

# FLOW MANAGEMENT DEVICES SMALL VOLUME PROVER PROJECT SUMMARY



Click on the arrows to see some of the projects that include FMD Small Volume Provers.

# FLOW MANAGEMENT DEVICES PROJECT HISTORY

Flow MD was started in 2007 with the goal of “Improving Liquid Measurement Technology.”

Shortly thereafter, FMD introduced the patented “Next Generation” Small Volume Unidirectional Captive Displacement Prover technology. The hydrocarbon measurement industry was quick to accept our technological benefits, and Flow MD has gained recognition as the “World Class Leader” in Small Volume Prover technology.

Flow MD continues to raise the bar in Small Volume Prover design with new innovations and our unprecedented commitment to continuous improvement.

We believe our customers are vital to our continued success, and we strive for Customer Service Excellence by continually and relentlessly improving all aspects of our business.

# MARCUS HOOK SHALE PLAY

## CLIENT

Sunoco

## PROJECT LOCATION

Marcus Hook, PA USA

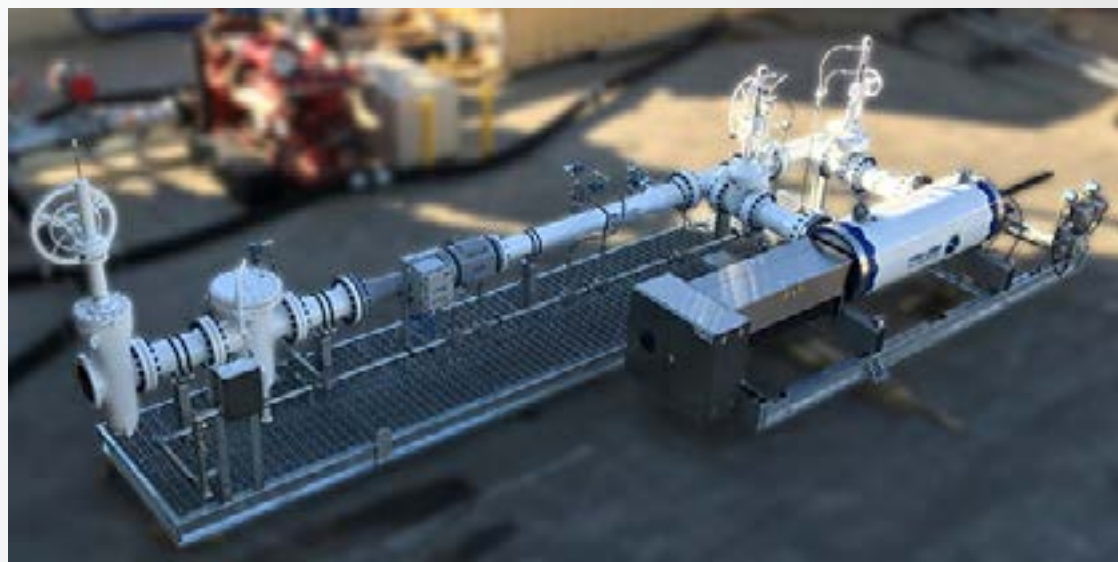
## PROJECT SPECIFICS

FMD090 Prover paired with large bore high flow rate ultrasonic meters.

## GOAL

Minimize pressure drop at marine terminal / pipeline application. minimize pressure drop at marine terminal / pipeline application.

Fast track project in order to maintain customers schedule. Customer required minimal pressure drop throughout the system. Origin and end point metering stations. Utilize FMD CFD models to optimize design. Project completed in 14 weeks.



# MARINER EAST PIPELINE PROJECT

## CLIENT

Sunoco

## PROJECT LOCATION

Ohio, Pennsylvania USA

## PROJECT SPECIFICS

FMD Provers - Over 20 FMD Provers Supplied

## GOAL

Move Natural Gas Liquids (NGLs) from Ohio to Marcus Hook PA for processing and export.

The Mariner East project includes three pipelines, Mariner East 1, Mariner East 2, and the Mariner East 2X which carry natural gas liquids from the Marcellus and Utica shale plays in eastern Ohio and western Pennsylvania to a processing and export terminal in Marcus Hook, Delaware County, Pennsylvania.



# CAPLINE REVERSAL PIPELINE

## CLIENT

Marathon

## PROJECT LOCATION

Illinois, Louisiana, Mississippi, Oklahoma USA

## PROJECT SPECIFICS

FMD130s and FMD200s

## GOAL

Add a joint tariff point in Cushing, OK with Diamond pipeline.

Capline systems southbound service from Patoka, Ill., to St. James, La. or Liberty, Miss. with an additional origination point at Cushing, Okla., as part of a joint tariff with Diamond pipeline. Capline is a 40-inch, 632-mile pipeline system extending from Patoka, Ill. to St. James, La.



# DAKOTA ACCESS PIPELINE

## CLIENT

Energy Transfer

## PROJECT LOCATION

North Dakota, Illinois USA

## PROJECT SPECIFICS

FMD Provers Various Sizes - FMD provided over 10 provers on this pipeline project.

## GOAL

Deliver Crude Oil to Patooka, IL

The Dakota Access Pipeline or Bakken pipeline is a 1,172-mile-long underground oil pipeline in the United States. It begins in the shale oil fields of the Bakken formation in north west North Dakota and continues through South Dakota and Iowa to an oil terminal near Patoka, Illinois.



# GREY OAK PIPELINE

## CLIENT

Phillips 66

## PROJECT LOCATION

Permian Basin - Eagle Ford Shale, TX USA

## PROJECT SPECIFICS

FMD Provers Various Sizes - FMD provided over 42 provers on this pipeline project.

## GOAL

Transport Crude from key shale plays to demand centers on the Texas Gulf Coast.

The Grey Oak Pipeline is 850 miles of pipeline and transports 900,000 BPD of crude oil. The system runs from West Texas to Central Junction and has expanded services to include more grades of crude.



# ENTERPRISE PIPELINE

## CLIENT

### Enterprise

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#### PROJECT LOCATION

Permian Basin - Gulf Coast, TX USA

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#### PROJECT SPECIFICS

FMD Provers Various Sizes .

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Major Texas Crude oil pipeline from the Permian Basin to the Houston Terminal. The crude is used for refining and export. 700 miles of 24" pipeline with 550,000 BPD capacity. FMD provers are paired with large bore helical turbine meter and Coriolis meters.

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A Unit of IDEX Corporation

# BALL PROVER REPLACEMENT INITIATIVE

## CLIENT

Colonial

## PROJECT LOCATION

Various Sites - USA

## PROJECT SPECIFICS

FMD Provers Various Sizes .

## GOAL

Ball Prover Replacement

FLOW MD awarded 10 year contract for replacing aging ball provers. FMD considered as improvement in measurement technology, improvement in speed of proving, best option for capex.



# BAYTOWN PROPYLENE PROVERS

## CLIENT

Chevron

## PROJECT LOCATION

Baytown, TX USA

## PROJECT SPECIFICS

Six FMD Provers replaced ball provers.

## GOAL

Replace Ball Provers.

A ball prover replacement project initiative for 6 locations in the Baytown, TX area. FMD provers were selected because of increased accuracy and decreased overall OPEX.



# GENESIS RACELAND TERMINAL

## CLIENT

Genesis

## PROJECT LOCATION

Southeast Louisiana, USA

## PROJECT SPECIFICS

FMD090 was the first Small Volume Prover purchased in 2019.

Crude oil is sent to the Raceland Terminal in Southern Louisiana via train and the LOOP (Louisiana Offshore Oil Port). LOOP handles a combination of foreign and domestic crude oil.



# SWEENY HUB EXPANSION

## CLIENT

Phillips 66

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## PROJECT LOCATION

Sweeny Hub, TX USA

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## PROJECT SPECIFICS

FMD Small Volume Provers - Various Sizes.  
Total of 15 FMD SVPs were purchased.

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## GOAL

Provide fractionation capacity for the Permian Basin NGL production.

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This expansion provides the Sweeny Hub with capabilities to handle 400,000 barrel per day of NGL fractionation and up to 15 million barrels of total storage capacity.

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# WHITE CLIFFS PIPELINE

## CLIENT

SEM Group

## PROJECT LOCATION

Colorado - Cushing OK USA

## PROJECT SPECIFICS

FMD060s used with NGL metering skids.

12" Pipeline Conversion to NGL From  
Platteville Colorado to Cushing Oklahoma.  
Furnished (2) FMD-060 Small Volume  
Provers,



# GRASS ROOTS TERMINAL

## CLIENT

Magellan

## PROJECT LOCATION

Tulsa, OK - Pasadena, TX USA

## PROJECT SPECIFICS

FMD090s and FMD130s - Six (6) total ordered.

Grassroots Terminal Pasadena Texas, furnished FMD-090's and FMD-130's. A total of 6 FMD Small Volume Provers were ordered.



# ELK CREEK NGL PIPELINE

## CLIENT

OneOK

## PROJECT LOCATION

North Dakota - Kansas USA

## PROJECT SPECIFICS

FMD090s, FMD130s and FMD200s.

## GOAL

Pipeline Capacity Expansion

Elk Creek NGL Pipeline from The Bakken to Central Kansas, 240,000 BPD is being expanded to 400,000 BPD. And the Arbuckle II 24" & 30" NGL Pipeline from South Central Oklahoma to Mt. Belvieu Texas, 410,000 BPD with expansion capabilities,



# OVERLAND PASS PIPELINE

## CLIENT

Williams Energy Services

## PROJECT LOCATION

McPherson, KS USA

## PROJECT SPECIFICS

2 FMD-130s.

## GOAL

Meter Station Upgrade

Overland Pass Pipeline Company, LLC  
Conway Meter Station Upgrade, McPherson  
Kansas, furnished (2) FMD-130 Provers.





# VERA CRUZ MEXICO OFFLOADING

## PROJECT LOCATION

Vera Cruz, Mexico

## PROJECT SPECIFICS

3 FMD-090s.

With the help of our partner Flowsis, Flow MD recently started up three FMD-090 small volume provers at the IEnova Marine Terminal in the new expansion of the Port of Veracruz. The Veracruz terminal will help meet growing demand for fuels in the region and enhance energy security, by allowing access to international sources of refined products. The IEnova Terminal has 2,000,000 barrels of storage capacity and Flow MD is proud to ensure every drop is accounted for.



# INCLEMENT WEATHER PROVING TRUCK(S)

## PROJECT LOCATION

Canada

## PROJECT SPECIFICS

Truck mounted jacketed FMD-035.

FMD has manufactured quite a few of these trucks for our friends up North. These trucks are designed to keep inclement weather out and allow for proving in harsh weather conditions. Not only can these trucks be used in extreme cold temperature, they can also be engineered for extremely hot conditions.



# MODEC/PETROBRAS LIBRA FPSO

## CLIENT

Modec / Petrobras

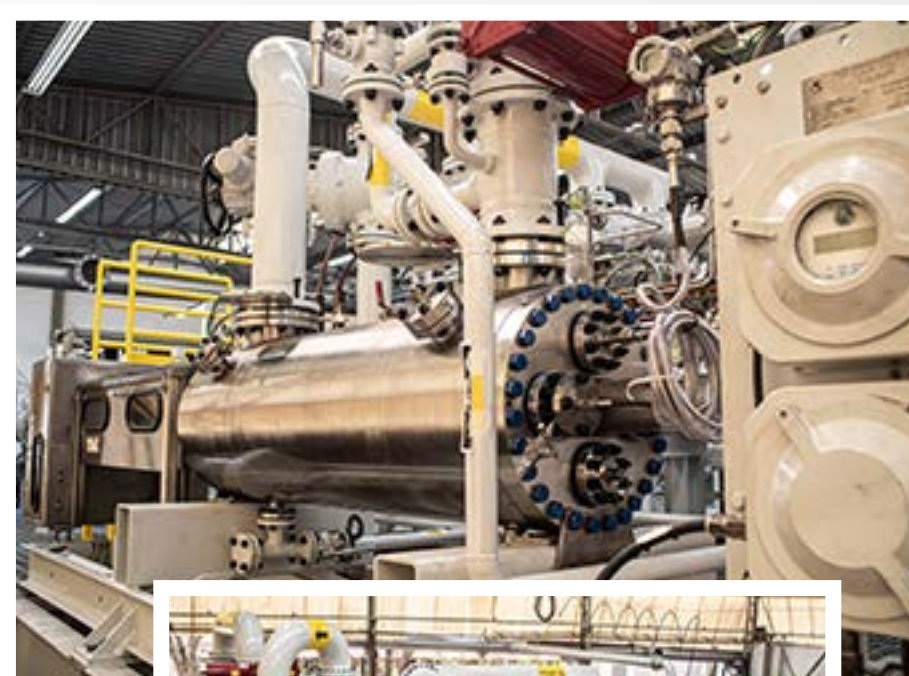
## PROJECT LOCATION

Santos Basin, Brazil

## PROJECT SPECIFICS

FMD Small Volume Provers - FMD-045 and FMD-200.

The FPSO will be capable of processing 180,000 barrels of crude oil per day, 424 million standard cubic feet of gas per day, 225,000 barrels of water injection per day and has storage capacity of 1,400,000 barrels of crude oil.



# OTHER INTERNATIONAL PROJECTS

## CLIENT

Chevron

## PROJECT NAME

Gorgon Project

## LOCATION

Barrow Island, Australia

## PROJECT OVERVIEW

FMD Small Volume Provers

Chevron announced it has started producing liquefied natural gas (LNG) and condensate at the Gorgon Project on Barrow Island off the northwest coast of Western Australia.



# FMD SMALL VOLUME PROVERS ARE USED IN CALIBRATION LABS AND TRAINING CENTERS THROUGHOUT THE WORLD.

Roll over dots on the map to see additional information





WE LOOK FORWARD TO HELPING  
YOU WITH YOUR NEXT  
SMALL VOLUME PROVER PROJECT!

LEARN MORE ABOUT US:

[WWW.FLOWMD.COM](http://WWW.FLOWMD.COM)

THANK YOU