



# THE Marcellus Update

Q1 - 2018

## Renshaw wells hit big!

### Initial production nearly doubles

**Great news for MDS 2016 partnership investors. The second of two pads is now flowing, and at a much higher rate than any wells we've drilled so far. Distributions begin in March.**



We are very excited to report that our 2016 partnership has seen the highest initial production numbers of any wells we've drilled to date.

In 2016 we drilled two pads, with four wells on each pad. So far, our northern tier wells have been extremely respectable with initial production numbers averaging around 8 million cubic feet per day. The 2016 northern wells (the "Dynamite Shack" pad) significantly outperformed our legacy wells, averaging close to 10 million per day...about a 25% uptick in production.

Not to be outdone, the 2016 southern tier wells on the Renshaw Farm are each averaging about **15 million cubic feet per day**. Nearly double the initial production of our first horizontals in the 2014 partnership. We did have a small permitting delay to install our high pressure steel pipeline, so we'll run the wells on a restricted basis until this summer once the high capacity pipeline is completed. *Continued on Page 2*

## RETURNS REMAIN STRONG

### MDS 2015 distributing 2% to 2.5% cash-on-cash monthly

Due to our efficient operations and rising natural gas prices, we are happy to report that our 2015 partnership has seen very little decline in production and continues to return monthly distributions in the 2.0% to 2.5% cash-on-cash range PER MONTH, or about 24% to 30% annualized.

After only 13 distributions, several of which were sharply reduced due to offset drilling shut-ins, **the total cash and tax return is 56.83%** for those investors who took advantage of the early investor discount.

There is still much potential for upside as we are accomplishing these numbers at gas pricing between \$2.00 and \$2.50, which is below the break even of many producers.

The Renshaw wells are located on a family farm that has been in operation since 1834. Before this drilling project, and the prospect of royalty payments to help with cash flow, the owners were close to shutting down the farm and walking away. We're very happy to help keep these good folks doing what they love.

**U.S. exports are expected to grow from \$17B in 2017 to \$110B in 2027. This is nearly the value of all of Saudi Arabia's oil exports**  
-The Wall Street Journal  
"The Shale Revolution's Staggering Impact in Just One Word: Plastics"

### U.S. Petrochem Exports to Equal Saudi Oil Exports

Most folks don't realize that nitrogen based fertilizer and most plastics are made almost entirely of natural gas in facilities that run on natural gas.

With our newfound massive gas reserves here in the U.S., about \$200B in capital investment has been made by private companies to take advantage.

New facilities are starting to come online and will have a massive impact on our GDP and trade imbalance. Shell's flagship \$4B facility just outside of Pittsburgh is well on its way to completion and will be a major regional demand driver for Marcellus Shale gas.



## LNG EXPORTS: How the LNG boom is impacting gas markets

In a massive paradigm shift, the United States has gone from gearing up to import massive amounts of natural gas, to producing so much we're now poised to become one of the world's largest natural gas EXPORTERS.

It's 2005. As a country, we've reached peak natural gas production. No matter how much is invested, we're producing less and less every year as the decline in existing fields outpaces production from new wells. Billions of dollars were spent to build massive complexes to import natural gas from places like Iran, Qatar, and Russia. Prices skyrocketed to over \$14 per thousand cubic feet (Mcf). Right around that same time, drillers in Western Pennsylvania drill a test well

using techniques developed in Texas on a untested shale formation called the Marcellus. The result? A geopolitical game changer. The Marcellus is now producing almost 1/3 of all the natural gas in the country. The U.S. is the largest producer of natural gas in the world, and is about to become a major player in the gas export market, stealing market share from those same countries we were about to import from. Shale drilling has made the U.S. an energy powerhouse.

Through the country's first gas export terminal in Sabine Pass, LA, we are already sending gas to dozens of countries, including South Korea, Chile, Argentina, Japan, and Turkey. Over the next few years, gas exports are expected to more than quadruple. Most pertinent for MDS investors will be the opening of the Dominion Cove Point facility on the Chesapeake Bay. This will move nearly a billion cubic feet of gas out of the Marcellus region. It's expected to begin operations this spring.

## Clean, green, and all American How natural gas is cleaning up our air

Compared to coal and oil, natural gas is far cleaner when used to produce electricity. As dozens of new gas fired plants come online, air quality has begun to improve significantly, and we've cut carbon emissions.

Over the last several years, billions of dollars have flowed into the construction of new natural gas fired power plants as old coal plants continue to be decommissioned at a rapid pace. As a result, natural gas has surpassed coal as the country's #1 fuel source for power generation. Gas is inherently cleaner than coal, and as the switch continues,

huge amounts of mercury, barium, arsenic, selenium, particulate matter (causes childhood asthma) and precursors to smog like NOx and SOx have been significantly reduced. Despite various international climate accords,



The U.S. is the only country to reduce its carbon emissions, and we've done so in dramatic fashion, lowering carbon emissions to levels not seen since the early 1990's.

# MDS Investor Portal

Did you know...all of your vital documents including monthly earnings statements, tax documents, and subscription agreements are available 24/7 online at our secure investor portal?



As tax season rolls around, just a quick reminder that all of your important documents are stored and available to you at our secure website,

[www.partnershipaccounting.com/mdsenergy](http://www.partnershipaccounting.com/mdsenergy).

If you haven't registered, or if you forgot your login credentials, please contact our transfer agent Great Lakes Fund Solutions, Inc at:

**compliance@glfsi.com or  
847-265-5000**

## Takeaway/regional drivers tightening basis

For the last few years, the largest barrier to higher gas prices in the northeast United States has been takeaway capacity. Basically, the region has been producing more natural gas than the region's pipelines could handle, creating a glut and depressing prices.



With approximately 18-20 Bcf of additional takeaway capacity expected to come online by 2022 (which represents about ALL of the current output of the Marcellus shale), these constraints should become far less significant and should bolster regional gas prices, thus increasing investor returns.

The pipeline industry has been playing catch-up ever since, having invested tens of billions of dollars in new pipelines that will take gas from the Marcellus region and send it up and down the east coast from Maine to Florida, west to Chicago where it meets many other interconnects into the Midwest and southern Canada, and perhaps most importantly, to the gulf coast area where much of the nation's industrial end users are.

Also, major new demand drivers in the area will help alleviate the need to transport gas to other regions as companies purposefully invest in new facilities here in the Marcellus. Dozens of new gas fired plants, as well as the new Dominion export facility in Cove Point, MD will consume Marcellus gas in large numbers, again helping to buoy prices.

*Want to keep up to date on the Marcellus Shale and developments that could impact your investment? Visit the news section of our website at [www.mdsed.com/articles](http://www.mdsed.com/articles)*



## 5 Important updates On MDS partnerships

**1** Shut-ins now complete  
The temporary shut-ins on the Ambrose (2014), Furnace Run (2015) and Biblical Life (2015) pads are now complete.

**2** Distributions to return to normal  
Now that all wells are back online and producing normally, the end of February distributions will return to normal levels.

**3** 2016 distributions to start end of March  
As production began on the Dynamite Shack pad in December, first distributions will begin for our investor partners at the end of March.

**4** 2017 distributions begin this summer  
Operations have already begun on the 2017 partnership. Wells on the "Kuhns" pad are drilled and fractured and awaiting flowback. Wells on the "Nolder" pad are drilled and awaiting hydraulic fracturing

**5** K1 Tax Forms Scheduled for March  
We anticipate the release of this year's tax documents mid-March. They will be mailed in hard copy and uploaded to the portal.

# A little bit about us

MDS Energy Development is a vertically integrated natural gas E&P company located in Pittsburgh, Pennsylvania. We sponsor tax-advantaged natural gas partnerships to help high net worth individuals mitigate taxes and create a potential long-term, non-correlated income stream. MDS president Michael Snyder is a member of the Snyder family office, which is one of the largest well operators in Pennsylvania, with whom we co-invest on drilling projects. We are the largest investor in these projects by far, and when not drilling our own projects, we are drilling as a subcontractor for companies like Exxon-Mobil, EQT Corporation, Rice Energy, Range Resources, etc.



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## Tax time! **K-1 FORMS COMING SOON**

As you well know, MDS partnerships come with significant tax advantages. Even after you've taken your big up-front tax write-off, there are additional tax advantages on the back end too, through the percentage depletion allowance and the depreciation of hard assets.



Don't forget to take this crucial document to your tax preparer and/or your financial advisor to make sure you're taking advantage of all the tax benefits this investment affords. We anticipate issuing these documents sometime in March.



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