



Receipt Date: May 9, 2016
Cal. Date: May 10, 2016
Report Date: May 10, 2016

Report No.: 335929
Serial No.: 060810915-0101
Barcode: 200749

Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: None
SOP: 19
Technician ID: 19

Item(s) Submitted: 1000 Gallon Prover
Manufacturer: Determan Brownie Inc
Material: Stainless Steel (304)
Type: No Bottom Zero
Condition: Good
Temperature: 20.3 °C
Pressure: 735.2 mmHg
Relative Humidity: 56.8 %
Standard H₂O Temp.: 12.1 °C
Artifact H₂O Temp.: 11.6 °C

Nominal	Calibrated				
Volume (gal)	Volume (gal)	Error (in ³)	<i>k</i>	U (in ³)	CCE (1/°F)
1000	As Found	1000.08	18	2.02	24 0.0000288
	As Left	1000.08	18		

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 prover 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

Erik Alfvín
Erik Alfvín
Metrologist

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Calibration report

Westmor Fluid Solutions, LLC

Reviewed by:
Mark Nicollet

Mark Nicollet
Quality Manager



Receipt Date: May 9, 2016
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Report No.: 335928
Serial No.: 060810915-0201
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Calibration Certificate

WESTMOR FLUID SOLUTIONS LLC
14044 W. FREEWAY DRIVE
COLUMBUS, MN 55038
Contact: Ryan Hartin
Phone: 651-842-2551
PO Number: None
SOP: 19
Technician ID: 19

Item(s) Submitted: 100 Gallon Prover
Manufacturer: Determan Brownie Inc
Material: Stainless Steel (304)
Type: No Bottom Zero
Condition: Good
Temperature: 20.4 °C
Pressure: 737.2 mmHg
Relative Humidity: 52.7 %
Standard H₂O Temp.: 11.2 °C
Artifact H₂O Temp.: 11.3 °C

Nominal Volume (gal)	Calibrated			k	U (in ³)	CCE (1/°F)
	As Found	Volume (gal)	Error (in ³)			
100	As Found	100.013	3.0	2.01	3.3	0.0000288
	As Left	100.013	3.0			

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

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