# Oil and Gas Flow Rate Measurement: It's Not that Simple

Presentation to
Ernest E. Smith Oil, Gas, and Mineral
Law Institute
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## The Letton Hall Group

- Founded by Jim Hall and Chip Letton in early 2001
- Deep domain knowledge in oil, gas and multiphase flow
  - **▶** Largest group of senior experts in flow measurement domain
  - **Experience in measurement R&D, system design, operations**
  - **▶** Over 700 publications, 45 patents
- Industry leadership in technology and standards development
- Worldwide business and cultural experience



#### Oil and Gas Flow Rate Measurement

#### **Goal Today**:

Convince you that this is an oilfield technology area where it is very easy to get it wrong.



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### **Common Liquid Flow Meters**

- Positive Displacement (PD)
- Turbine
- Coriolis
- Transit-Time Ultrasonic
- Differential
- Vortex
- Magnetic
- Pitot
- Doppler Ultrasonic



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