.27
03/22/99	11548.90	-2.70	-0.67
06/06/94	11551.60	0.00	0.00

For the Director,  
National Institute of Standards and Technology

Dr. John D. Wright  
Project Leader  
Fluid Metrology Group  
Physical Measurement Laboratory  
National Institute of Standards and Technology

Sherry Sheckels  
Calibration Technician  
Fluid Metrology Group  
Physical Measurement Laboratory  
National Institute of Standards and Technology



# Johnson Gage and Inspection, Inc.

5920 W 21st St. N., Wichita, KS 67205  
Phone 316.943.7532; Fax 316.944.6256



## Certificate of Calibration

Report Number: 210144A  
Customer: METER ENGINEERS, INC.

Page 1 of 1

Form 2511  
REV C 12-01-11

7718 W. 53rd ST. NORTH  
MAIZE KS 67101

Item: MERCURY THERMOMETER  
Unit Number: 4P6153  
Model Number: MILLER & WEBER SAMA FP40 T-3426  
Serial Number: 4P6153  
Location: PRODUCTION

Inspector: KF  
Date Calibrated: Jan 6, 2017  
Recalibration Date: Jan 6, 2018  
Temperature: 72 °F  
Relative Humidity: 16 %

\*\*\*\*\*  
Item Range: 30°F to 124°F Resolution: 0.05°F  
Tolerance: ±0.10°F Class: N/A  
Controlling Specification(s): ISO/IEC 17025, ANSI/NCSL Z540-1  
Calibration/Inspection Procedure(s): WP4001 Tolerance Source: C See Below  
\*\*\*\*\*

Standard Value	Test Result	Deviation	Uncertainty @k=2
32.00 °F	32.00 °F	NONE	0.1 °F
76.00 °F	75.90 °F	-0.10 °F	0.09 °F
120.00 °F	120.10 °F	+0.10 °F	0.09 °F

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k such that the coverage probability corresponds to approximately 95%. This estimate was performed in accordance with guidelines set forth in ANSI/NCSL Z540-2. The acceptance or rejection of the item(s) is based on the actual test values shown, without adjustment for measurement uncertainty. All testing performed using standards traceable to NIST or to intrinsic standards. This document shall not be reproduced except in full, without the written permission of Johnson Gage and Inspection. Tolerance source key: C = Customer; S = Specification; M = Manufacturer; R = JGI Recommended.

\*\*\*\*\*  
Comments: FOUND IN TOLERANCE. NO ADJUSTMENT REQUIRED.  
\*\*\*\*\*

Additional Standard Used: FLUKE 1502A S/N: B55852 CERTIFIED 5-9-16 DUE 5-9-17 T/N: 200759

Condition: USED  
RESULTS: ACCEPTED

\*\*\*\*\*  
CALIBRATION STANDARD

Manufacturer/type: BURNS ENGINEERING PRT Model Number: 3925  
Date Certified: Nov 9, 2015 Serial Number: 496142  
Date Due: Nov 9, 2017 TRACEABILITY NUMBER: Y229241

Approved by:

*William C. Micera, Jr., SC*

1/6/2017



# Johnson Gage and Inspection, Inc.

5920 W 21st St. N., Wichita, KS 67205  
Phone 316.943.7532; Fax 316.944.6256



## Certificate of Calibration

Report Number: 210477A  
Customer: METER ENGINEERS, INC.

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Form 2511  
REV C 12-01-11

7718 W. 53rd ST. NORTH  
MAIZE KS 67101

Item: DIGITAL THERMOMETER  
Unit Number: 1630273  
Model Number: MARTEL BETA PROBE T1  
Serial Number: 1630273  
Location: PRODUCTION

Inspector: KF  
Date Calibrated: Jan 12, 2017  
Recalibration Date: Jul 12, 2017  
Temperature: 73 °F  
Relative Humidity: 16 %

\*\*\*\*\*  
Item Range: -58°F to 320°F Resolution: 0.01 °F  
Tolerance: ±0.1 °F Class: N/A  
Controlling Specification(s): ISO/IEC 17025, ANSI/NC SL Z540-1  
Calibration/Inspection Procedure(s): WP4001 Tolerance Source: M See Below  
\*\*\*\*\*

Standard Value	Test Result	Deviation	Uncertainty @k=2
32.00 °F	31.96 °F	-0.04 °F	0.1 °F
120.00 °F	119.91 °F	-0.09 °F	0.09 °F
200.00 °F	199.93 °F	-0.07 °F	0.09 °F

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k such that the coverage probability corresponds to approximately 95%. This estimate was performed in accordance with guidelines set forth in ANSI/NC SL Z540-2. The acceptance or rejection of the item(s) is based on the actual test values shown, without adjustment for measurement uncertainty. All testing performed using standards traceable to NIST or to intrinsic standards. This document shall not be reproduced except in full, without the written permission of Johnson Gage and Inspection. Tolerance source key: C = Customer; S = Specification; M = Manufacturer; R = JGI Recommended.

\*\*\*\*\*  
Comments: FOUND IN TOLERANCE. NO ADJUSTMENT REQUIRED. RESOLUTION SET BY CUSTOMER.  
\*\*\*\*\*

Additional Standards Used: FLUKE 1502A S/N B55852, CERT 5-9-16, DUE 5-9-17, T/N 200759

Note: TEST POINTS PER CUSTOMER REQUEST.

Condition: USED

RESULTS: ACCEPTED AS NOTED

\*\*\*\*\*

### CALIBRATION STANDARD

Manufacturer/type: BURNS ENGINEERING PRT Model Number: 3925  
Date Certified: Nov 9, 2015 Serial Number: 496142  
Date Due: Nov 9, 2017 TRACEABILITY NUMBER: Y229241

Approved by:

*William C. Mieser, Jr., SC*  
1/12/2017

# ARROW LABORATORY, INC.

PO BOX 248  
WICHITA KS 67201-0248  
Phone: (316) 267-2893

## Metallurgical Analysis and Testing

1333 N MAIN ST  
WICHITA KS 67203  
Fax: (316) 267-0171

METER ENGINEERS  
7718 W 53rd St NORTH  
MAIZE KS 67101

01-11-17  
Page 1 of 1

LABORATORY REPORT #d90ra110

### PRESSURE GAGE CALIBRATION

One 4.5 inch liquid filled WIKA XSEL pressure gage, S/N 586, 0-60 psi capacity with 0.5 psi subdivisions, was received in usable condition and calibrated as shown below. The gage was checked with our Ashcroft dead weight gage tester. Testing was performed in accordance with ASME B40.100-2013, ISO 10012-2003, and ANSI/NC SL Z540.3-2006.

#### Calibration Data:

LOAD psi	Average GAGE READING as Left
0	0.0 psi
15	14.7
25	24.5
35	34.5
45	44.5
60	59.8

Maximum Error center 1/2 of scale: 1.0% of span  
 Max Error upper and lower 1/4 of scale: 0.9% of span  
 Accuracy: +/- 1.0% of span  
 Adjustments: none Limitations of use: none  
 Calibrated: 1-9-17 Temperature: 71°F  
 Client Provided Confirmation Interval: annual

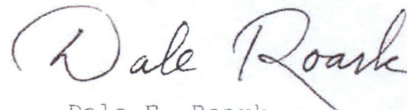
These results meet ASME B40.100 grade 1A accuracy requirements.

Ashcroft Gage Tester: S/N DWT 11436, Uncertainty: +/- 0.07%  
 Weights: Tester weights were compared with weights calibrated on NIST  
 Traceable Test #OBS 14-0422 Cal Due: 5-31-17

#### Piston Assembly:

The piston diameter and cylinder bore were measured by  
 Precision Metrology Test# 1001883919 and certified to +/- 0.10%  
 using masters traceable to NIST. Cal Due: 7-05-18

Project Supervisor



Dale E. Roark

Rec'd 12-27-16  
DER/dr

**Bauske, Shelly A.**

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**From:** Haugen, Mark <Mark.Haugen@magellanlp.com>  
**Sent:** Friday, October 06, 2017 2:16 PM  
**To:** Bauske, Shelly A.  
**Cc:** Crockford, Konrad S.; Ukele, Cassandra  
**Subject:** RE: Registered Service Company Renewal - Self-Certification  
**Attachments:** Fargo Calibration Open Top Prover Report Meter Engineers.pdf; Grand Forks Application Magellan.pdf; Grand Forks Calibration Open Top Prover Meter Engineers.pdf; West Fargo Application Magellan.pdf

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Shelly,

I have attached the Application For Registration As A Registered Service Company along with the Calibration Reports from Meter Engineers, Inc. for Magellan Pipeline Company's West Fargo and Magellan Pipeline Company's Grand Forks Terminals. As I recall we had to request a variance in August of 2015 and will need to request a variance for 2017 as well.

Please let me know if you need additional information.

Regards,  
Mark

Mark Haugen  
Magellan Midstream Partners, L.P.  
709 3<sup>rd</sup> Ave West  
Alexandria, MN 56308  
PH: 320-762-1193 Ext. 21  
CL: 320-808-6352  
[mark.haugen@magellanlp.com](mailto:mark.haugen@magellanlp.com)

**From:** Bauske, Shelly A. [<mailto:sbauske@nd.gov>]  
**Sent:** Thursday, October 05, 2017 8:59 AM  
**To:** Haugen, Mark <[Mark.Haugen@magellanlp.com](mailto:Mark.Haugen@magellanlp.com)>  
**Cc:** Crockford, Konrad S. <[kcrockford@nd.gov](mailto:kcrockford@nd.gov)>  
**Subject:** Registered Service Company Renewal - Self-Certification

Sent by an external sender. Use caution opening attachments, clicking web links, or replying unless you have verified this email is legitimate.

Good Morning Mark

The Registered Service Company Permit for Magellan Midstream Partners, L.P. expired on August 12, 2017.

The Application for Registration as a Registered Service Company is found at: <https://psc.nd.gov/forms/weights/registered-service-company.pdf>. Please complete and return the application

along with current calibration reports for your service standards, issued by a NIST-recognized metrology laboratory, and other applicable items no later than November 1, 2017.

If certification of the provers located in Grand Forks and West Fargo cannot be completed by a NIST-recognized metrology lab, you must request a variance to use the atmospheric tank prover that is not certified as traceable by a NIST-recognized metrology laboratory. The temporary variance permit issued on December 8, 2015 has expired (a copy of the West Fargo variance permit is attached).

If you have any questions, please contact me. Thank you!

Shelly Bauske  
Public Service Commission  
600 E Boulevard Ave Dept 408  
Bismarck ND 58505-0480  
701-328-4070  
701-328-2410 (fax)  
[sbauske@nd.gov](mailto:sbauske@nd.gov)

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**Bauske, Shelly A.**

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**From:** Haugen, Mark <Mark.Haugen@magellanlp.com>  
**Sent:** Wednesday, October 18, 2017 12:44 PM  
**To:** Bauske, Shelly A.  
**Cc:** Ukele, Cassandra  
**Subject:** Updated: Request For Variance Permit Magellan West Fargo, ND Terminal

**CAUTION:** This email originated from an outside source. Do not click links or open attachments unless you know they are safe.

Shelly,

Magellan Pipeline Company is requesting a variance permit to use the atmospheric tank prover SN 3461-538 located at our West Fargo, ND loading terminal that is not certified as traceable by a NIST-recognized metrology laboratory. We are requesting the variance because the prover is stationary and would require structural modifications to be made to the prover to transport the prover to a NIST recognized metrology lab.

Magellan Pipeline Company accepts the certifications for the standards, including the thermometers, that Meter Engineers, Inc. used to perform the prover calibration dated 7/24/2017.

Regards,

Mark

Mark Haugen  
Magellan Midstream Partners, L.P.  
709 3<sup>rd</sup> Ave West  
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PH: 320-762-1193 Ext. 21  
CL: 320-808-6352  
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