



Receipt Date: April 12, 2018  
Cal. Date: April 12, 2018  
Report Date: April 12, 2018

Report No.: 339266  
Serial No.: 43918  
Barcode: 202307

## Calibration Certificate

REITER OIL & GAS INC.  
P O BOX 2226  
MINOT, ND 58702  
Contact: KEVIN REITER  
Phone: 701-839-6791  
PO Number: None  
Procedure: NIST SOP 19  
Technician ID: 19

Item(s) Submitted: 5 Gallon Measure  
Manufacturer: Seraphin  
Material: Mild Steel  
Type: Measure  
Condition: Good  
Temperature: 19.7 °C  
Pressure: 730.1 mmHg  
Relative Humidity: 36.1 %  
Standard H<sub>2</sub>O Temp.: 17.3 °C  
Artifact H<sub>2</sub>O Temp.: 17.4 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in <sup>3</sup> )	<i>k</i>	U (in <sup>3</sup> )	CCE (°F)
5	As Found	4.99889	-0.26	2.05	0.25	0.0000186
	As Left	5.00055	0.13			

Neck Calibration: No neck calibration was performed at this time.

This measure has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds followed by a drain time of 10 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-3 (2010). Uncertainty calculations contain the components in NIST SOP 19 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (*k*) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F  
Conversion to SI unit: 1 gallon = 231 in<sup>3</sup> = 0.00378541 m<sup>3</sup>.

Erik Alfvin

Metrologist

Reviewed by:

Pete Whebbe

Metrologist

Receipt Date: April 12, 2018  
Cal. Date: April 12, 2018  
Report Date: April 12, 2018

Report No.: 339267  
Serial No.: RG01/ID 051710-1  
Barcode: 202306

## Calibration Certificate

REITER OIL & GAS INC.  
P O BOX 2226  
MINOT, ND 58702

Contact: KEVIN REITER  
Phone: 701-839-6791  
PO Number: None  
Procedure: NIST SOP 19  
Technician ID: 19

Item(s) Submitted: 5 Gallon Measure  
Manufacturer: Seraphin  
Material: Mild Steel  
Type: Measure  
Condition: Good  
Temperature: 19.7 °C  
Pressure: 730.1 mmHg  
Relative Humidity: 36.1 %  
Standard H<sub>2</sub>O Temp.: 8.7 °C  
Artifact H<sub>2</sub>O Temp.: 9.0 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in <sup>3</sup> )	<i>k</i>	U (in <sup>3</sup> )	CCE (°F)
5	As Found	4.99932	-0.16	2.05	0.25	0.0000186
	As Left	4.99932	-0.16			

Neck Calibration: No neck calibration was performed at this time.

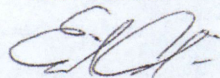
This measure has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds followed by a drain time of 10 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-3 (2010). Uncertainty calculations contain the components in NIST SOP 19 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (*k*) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F  
Conversion to SI unit: 1 gallon = 231 in<sup>3</sup> = 0.00378541 m<sup>3</sup>.

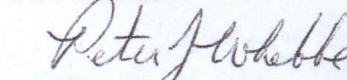
Erik Alfvín



Metrologist

Reviewed by:

Pete Whebbe



Metrologist

Receipt Date: April 12, 2018  
Cal. Date: April 12, 2018  
Report Date: April 12, 2018

Report No.: 339268  
Serial No.: 13-91114  
Barcode: 202509

## Calibration Certificate

REITER OIL & GAS INC.  
P O BOX 2226  
MINOT, ND 58702

Contact: KEVIN REITER  
Phone: 701-839-6791  
PO Number: None  
Procedure: NIST SOP 19  
Technician ID: 19

Item(s) Submitted: 5 Gallon Measure  
Manufacturer: Seraphin  
Material: Stainless Steel  
Type: Measure  
Condition: Good  
Temperature: 19.7 °C  
Pressure: 730.1 mmHg  
Relative Humidity: 36.1 %  
Standard H<sub>2</sub>O Temp.: 10.3 °C  
Artifact H<sub>2</sub>O Temp.: 10.5 °C

Nominal		Calibrated				
Volume (gal)		Volume (gal)	Error (in <sup>3</sup> )	<i>k</i>	U (in <sup>3</sup> )	CCE (°F)
5	As Found	4.99970	-0.07	2.05	0.25	0.0000265
	As Left	4.99970	-0.07			

Neck Calibration: No neck calibration was performed at this time.

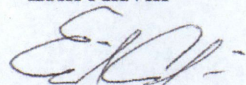
This measure has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds followed by a drain time of 10 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-3 (2010). Uncertainty calculations contain the components in NIST SOP 19 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (*k*) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F  
Conversion to SI unit: 1 gallon = 231 in<sup>3</sup> = 0.00378541 m<sup>3</sup>.

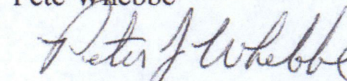
Erik Alfvin



Metrologist

Reviewed by:

Pete Whebbe



Metrologist

Receipt Date: April 12, 2018  
Cal. Date: April 12, 2018  
Report Date: April 12, 2018

Report No.: 339269  
Serial No.: 43942  
Barcode: 202305

## Calibration Certificate

REITER OIL & GAS INC.  
P O BOX 2226  
MINOT, ND 58702  
Contact: KEVIN REITER  
Phone: 701-839-6791  
PO Number: NONE  
Procedure: NIST SOP 19  
Technician ID: 19

Item(s) Submitted: 5 Gallon Measue  
Manufacturer: Seraphin  
Material: Mild Steel  
Type: Measure  
Condition: Good  
Temperature: 19.7 °C  
Pressure: 730.1 mmHg  
Relative Humidity: 36.1 %  
Standard H<sub>2</sub>O Temp.: 8.7 °C  
Artifact H<sub>2</sub>O Temp.: 9.1 °C

Nominal Volume (gal)		Calibrated Volume (gal)	Error (in <sup>3</sup> )	<i>k</i>	U (in <sup>3</sup> )	CCE (°F)
5	As Found	4.99912	-0.20	2.05	0.25	0.0000186
	As Left	4.99912	-0.20			

Neck Calibration: No neck calibration was performed at this time.

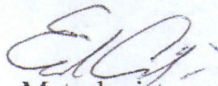
This measure has been calibrated as a "to contain after wet down" vessel with a pour time of 30 seconds followed by a drain time of 10 seconds after cessation of full flow.

The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-3 (2010). Uncertainty calculations contain the components in NIST SOP 19 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (*k*) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

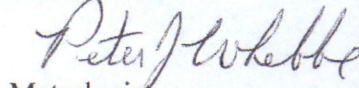
CCE is the cubical coefficient of thermal expansion, and the reference temperature is 60 °F  
Conversion to SI unit: 1 gallon = 231 in<sup>3</sup> = 0.00378541 m<sup>3</sup>.

Erik Alfvin

  
Metrologist

Reviewed by:

Pete Whebbe

  
Metrologist

Receipt Date: April 12, 2018  
Cal. Date: April 12, 2018  
Report Date: April 12, 2018

Report No.: 339270  
Serial No.: 101011122-0101  
Barcode: 201648

## Calibration Certificate

REITER OIL & GAS INC.  
P O BOX 2226  
MINOT, ND 58702  
Contact: KEVIN REITER  
Phone: 701-839-6791  
PO Number: NONE  
Procedure: NIST SOP 19  
Technician ID: 11

Item(s) Submitted: 100 Gallon Prover  
Manufacturer: Determan Brownie  
Material: Stainless Steel (304)  
Type: No Bottom Zero  
Condition: Good  
Temperature: 19.1 °C  
Pressure: 730.1 mmHg  
Relative Humidity: 39.1 %  
Standard H<sub>2</sub>O Temp.: 6.4 °C  
Artifact H<sub>2</sub>O Temp.: 6.5 °C

Nominal Volume (gal)		Calibrated Volume (gal)	Error (in <sup>3</sup> )	<i>k</i>	U (in <sup>3</sup> )	CCE (/°F)
100	As Found	99.9993	-0.2	2.00	2.2	0.0000288
	As Left	99.9993	-0.2			

Neck Calibration: No neck calibration was performed at this time.

This prover has been calibrated as a "to contain after wet down" vessel with a drain time of 30 seconds after cessation of full flow.

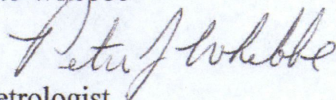
The vessel listed above has been compared by volumetric transfer methods to the standards of the State of Minnesota using water as the calibration medium. The standards are traceable to the SI through NIST. Statistical process control charts indicate standards are currently in control. All gauges were sealed in place.

All tolerances and specifications were evaluated according to NIST Handbook 105-3 (2010). Uncertainty calculations contain the components in NIST SOP 19 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (*k*) calculated at the approximate 95.45 % confidence level. Results apply to item identified in this report only.

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Pete Whepbe

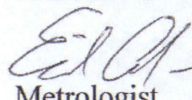
Metrologist



Reviewed by:

Erik Alfvin

Metrologist



# United States Department of Commerce

## National Institute of Standards and Technology

Certificate of Metrological Traceability For:

# Minnesota

This laboratory has demonstrated evidence of an unbroken chain of metrological traceability of its standards to the international system of units (SI), documented measurement uncertainties, uses documented measurement procedures, successfully completed training and proficiency tests, documented calibration intervals, submitted a quality management system, and demonstrated suitable measurement assurance for the Scope listed on this certificate.

The Office of Weights and Measures Program assesses laboratories to NIST Handbook 143 - Program Handbook for State Weights and Measures Laboratories and ISO/IEC 17025:2005.

### Scope

2018 to 2019

**Mass Echelon I**  
20 kg to 1 mg  
50 lb to 0.001 lb

**Mass Echelon III**  
50 kg to 1 mg  
5000 lb to 0.001 lb  
4 oz to 0.03125 oz

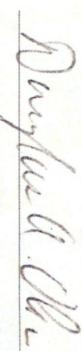
**Volume Gravimetric, I**  
20 L to 10 ml  
100 gal to 0.25 gal

**Mass Echelon II**  
20 kg to 1 mg  
1000 lb to 500 lb  
50 lb to 0.001 lb  
4 oz to 0.03125 oz

**Volume Transfer, II**  
Weight Carts  
10 000 lb to 2000 lb  
Wheel Load Weighers  
20 000 lb to 2000 lb

**Volume Transfer, I**  
1500 gal to 5 gal  
200 gal to 25 gal LPG

Railroad Test Cars  
110 000 lb to 80 000 lb



Douglas A. Olson, Chief  
NIST Office of Weights and Measures

Effective Dates: 2018-01-01 to 2019-12-31

