



CCAMS Newsletter

Eagle Ford Shale Continues to Dominate Work in Area



The Eagle Ford Shale play has continued to dominate the activities of many companies and individuals in this area.

If you talk to any vendor affiliated with the oil and gas business, most of their focus has been on sales associated with the Eagle Ford oil and gas business. If you talk with producers and pipeline operators, everyone is working on expanding existing systems or installing new pipelines to try and capture a portion of this business.



Driving through the area, located southeast of San Antonio and west toward Laredo, you will find a flurry of activity not seen in this area since the 80's. I grew up in Oklahoma and worked in the oil fields in the 80's and this is much bigger, by far.



With the growth comes opportunities for entrepreneurs to start a new business, or expand into the area with an existing business. Trailer parks, motels, convenience stores, restaurants etc. have popped up all over the area. These new businesses are hiring workers and are providing good jobs where jobs had been scarce.



Another area of opportunity is in the area of gas and oil measurement. If you talk to many of the producers in the Eagle Ford play, many have only limited expertise in liquid measurement. Most are natural gas

producers who are now forced to deal with the vast amount of hydrocarbon liquids being produced, along with the natural gas. There has always been a limited number of quality liquid measurement people in this business, and now it seems there are even fewer available to work in this area.

There is a great opportunity for anyone skilled in the liquid measurement business to find work in this area. Of course, I would suspect that most have good jobs already, but the opportunity to advance their careers is quite possible.

There are also opportunities for experienced pipeline gas measurement technicians to obtain new skills by learning liquid hydrocarbon measurement.

I would recommend anyone interested in learning more about liquid hydrocarbon measurement attend the CCAMS school next February here in Corpus Christi. We will have over 35 classes which will deal with both liquid and gas measurement. Another opportunity for measurement training is PETEX in Houston. They offer several courses each year that are for beginners and advanced measurement technicians. Their website is:

<http://www.utexas.edu/ce/petex/>

CCAMS 2012 School Dates Set

The date and location for the next **Corpus Christi Area Measurement Society School** has been set to be held on **February 21st and 22nd** at the **Omni Marina Hotel** in Corpus Christi.

The CCAMS school has been in existence for many years and continues to grow and prosper in the South Texas area. This school, which is held every other year, will provide over 35 lectures and hands-on classes for anyone interested in learning about natural gas and liquid hydrocarbon measurement. The classes will range from fundamentals of liquid and gas measurement to hands-on training for specific kinds of equipment used in oil and gas measurement.

The instructors who present the classes are among the most knowledgeable individuals in their field. The CCAMS makes every effort to bring in the best instructors and provide classes which are interesting and informative to the students.

The school will also host an exhibit area which will include the latest technology available in measurement, sampling, communications, and data handling. There were 30 different exhibitors showing their wares at the school in 2010, and we expect to be able to accommodate several more at the upcoming school.

The vendors who participate are providing a large amount of the equipment and expertise that is being used in the Eagle Ford Shale oil and gas field.

The school will be held at the Omni Marina Hotel, which faces the Corpus Christi bayfront. The hotel was a great venue for our school in 2010 with newly upgraded hotel rooms and a great classroom area. The hotel is convenient to some of the best restaurants in town, along with some local tourist attractions.

Measuring Liquid Hydrocarbons

The oil and gas boom in the area has brought great opportunities for many people involved in this business. Unfortunately, there are opportunities for major mistakes to be made with regards to liquid measurement.

One glaring issue in the Eagle Ford is the lack of knowledge of proper liquid measurement. This has led to the design and building of metering systems which do not conform to API recommended practices. Producers with little liquid measurement knowledge are at the mercy of new entrants in the measurement field that are not knowledgeable when dealing with proper liquid hydrocarbon metering. Engineering firms, hired to design liquid metering such as LACT units (Liquid Automatic Custody Transfer), may be unfamiliar with the required components on LACT units. Pipeline metering stations have their own design requirements and they may be different than metering at a lease site.

The lack of pipeline infrastructure has led to a huge boom in the trucking of crude oil and condensate out of the Eagle Ford region. The lack of measurement knowledge has led to the design and construction of equipment which does not meet API recommended practices, or is ill-suited for the application. Vendors have done a great job in promoting some new technologies which are excellent when used under the right conditions, but can be a nightmare to use by inexperienced operators, or used under conditions not favorable to their strengths.

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It has been troubling to see the equipment that is being offered to producers as turn-key LACT units, which in reality are not acceptable. These LACT units have had to be modified by the producer after installation in order to meet the requirements set forth by API. The API guidelines should be adhered to as strictly as possible to ensure that accurate measurement is being performed, and each company involved with the sale or purchase of oil is dealt a fair hand. The further away from the API guidelines a LACT unit or pipeline metering system gets, the greater the measurement uncertainty.

A typical LACT unit should include the following .

Strainer (filter vessel)

Air Eliminator (Optional, but highly recommended)

Meter (suited for the application)

Water Monitor (measuring BS&W)

Divert Valve (return oil back to tanks when off-spec oil is found)

Backpressure Valve (hold backpressure on meter to ensure liquid state)

Composite Sampler (a composite sample of the volume must be taken to quantify BS&W and API gravity. Online monitors are not acceptable)

Temperature Device (Average temperature for the volume delivered must be measured)

Check Valve (ensures backward flow does not occur)

Proving Loops (allows for on-site proving of meter)

Volume Counter (counts volume in barrels, non-resetting preferred)

Flow Computer (Optional, should be simple and robust if used)

The items listed in this article are essential for accurate measurement. A schematic and design of a typical LACT unit is available in the **API standard Chapter 6.1 Lease Automatic Custody Transfer (LACT) Systems**.

As stated previously, there are many different kinds of devices available to the producer which are designed to accomplish the same thing. Unfortunately, there are some devices that do not work well in all situations, and with all types of products. There is no “one size fits all”.

There are several important things that must be known when designing a meter skid. The flow rate, API gravity, temperature, pressure and vapor pressure of the product are a few of the parameters that need to be well understood before the meter skid can be designed correctly. Also operating the meter under conditions significantly different than the original design can cause serious errors in measurement.

Using a company that has successfully designed and built meter skids for the hydrocarbon industry is one way of ensuring that these metering skids are going to provide accurate measurement under all of the conditions that are expected. Do your homework and make sure that the equipment you intend to use is acceptable to the company that you intend to sell your product to. There is nothing worse than getting ready to startup a meter skid and find out that it doesn't meet the specs of the contract.



Omni Marina Tower Hotel



Within walking distance to a number of excellent restaurants

- Water Street Seafood Company
- Elmo's City Diner
- Landry's Seafood
- Joe's Crab Shack
- Executive Surf Club
- Republic of Texas Bar and Grill

Omni Marina Hotel
700 North Shoreline Blvd
Corpus Christi, TX 78401
800-843-6664

The Omni Hotel has given us a special rate of \$109/night which is a good price for this newly remodeled hotel. The guest rooms are great, the best in Corpus Christi. Reserve your room under the code **CCAMS Measurement School.**

Parking garage available at the hotel entrance

Additional lodging can be found online at:

- Expedia.com
- Travelocity.com
- <http://www.visitcorpuschristitx.org>

Directions: I-37 South to downtown and Shoreline Blvd. Right on Shoreline, then right on Star Street. The Omni Marina is the brown colored South Tower.

2012 School Contact List

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