

Shale Daily

METHODOLOGY



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ABOUT INTELLIGENCE PRESS, INC.

Intelligence Press, Inc. (herein referred to as NGI) launched the first of its North American natural gas products in 1981, with the inaugural issue of its flagship *Natural Gas Intelligence* newsletter. It was in that publication that NGI initiated the U.S. natural gas industry's first spot market price table in 1983. In response to the further deregulation of the industry, NGI expanded on that seminal

price table in 1988 with the creation of its *NGI's Weekly Gas Price Index* and *NGI's Bidweek Survey* newsletters. NGI began publishing its *Daily Gas Price Index* newsletter in 1993, and more recently, created *NGI's Shale Daily* in 2010. *Shale Daily* is home to the Shale Price Indices (SPI), the industry's first natural gas spot market prices for unconventional producing areas within the United States.

SPI USER GUIDE/GENERAL INFORMATION

What Do the Shale Price Indices (SPI) Represent?

The SPI listings that appear in *Shale Daily* are day-ahead, delivered-to-pipeline spot market prices that aim to represent the price of production for each of the U.S. unconventional plays listed in the SPI table. Although we call them "Shale" Price Indices, we in fact monitor prices at both shale and tight sands formations. For more on what constitutes "day-ahead" prices, please see "Over What Time Period Does NGI Collect Data?" on page 6.

Please note that because the SPI are delivered-to-pipeline prices, they include treating, gathering, and processing charges, and therefore do not represent the price of natural gas at the wellhead.

Our goal is to measure the price of gas as close to the various SPI unconventional formations as possible. As such, we include deals within or adjacent to the various counties/parishes that comprise each play. Obviously, incorporating transactions that occur directly within the boundaries of the various unconventional areas satisfies our aim to measure the price of gas as close to each formation as possible. We also include transactions that are conducted in counties/parishes that are adjacent to each formation, because 1.) in many cases, the pipelines into which production from these areas is delivered do not lie directly within the boundaries of each play, and 2.) doing so adds liquidity to our price survey, which in turn helps makes our SPI prices more robust. However, we are cognizant not to include trades at points that are a significant distance away from the various SPI locations ("distance trades"), because such transactions are more likely contain transportation charges that are over and above the

"intrinsic value" of the production for each SPI location, and/or trade at basis differentials that are unrepresentative of those within each particular SPI formation. The farther away trades are from a particular producing area, the more likely including them in our survey would artificially skew our SPI prices higher or lower.

While we believe we are successful in minimizing the number of "distance trades" when calculating our SPI listings, there are two areas where doing so is largely impossible: The Barnett and Eagle Ford shales. The reason is that these two areas are dominated by Texas Intrastate pipelines, into which trading activity tends to be highly illiquid. We are therefore required to include trades that are farther away from these two areas than we would otherwise like, but as we explain in the Point-to-Point Descriptions section of this document, we believe including "distance trades" for pricing gas in these two regions is actually standard industry practice.

What Exactly Are "Adjacent Counties?"

As mentioned in the previous section, adjacent counties/parishes are those that are close to, but not actually part of, the particular SPI formation in question. We have no set formula for determining the adjacent counties/parishes we include for each play, as in "we only include counties or parishes that are X number of miles from the formation," in large part because every formation is different. The rough rule of thumb we use is to include all counties/parishes that border, or form a "circumference" around each particular basin, unless those neighboring counties/parishes are part of another unconventional formation in our table. For example, several of the counties that border the Granite Wash in Oklahoma are also

part of the Cana-Woodford Shale. In this case, we do not include those counties that border the Granite Wash that are part of the Cana-Woodford in our Granite Wash index. They are only part of our Cana-Woodford index.

Some of the unconventional formations in our survey are surrounded by relatively small counties/parishes, and in those cases we may include counties that are more than one county/parish away. This is more prevalent in Oklahoma, Texas, and the Appalachia states. In other areas, such as Wyoming and Utah, where counties/parishes tend to be much larger, we do limit adjacent counties to those that directly border the particular formation.

One check and balance we have to ensure we do not include “adjacent counties” that are too far from a particular SPI play is our three standard deviations check. As explained on pages 6 & 7, we typically remove transactions that are three standard deviations above or below our calculated average price for each area in our SPI table. The farther away a trade is from each SPI location, the more likely it will be unrepresentative of that area, and the more likely it will fail our three standard deviations test.

How Did NGI Determine Which Counties/Parishes To Include in the Definition of Each SPI Location?

The counties and parishes we include in our definition of each play represent our best estimate as to where the majority of the permitting, drilling, and production activity for each SPI area is located, based on our analysis of the following:

- State oil & gas commission data
- Individual company reports
- SEC filings
- Rig data
- U.S. Federal Government data (particularly those from the Energy Information Administration and the United States Geological Survey)

Please note that each SPI formation may in fact be prospective in more counties/parishes than we include in our designations. For example, the Marcellus Shale in West Virginia is prospective throughout much of the “non-Panhandle” portion of the state. However, there has been very little permitting activity in the southwest section of

West Virginia since 2010, so we have chosen to exclude this area from our definition of our Marcellus – SW PA/ WV index.

We detail the counties/parishes that make up each SPI formation in the Point-by-Point Description section that begins on page 10. However, our definition of the counties/parishes that make up each play may change over time, particularly as operators continue to delineate their acreage positions.

Similarly, How Did NGI Choose the Pipelines Which It Uses To Calculate The Various SPI Prices?

The pipelines and market hubs we include in calculating each individual SPI price are largely the result of an extensive analysis we conducted of nominations data reported by the various natural gas pipelines that serve the U.S., by speaking with physical market traders and pipeline representatives, and by the knowledge we have garnered from determining day ahead natural gas spot market prices since we began publishing our *NGI's Daily Gas Price Index* newsletter in 1993. We supplemented this by reviewing many of the same data sources we studied in determining which counties/parishes to include in our definitions of each play, namely state oil & gas commission data, individual company reports, SEC filings, and U.S. government data.

Are the SPI County & Pipeline Assignments Static, Or Do They Change Over Time?

Although it is our strong preference to keep our county definitions and pipeline assignments consistent over time, we will change them as necessary as the various unconventional plays we cover continue to evolve, in order to ensure our SPI prices remain representative. For example, since we debuted the SPI table in October 2010, we have added more counties to our definition of the Cana-Woodford Shale, as drilling activity in that formation moved farther south. We have also reassigned Dominion North Point and Tennessee 313 Pool trades from our Marcellus NE PA – Other to our Utica Shale index, since the counties in Northwest Pennsylvania now seem to be more commercial for the Utica than the Marcellus.

What Type of Transactions Does NGI Include in Calculating the SPI Prices?

We include all next-day, delivered-to-pipeline spot market transactions that occur within or adjacent to the counties/parishes that comprise our definition of each SPI play, *regardless of where or from what formation that gas was actually produced*. This means that rather than being a “pure pool” of deals from each listed SPI formation, our SPI prices are in fact calculated from a mix of unconventional production, conventional production, and even gas that was produced in different regions of the country that was transported to pipeline interconnects within or adjacent to the counties/parishes that make up each particular SPI location.

But how can this be? Aren't the SPI prices supposed to represent unconventional production from each stated SPI formation? They are indeed. However, we are comfortable using such a hodge-podge of different production sources to represent each SPI play because natural gas is fungible. A molecule of unconventional natural gas is priced the same as a molecule of conventional natural gas. Moreover, gas that is produced in one area (say South Texas) and is delivered to a pipeline interconnect in a different area (say North Louisiana) should command the same market price as natural gas that was produced and delivered to a pipeline within the same area, otherwise this may create arbitrage opportunities.

Summary of the Types of Deals We Include

Type of Deal	Rationale
Deals done directly within or adjacent to the counties/parishes that comprise each play	These transactions tend to have little to no additional transportation charges or basis differentials, since they occur within or just next to the area each particular SPI represents.
Pipeline interconnects	We believe that gas produced in other areas but transported to and traded within a particular SPI region tends to sell at prices similar to that of gas produced directly within that particular region.
Tailgate gas from natural gas processing plants that is delivered-to-pipelines	Such gas typically represents the first flow of production into a mainline (not gathering) pipeline system, and our SPIs by their very nature are designed to measure the delivered-to-pipeline price of production from the various unconventional formations.
Storage transactions at hubs	We have observed over many years of determining natural gas spot market prices in the U.S. that storage transactions in and out of “captive storage facilities” that are only connected to one pipeline can trade at significant premiums or discounts to other deals along that portion of the pipeline. However, we believe any such pricing difference tends to be much less at hubs, which are served by two or more pipelines.

Summary of the Types of Deals We Do Not Include

Type of Deal	Rationale
For all areas other than the Barnett and Eagle Ford shales, transactions done at too great a distance from the various producing counties/parishes for each play (a.k.a. "distance trades").	The Barnett and Eagle Ford shales are largely served by intrastate pipelines, which tend to be illiquid, meaning we must venture outside the immediate counties/parishes that comprise these two areas in order to approximate the delivered-to-pipeline value of production for these two formations. For all of our other SPI prices, we limit trades to those counties/ that are within or adjacent to each particular formation.
"Citygate" transactions (gas delivered to local distribution companies), and gas delivered to industrial, power generation, and retail customers.	Our SPI prices represent delivered-to-pipeline prices, not delivered-from-pipeline prices. We exclude these end-user deals because they tend to include significant additional transportation charges that are over and above the "intrinsic value" of the gas in each SPI formation, and/or trade at basis differentials that do not reflect those within the various unconventional formations in our price table.
Storage deals into facilities that are only connected to one pipeline (i.e. not done at a hub)	As explained above, we believe that storage transactions in and out of "captive storage facilities" that are only connected to one pipeline can trade at significant premiums or discounts to other deals along that portion of the pipeline.

Type of Deal	Rationale
Deals that are statistical outliers, include additional charges, or do not fit the definition of "day-ahead" transactions.	We explain this in the section entitled "The SPI Calculation Process" on page 6.

Indications of Volume of Trading and Number of Deals

The deals column represents the number of transaction reports used by NGL in the calculation of the price, and the volume column indicates the sum of the volume of those deals, expressed in thousand MMBtus per day.

The nature of our survey is such that we attempt to collect, and include in our index calculations, reports of both the buy and sell sides of an individual transaction. Theoretically, if we were to receive perfect data for a given SPI formation, and had received reports from every buyer and every seller, our volume figure would be exactly twice the volume of gas transacted within that particular SPI area.

Do the Volumes Reported in the SPI Table Represent Daily Production Within Each Listed Unconventional Formation?

No they do not. As explained before, we include both unconventional and conventional gas in our calculations, as well as production delivered to each SPI location from other areas. In addition, unconventional producing areas that are served by a greater number of pipelines, or that feature pipelines that are more actively traded will have greater reported volumes, everything else being equal. These are the reasons that our reported volumes in Marcellus – SW PA/WV are so much greater than in Marcellus – NE PA, even though northeast Pennsylvania accounts for much more natural gas production than that in the southwest part of the state. Therefore, the volumes we report are *trading* volumes within and adjacent to each SPI formation, and should not be interpreted as any kind of estimate of or proxy for actual daily production within each area.

THE SPI CALCULATION PROCESS

Over What Time Period Does NGI Collect Data?

As explained below in more detail, NGI follows the IntercontinentalExchange (ICE) “next day physical natural gas trading calendar” to discern what constitutes a “trading day.” NGI has posted its publishing calendar here: <http://www.naturalgasintel.com/ext/resources/NGI-Calendar.pdf>

Subject to the ICE trading calendar, NGI includes in its survey gas that is traded for “next day” flow. Nominations for “next day” flow must be made by the nominating party by 12:30p.m. Eastern Time on the calendar day one-day before the nominated gas is scheduled to start flowing in order to be included in our SPI table.

In most cases, our SPI indexes capture gas flows for the next calendar day. For example, day-ahead gas that trades on a Monday for that next day (Tuesday) would comprise the indexes that appear in that next Tuesday edition of *Shale Daily*. On Fridays, gas typically trades for Saturday, Sunday, and Monday flow, so the prices that appear in our Monday edition would include gas traded on Friday for Saturday through Monday. If that Monday were a holiday, then we would publish SPI prices on Tuesday, and that edition of *Shale Daily* would include gas traded on Friday for Saturday through Tuesday delivery. The same concept applies when a holiday falls in the middle of a particular week. If, for example, Wednesday were a holiday, then that Thursday edition of *Shale Daily* would include gas traded on Tuesday for Wednesday and Thursday delivery.

How Does NGI Convert Raw Price Reports Into Published SPI Indexes?

We use the same process to collect trading data and to calculate prices as we do for our regular *Gas Price Index* newsletters. Our SPI prices are a volumetric weighted average of deals within each region, we handle statistical outliers the same way, and we exclude retail deals and trades that include a markup to compensate for credit risk. This is all explained more in our regular price meth-

odology, which is posted to our www.naturalgasintel.com website.

The main difference between our SPI and regular *Gas Price Index* prices is that for our SPI table, we exclude storage deals that were not transacted at a physical hub (defined as a storage area with two or more pipeline interconnects) and gas that is delivered to end-users and LDCs, in an effort to better represent the price of production within each play.

Our first step is to determine to which of our published indexes each price report applies. From there, we review the data to ensure there are no obvious reporting errors such as typos or missing data, and that the data are for gas flows for the same period that our indexes intend to measure (see “Over What Time Period Does NGI Collect Data?,” page 6). If any of the submitted data fail either of these first two tests, we may exclude them from our survey, or we may flag them for further investigation.

After determining the data to be considered in each of the individual indexes, NGI then examines these datasets individually to identify statistical outliers and irregular data.

What Are Outliers, or “Irregular” Data?

Our goal at NGI is to take a “hands-off” approach with respect to data by incorporating as many reported transactions to us as possible, and to do so on an “as-is” basis to the extent we are able. However, at times we receive outliers, or “irregular data,” that may need to be excluded from the datasets, in order to preserve the integrity and accuracy of our published spot market prices.

Irregular data may be either price or volume levels that are not confirmed by another source, or transactions that do not meet the reporting guidelines we have listed throughout this methodology. Reports that were flagged in the initial processing of the data are reviewed for their appropriateness, applicability, and reasonableness, and may be excluded at the discretion of the editor.

Examples of (including, but not limited to) irregular data we may exclude from the data survey:

Reason	Why Exclude?
Deals that do not comply with the definition of each index	We will only include those transactions that are delivered to the portion of a pipeline that is either within or adjacent to the counties/parishes that comprise each SPI location. For example, deals in the Permian Basin are not included in our Eagle Ford Shale index.
Unconfirmed transactions that are more than three (3) standard deviations from the mean	Including an abnormal and unconfirmed transaction may artificially skew the index higher or lower.
Deal includes a credit adder	Such deals usually include a significant premium to compensate a company for the risk of transacting with a less-than-creditworthy counterparty. However, this type of premium is not indicative of the market value of the gas being transacted.
Trades between affiliated parties	These are not arms-length transactions, and may include a non-market representative premium or discount.
Transactions completed outside of our survey window	We must adhere to a strict and consistent time frame for collecting data, otherwise we would introduce measuring bias.
Reports flagged by our data contributors as being irregular or out of the market	Most of our exclusions fall into this category

How Does NGI Calculate the Published SPI Indexes?

Once we have removed any irregular, inappropriate or non-applicable transactions from our database, we can then calculate the index for each of our locations, which we do using a weighted average methodology. This can be expressed by the following formula:

$$A = \frac{\sum P \cdot V}{TV}$$

where: A = weighted average price, P = price per individual transaction, V = volume of each individual transaction, $\sum P \cdot V$ = cumulative total of each transaction multiplied by its volume, TV = total volume

Example:

Price (P)	Volume (V)	Factor (PxV)
\$3.26	10	32.60
\$3.27	5	16.35
\$3.29	15	49.35
\$3.32	5	16.60
Total	35	114.90

$$\text{Index} = 114.90/35 = \$3.283$$

Index rounds to \$3.28

A Note About Rounding Rules

For our SPI averages, NGI rounds to the nearest cent (one-hundredth of a dollar). When rounding a half-cent (\$0.005), NGI systems will round up or down in a random fashion. For example, in a large number of trials, \$3.235 will round to \$3.23 half of the time and \$3.24 half of the time.

For SPI ranges, NGI rounds down on the low and up on the high. For example, a low observation of \$3.219 would produce a low for the range of \$3.21 while a high observation of \$3.281 would produce a high for the range of \$3.29. This rounding rule will not impact the computation of the average.

Published volumes are always rounded up to the nearest 1,000 MMBtu. For example, a total volume of 67,200 MMBtu will be rounded to 68,000, and will appear in the volume column of our publications as 68.

Error Corrections

Because we understand that the market relies on the certainty provided by NGI indexes and that trading decisions are made based on these indexes the moment they are published, NGI will only correct errors within three (3) business days of the posting of the original index. Although the ultimate decision will be made after taking

into account factors such as the nature of the error and who was responsible, it would be unlikely that NGI would issue a correction unless the error results in a material change to the index posting.

Code of Conduct

Intelligence Press Inc., more generally known as *Natural Gas Intelligence* or NGI, operates under the journalism code of ethics, which requires that the personnel creating and compiling the content of our publications and management have no financial interest in the companies on which they report. NGI also warrants that its editorial and price survey employees and management do not trade in the natural gas or any other commodity markets, nor do we trade the stocks, bonds, or other securities of companies engaged in the energy industry.

Our journalists and employees strive to maintain the highest standards of truth, accuracy, fairness and impartiality. This means double-checking facts, correcting errors as soon as we are able, and striving to tell all sides of a story as equally as possible.

NGI also has a record of meeting deadlines and never failing over more than 30 years to publish a scheduled daily or weekly issue. In the real-time world, NGI strives to stay abreast of the news with timely reports over the Internet.

Confidentiality

In order to gain the broadest possible market participation in our data collection process, and to protect our sources' competitive standing, NGI pledges not to reveal the confidential data that it receives, nor the source of any price information, nor will it reveal the parties involved in any transaction to any outside organization, except to the extent that it is legally required to do so (i) in response to any summons, subpoena, request of governmental or regulatory authority, or otherwise, or (ii) in order to comply with any applicable law, order or regulation, (hereafter, a "Required Disclosure"). NGI, before seeking to disclose data in a Required Disclosure, shall to the extent legally permissible notify the Data Provider prior to making such disclosure in order to permit the Data Provider an opportunity to seek an appropriate protective order or grant a waiver of compliance with the provisions of this agreement.

Data sent to NGI price editors at the prices@naturalgasintel.com e-mail address are archived on a daily basis. Only NGI's price survey staff and management have access to the confidential data submitted. Those personnel with access to the data are required to sign pledges of confidentiality restricting their use to purposes of evaluation, compilation, or editorial review of various price index surveys for publication (in aggregated form only and without disclosing the source thereof). If you have any questions or would like to review NGI's Confidentiality Agreement, please email us at prices@naturalgasintel.com or call 1-800-427-5747.

HOW TO INTERPRET OUR POINT-BY-POINT SPI DESCRIPTIONS (EXPLANATION OF DEFAULT VS. OIS TRADES)

We separate the pipelines/trading points that we include in each SPI into two groups: Default and Only if Specified.

Default means we include all gas delivered to a stated pipeline or pipeline segment in a particular SPI calculation, unless a particular trade on that pipeline or pipeline segment is specifically labeled as being done at a point that is not within or adjacent to the counties/parishes that we have identified for each play. Our price contributors do not always assign individual point names or meter/DRN numbers to their trades, so we cannot always determine that a trade took place within a specific county

or parish. However, after studying pipeline flow data, and talking to pipeline representatives, physical traders, and producers, we believe the majority of gas that is delivered to the pipelines or pipeline segments we have placed in the Default category for each SPI are indeed mostly transacted in or adjacent to the counties we have designated for each play, meaning we are comfortable in assigning all delivered-to-pipeline trades in that pipeline to a particular SPI price, regardless of where along the pipeline or pipeline segment those trades actually took place.

For example, even though portions of the 30" pipeline on Texas Eastern Transmission's Market Zone 2 lie within Ohio, we believe the overwhelming majority of gas delivered into this segment of TETCO occurs within or adjacent to counties that comprise our Marcellus SW PA/WV index. As a result, when we receive generically labelled TETCO M-2 Receipts trades, we know there is a very high statistical probability that those particular trades were likely conducted in or adjacent to the Marcellus Shale in southwest Pennsylvania or West Virginia, so we are comfortable assigning all generically labelled TETCO M-2 receipts to our Marcellus SW PA/SW index.

Please keep in mind that we do have an automatic screening device that helps us weed out trades that may not conform to our index definition, since we tend to remove trades that fall more than three (3) standard deviations away from the mean for each point. For example, we would initially include a TETCO M2 Receipts deal that was simply labelled as being in TETCO M2 but was actually transacted in Ohio in our Marcellus SW PA price. However, if the location differential means that Ohio trade is priced significantly higher or lower than the mean of our calculated weighted average Marcellus SW PA price, then our standard deviation screen would probably catch it. If that Ohio price were not significantly different from the mean, then including it likely would not skew the "true" Marcellus SW PA average price.

Just to clarify, when we default transactions on a particular pipeline or pipeline segment to an SPI, we only include deliveries into the pipeline. We do not include deliveries from the pipeline. One reason for this is that many deliveries from a pipeline are either into a citygate, or are made to end-users. Per our methodology, we do not include such deliveries, because our SPI prices are geared to measure the price of gas as close to the various unconventional production areas in our table as possible, and deliveries to local distribution companies and end-users tend to have charges over and above the intrinsic value of the gas being transported. The only deliveries we include in our survey are those that occur at pipeline interconnects, since that gas is a delivered-to-pipeline transaction

for the receiving pipeline. For example, gas shipped from Destin Pipeline into Florida Gas Transmission would be a delivered-to-pipeline transaction at Florida Gas, and would be included in our survey as a deal transacted into FGT, rather than as a transaction delivered from Destin.

The other reason we make this distinction is that many of the pipelines we include in our survey tend to receive the majority of their receipts in one area, and deliver most of their gas to another area where prices and basis differentials can be significantly different. For example, we believe Tiger Pipeline receives the majority of its receipts from the North Louisiana Haynesville Shale, but that gas is delivered along Tiger to the Perryville area in Northeast Louisiana, where prices tend to be different from those in Northwest Louisiana. Similarly, Fayetteville Express (built specifically to provide takeaway capacity from the Fayetteville Shale) transports gas from Arkansas to a pipeline interconnect in Mississippi, where prices also tend to be different. We default all delivered-to-pipeline transactions into these two pipelines in our respective N. La Haynesville and Fayetteville Shale SPI listings, but we do not include deliveries out of these pipelines into those respective indexes.

Only if Specified means that in some cases we will only include trades into a particular pipeline or pipeline segment if those trades have been specifically identified by our survey contributors as being within or adjacent to the counties we include for each SPI location. In other words, we do not automatically assume a generically labelled trade for an OIS pipeline was done at a particular SPI location. For example, National Fuel Gas receives gas from the NE PA Marcellus (through its interconnect with the Leidy Hub in Clinton County, PA), the SE PA Marcellus, and the Utica Shale in Pennsylvania. There is simply no way we can take an unspecified NFG trade and automatically assign it to any one of these SPI prices. We therefore exclude all NFG trades from our indices, unless the contributor of that trade to our price survey has identified that transaction as having been done within or adjacent to one of our various SPI county definitions.

SPI POINT-BY-POINT DESCRIPTIONS

GULF COAST

Barnett

Although the Barnett Shale is the oldest producing major U.S. unconventional play, measuring delivered-to-pipeline prices within the Barnett is a difficult task. The reason is that the overwhelming majority of pipelines that serve the counties that comprise the Barnett are intrastate lines, and this creates several challenges: 1.) pipeline flow data on intrastate pipelines are generally not available to the public, and 2.) spot market trading into the Texas intrastates is not very liquid, because these pipelines still retain their merchant function, and are therefore not completely open to third party shippers.

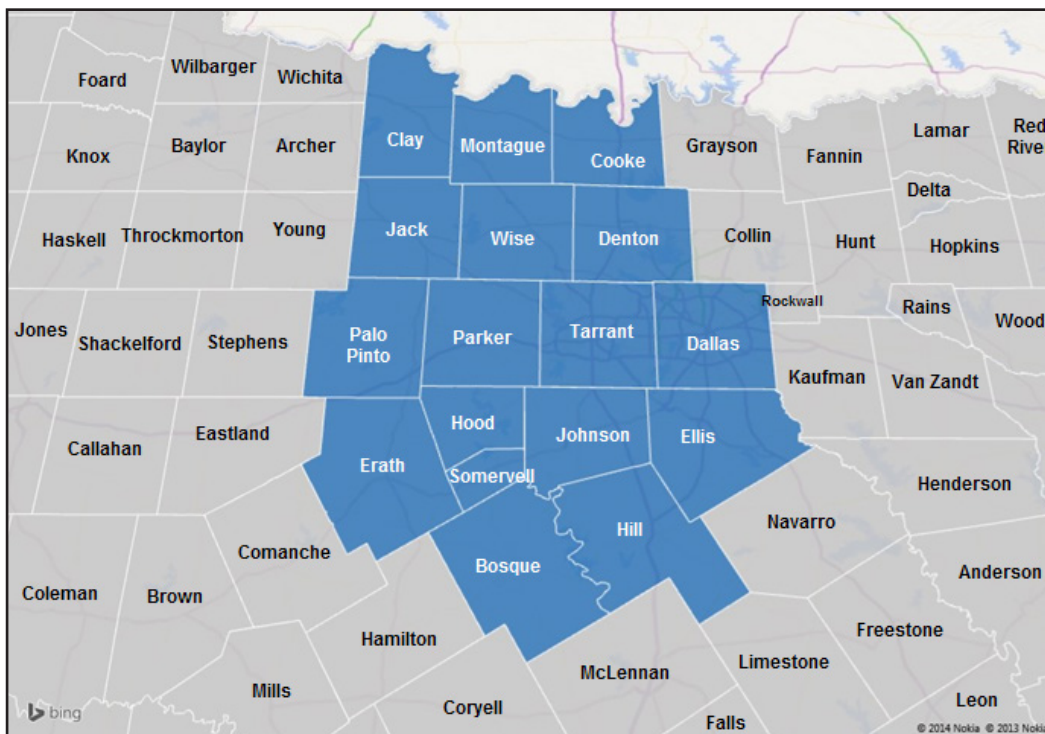
There simply are not enough spot market trades within the Barnett itself to support a daily index, so in order to increase liquidity, we augment the few sporadic direct Barnett trades we do receive with transactions into interstate pipelines that we believe transport Barnett production, but are located some

distance (yet as close as possible) to the Barnett. For example, we include some trades along NGPL TexOk in our Barnett Shale index, even though this pipeline segment is located several counties to the east of the Barnett region.

However, we believe our practice of including interstate pipeline trades that are not in the immediate vicinity of the Barnett is in fact largely consistent with how much of the gas in the Barnett is bought and sold. We believe the intrastate pipelines that serve the Barnett tend to buy gas at an interstate index and sell that gas at that interstate index plus a percentage markup, so we believe our including nearby interstate pipeline transactions is not only necessary to improve liquidity, but also reflective of actual trading activity in the region.

Counties¹

Texas – Bosque, Clay, Cooke, Dallas, Denton, Ellis, Erath, Hill, Hood, Jack, Johnson, Montague, Palo Pinto, Parker, Somervell, Tarrant, Wise



Barnett Pipeline Descriptions:

Pipeline/Hub	Default or OIS?	Description
Atmos Zone 3	Default	Atmos Zone 3 serves Nolan, Taylor, Coleman, Callahan, Jones, Haskell, Knox, Shackelford, Eastland, Erath, Hood, Johnson, and Ellis Counties, TX. Only a portion of these counties either comprise or are adjacent to the Barnett, but we believe the majority of receipts within this section of Atmos are indeed from the Barnett Shale area.
Atmos Zone 5	Default	Atmos Zone 5 lies within Erath, Palo Pinto, Parker, Wise, Tarrant, Dallas, Denton, Montague, and Clay Counties, TX, most of which are in the heart of the Barnett Shale.
Cleburne	Default	Cleburne, which is the origination point for several Energy Transfer pipelines built to move gas out of the Barnett, is located in Johnson County, TX, well within the boundaries of the play. We include all deals at Cleburne in our Barnett index.
Energy Transfer (ET Fuels System)	OIS	The ET Fuels systems connects to several key market hubs and production centers in Texas, most notably Waha (Permian Basin), Carthage (E. Tx Haynesville), and Katy. Since ET Fuels serves both the Permian Basin and the E. Tx Haynesville Shale, in addition to the Barnett, we cannot automatically assign any ET Fuels trades to a particular SPI, unless those transactions are specified as having occurred in or adjacent to a single basin.
EnLink North Texas Pipeline	Default	EnLink's North Texas Pipeline (NTP) is a gathering system that connects Barnett Shale production to interconnects with NGPL, HPL, Atmos, and Gulf Crossing. We include all deliveries from NTP to these pipelines.
Enterprise Products	OIS	The Enterprise Products Texas Intrastate Pipeline System covers numerous production areas in the state. As a result, we can only include those trades on EP that are labelled as having occurred within and adjacent to the counties that comprise the Barnett Shale.
Gulf Crossing	OIS	The only Gulf Crossing trades we include in our Barnett Index are receipts at Sherman from Enterprise, which occur in Grayson County, TX. Grayson County is adjacent to the Barnett.
Maypearl	Default	We include all trades specifically transacted at the Maypearl Compressor Station/pipeline interconnect on the Energy Transfer system in Maypearl, TX. Maypearl is located in Ellis County, TX, which is within the boundaries of the Barnett Shale.
NGPL Midcontinent	OIS	We include all NGPL Midcontinent receipts that occur in Montague and Wise Counties, TX.
NGPL TexOk A/G Line	Default	Per NGPL's tariff: "The A/G Line, an interconnection between the Amarillo Line and the Gulf Coast Line, is located in Carter, Murray, Johnston and Bryan Counties, Oklahoma, and Lamar, Red River, Franklin, Titus, Morris and Cass Counties, Texas." We believe the majority of activity on the A/G line is either the receipt of Barnett production from Texas Intrastate systems (albeit in several counties away from the Barnett), or occurs in counties that are adjacent to the formation. We therefore include all generic A/G Line trades in our Barnett Shale Index.

Pipeline/Hub	Default or OIS?	Description
NGPL TexOk (Gulf Coast Line) Trades Not Conducted on ICE	Default	As explained in the introduction to this section, we believe the lion's share of Barnett production is traded in the wholesale market at locations that are some distance from the Barnett itself. We further believe a major trading location for the Barnett is the Gulf Coast portion of NGPL's TexOk zone in East Texas, which also lies in the heart of the E Tx Haynesville Shale. Since we believe the majority of NGPL TexOk volumes are actually a combination of Barnett and Haynesville production, we assign NGPL TexOk Gulf Coast trades to both areas. We do this by defaulting all NGPL TexOk Gulf Coast trades conducted on the Intercontinental Exchange (ICE) to our E. TX Haynesville index, and all non-ICE NGPL TexOk Gulf Coast trades to our Barnett Shale listing.
Tolar Hub	Default	Located within the Barnett Shale in Hood County, TX, the Tolar Hub connects the Worsham-Steed Gas Storage facility to five natural gas pipelines. As explained earlier in the document, we include trades from storage facilities, provided they connect to two or more inter or intrastate pipelines.

Eagle Ford

The Eagle Ford Shale is similar to the Barnett Shale in that the majority of natural gas pipelines within its immediate borders are intrastate pipes, which means that measuring delivered-to-pipeline prices within the Eagle Ford itself is difficult. As explained in the Barnett Shale section above, trading activity within intrastate pipelines is simply not very liquid, so that means in order for us to have enough trading volumes to support an Eagle Ford index, we must venture outside of the counties that comprise and are adjacent to the formation.

The good news is we do not have to venture out very far. All the interstate pipelines that serve South Texas are close to the Gulf Coast shoreline, and those counties either directly border or tend to be no more than one additional county away from the Eagle Ford, so we do not believe that adding these interstate pipelines adds much in terms of extra delivery charges.

We have also elected to default all transactions that occur within these South Texas interstate pipelines to our Eagle Ford index, even though they may be more than one county away from the Eagle Ford, because of the growing presence of Eagle Ford production in the area. We believe these interstate pipelines were built primarily to handle production in the Gulf of Mexico and the onshore area south of what has become the Eagle Ford Shale and its adjacent counties. For example, in 1993 and 1998, combined production from the Gulf of Mexico and the non-Eagle Ford area South Texas onshore counties comprised between 58%-60% of total South Texas onshore and offshore natural gas production. Likewise, production in the Eagle Ford Shale area was 38%-40% in those two years. However, gas production in the Eagle Ford Shale area grew to ~77% of South Texas onshore and offshore production in 2013, and we expect this percentage to grow over time, as drilling in the Eagle Ford continues to dominate local onshore and offshore activity.

SHALE DAILY METHODOLOGY

Estimated Onshore & Offshore South Texas NatGas Production (Mcf) 1993-2013

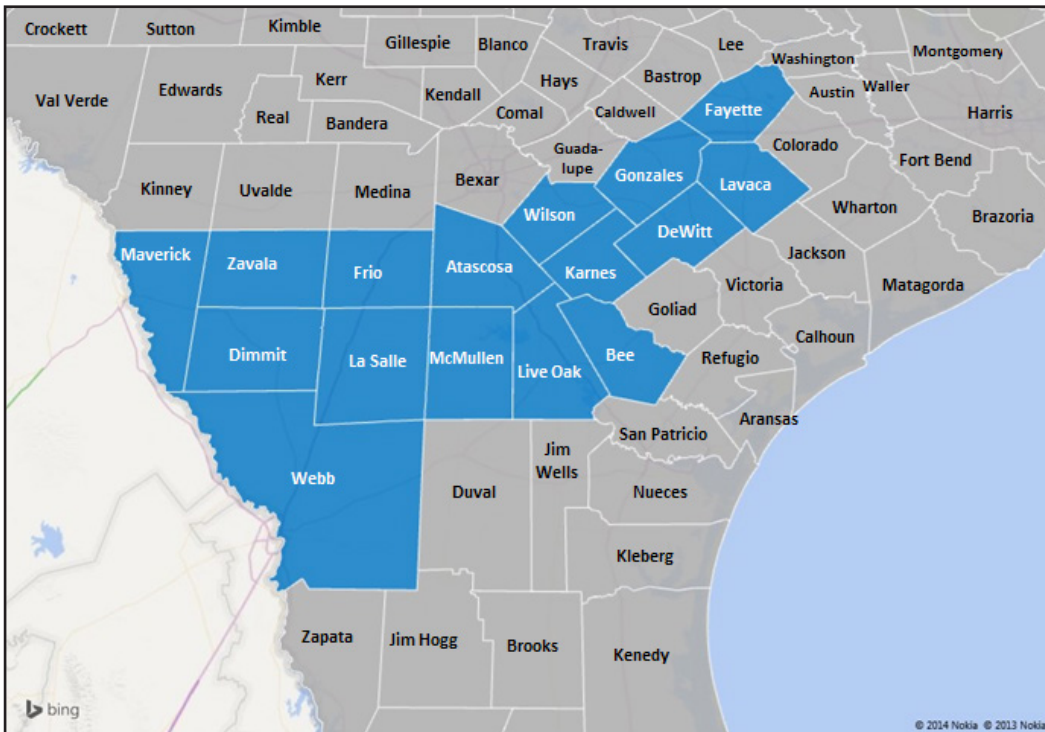
Area	1993 (Mcf)	% of Total	1998 (Mcf)	% of Total	2003 (Mcf)	% of Total	2008 (Mcf)	% of Total	2013 (Mcf)	% of Total
Eagle Ford Counties	713,688,190	22.0%	637,430,105	19.7%	542,028,442	17.7%	487,318,555	20.5%	1,727,088,823	67.0%
Adjacent Counties	653,128,115	20.2%	651,642,139	20.2%	617,313,479	20.1%	645,498,923	27.1%	243,845,722	9.5%
Other S. Tx Onshore	507,275,215	15.7%	697,246,644	21.6%	824,321,148	26.9%	658,533,129	27.7%	284,107,120	11.0%
Texas State Offshore	87,635,558	2.7%	60,692,211	1.9%	53,950,767	1.8%	49,316,180	2.1%	15,728,478	0.6%
Federal Texas Offshore*	1,276,009,999	39.4%	1,180,967,000	36.6%	1,026,702,850	33.5%	539,241,686	22.7%	305,646,604	11.9%
TOTAL	3,237,737,077	100.0%	3,227,978,099	100.0%	3,064,316,686	100.0%	2,379,908,473	100.0%	2,576,416,747	100.0%

*1993 & 1998 are actual production statistics from the EIA. 2003, 2008, and 2013 stats are NGI estimates based on a pro-rata share of actual 1998 Texas GOM to overall 1998 Federal GOM production of 23.3%.

Source: EIA, NGI's Shale Daily estimates

Counties¹

Texas – Atascosa, Bee, DeWitt, Dimmit, Fayette, Frio, Gonzales, Karnes, LaSalle, Lavaca, Live Oak, Maverick, McMullen, Webb, Wilson, Zavala



Eagle Ford Pipeline Descriptions:

Pipeline/Hub	Default or OIS?	Description
Enterprise Products	OIS	We estimate that Enterprise Products has the largest footprint within the Eagle Ford, but because the system serves other parts of Texas, we can only include those trades that are designated as having occurred within or adjacent to the counties that make up the Eagle Ford in this index.
HPL	OIS	As written on the Energy Transfer website, "the [HPL] system has access to multiple sources of historically significant natural gas supply reserves from South Texas, the Gulf Coast of Texas, East Texas and the western Gulf of Mexico, and is directly connected to major gas distribution, electric and industrial load centers in Houston, Corpus Christi, Texas City and other cities located along the Gulf Coast of Texas." Since we believe a large percentage of activity on the portion of the HPL system that serves South Texas are deliveries to end-users, which we by definition do not include in our SPI prices, we will only include HPL deals in our Eagle Ford index if those transactions are deliveries into HPL that occur within or adjacent to the counties that comprise the play. Obviously, we will not include transactions from the portion of HPL that Energy Transfer plans to convert to crude oil service in 2014.
Kinder Morgan Tejas	OIS	Kinder Morgan Tejas is an intrastate pipeline that serves South and East Texas, and runs through several unconventional formations, including the Eagle Ford, the Eaglebine, and the E. Tx Haynesville Shale. Since Tejas serves multiple plays, we cannot assign trades along the system to the Eagle Ford, unless specifically noted by the parties involved in the transaction.
Kinder Morgan Texas	OIS	Kinder Morgan Texas is a Texas intrastate pipeline system that connects production from the Permian Basin and South Texas (including the Eagle Ford) to the industrial end-user heavy Houston/Katy Gulf Coast Area. Because KM Texas serves multiple areas, we cannot assign trades along this pipeline to the Eagle Ford, unless those deals were pegged as occurring within or adjacent to the counties that make up the play.
NGPL S. Tx	Default	As defined in our <i>NGI's Price Index Methodology</i> for our regular <i>Gas Price Index</i> newsletters, this point includes deliveries into NGPL's South Texas Receipt & Delivery Zone (so named even though nearly all transactions in this portion of NGPL are receipts), which includes all points southwest of Compressor Station 302 in Montgomery County, TX down toward the Texas/Mexico border.
Tennessee Zn 0 South	Default	From our <i>NGI's Price Index Methodology</i> : Tennessee Zone 0 South begins near the Texas/Mexico border in McAllen County, TX and ends at the East Bernard (Station 17) Compressor Station in Wharton County, TX. Tennessee Pipeline split what was previously Zone 0 into Zone 0 South and North effective November 1, 2009.

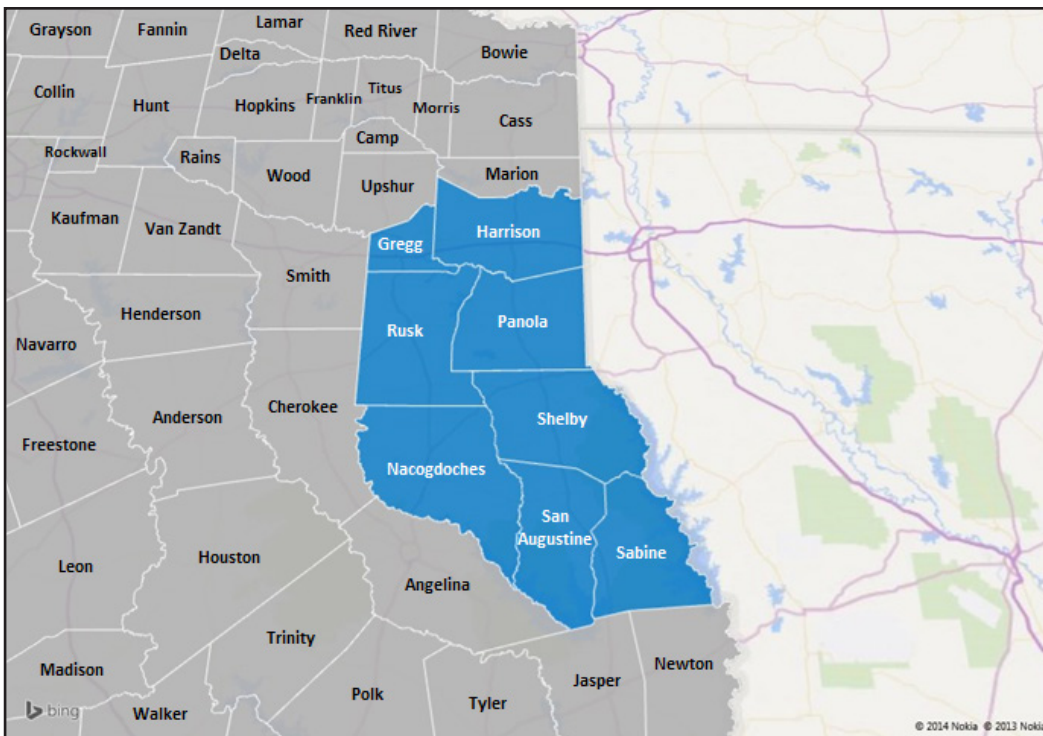
Pipeline/Hub	Default or OIS?	Description
TETCO S. Tx	Default	Also from our <i>NGI's Price Index Methodology</i> : Comprised of transactions within the Texas Eastern "Access Zone S. TX." Includes 1.) the line that runs from the Hagist Ranch Compressor Station to the suction side of the Huntsville, TX Compressor Station, 2.) the section that begins near the U.S./Mexico border and extends along the Gulf Coast of Texas to the suction side of Vidor, TX, and 3.) the lateral that connects the two sections referenced above between Provident City and Blessing.
Transco McMullen Lateral	Default	We include all trades on Transco's McMullen Lateral, which runs through McMullen, Live Oak, Bee, Goliad, Victoria, Jackson, and Wharton Counties, TX. The McMullen Lateral is part of Transco Zone 1, which we also default into our Eagle Ford index.
Transco Zn 1 (excluding deals at Station 30)	Default	We include all trades within Transco Zone 1 in our Eagle Ford Index, unless those trades occur at the Station 30 pooling point. We exclude Station 30 specific trades because we believe that trades at this location (which marks the transition between Transco Zones 1 and 2 in Wharton County, TX, and is a bit farther downstream than the Eagle Ford area) tend to carry some extra fees, or trade at a bit of a location premium, over and above the trades within the rest of Transco Zone 1.

Haynesville – E. TX

We split the Haynesville Shale into separate East Texas and North Louisiana indexes for two reasons. One is that gas in East Texas traditionally has traded at a slight discount to that in North Louisiana, although that could change in the years ahead, especially as more pipelines that once moved gas from the Gulf Coast to the Mid-Atlantic and Northeast reverse direction. The other is that the Texas side of the Haynesville play is largely thought to be outside the core area, has access to more pipeline takeaway capacity, particularly from the Texas Intrastates, and is subject to a different set of regulatory rules than those on the Louisiana side of the formation.

Counties¹

Texas – Gregg, Harrison, Nacogdoches, Panola, Rusk, Sabine, San Augustine, Shelby



Haynesville – E. TX Pipeline Descriptions:

Pipeline/Hub	Default or OIS?	Description
Atmos Zone 6	OIS	Atmos Zone 6, which lies in Northeast Texas, serves a number of different production areas. We include transactions that occur within Rusk, Gregg, and Panola Counties, TX in our E. Tx Haynesville index.
Carthage	Default	The Carthage Hub is located in Panola County, Texas, right in the heart of the Texas side of the Haynesville.
Enable CP	OIS	Enable CP receipts occur in both the Texas and Louisiana portions of the Haynesville, so we only include Enable CP receipts in Harrison and Panola Counties, TX in this index.
Enable South	OIS	Enable South stretches across several states, including Texas, Louisiana, and Arkansas. As such, we only include deliveries into Enable South that occur in Texas within Gregg, Harrison, and Panola Counties, which are part of the Haynesville, and in Marion County, which is adjacent to the Haynesville, in our Haynesville E. Tx index.
Enterprise Products	OIS	The Enterprise Products Texas Intrastate Pipeline System covers numerous production areas in the state. As a result, we can only include those trades on EP that are labelled as having occurred within and adjacent to the counties that comprise the Texas side of the Haynesville Shale.

SHALE DAILY METHODOLOGY

Pipeline/Hub	Default or OIS?	Description
Gulf South Area 8	Default	Gulf South Area 8 serves Anderson, Angelina, Cherokee, Gregg, Harrison, Houston, Nacogdoches, Panola, Polk, Rusk, Shelby, Smith, Van Zandt, Walker, and Wood Counties, TX, and Bossier and Caddo Parishes, LA. Although not all of these are prospective for the E. Tx Haynesville, we believe the majority of gas that flows within Area 8 does in fact come from the E. Tx. Haynesville area. We therefore default all reported trades in Area 8 to our E. Tx Haynesville index.
Gulf South Area 16	Default	Gulf South's Area 16 serves only one county: Panola County, TX, which is well within the E. Tx Haynesville.
Gulf South Zone 1	OIS	Gulf South Zone 1 stretches from Wharton County, TX through the heavily industrial Houston/Katy area, and on through East Texas into North Louisiana. As a result, we cannot default all trades within GS Zone 1 to our E. Tx Haynesville index. However, we do include any GS Zone 1 receipts that are marked as having occurred in Angelina, Gregg, Harrison, Nacogdoches, Panola, Rusk, and Shelby Counties, TX.
HPL East Texas Pool	Default	We believe the majority of activity along the East Texas Pool of the Houston Pipe Line (HPL) system is in counties that either make up or are adjacent to the Texas side of the Haynesville Shale, hence our decision to default all HPL East Texas Pool trades in this index.
Kinder Morgan Tejas	OIS	Kinder Morgan Tejas is an intrastate pipeline that serves South and East Texas, and runs through several unconventional formations, including the Eagle Ford, the Eaglebine, and the E. Tx Haynesville Shale. Since Tejas serves multiple plays, we cannot assign trades along the system to our E. Tx Haynesville index, unless specifically noted by the parties involved in the transaction.
MRT Field Zone	OIS	Although nearly all of MRT in its Field Zone is located in Louisiana and Arkansas, a small portion of MRT extends into Harrison County, TX. We only include MRT transactions within Texas in our E. Tx. Haynesville index.
NGPL TexOk (Gulf Coast) (ICE Deals only)	Default	We believe trading activity along the Gulf Coast section of NGPL's TexOk Zone largely occurs within and adjacent to the counties that comprise the E. Tx Haynesville Shale. However, because of the particular nuances of the Barnett Shale (as explained in the Barnett section of this methodology), we believe the NGPL TexOk Gulf Coast leg represents a combination of Barnett and E. Tx Haynesville activity, so we split TexOk Gulf Coast trades between these two formations. We assign all NGPL TexOk trades conducted on the Intercontinental Exchange (ICE) to the E. Tx Haynesville, and all non-ICE trades in this part of NGPL to the Barnett Shale.
Tennessee Zone 0 North	OIS	We include all receipts into Tennessee Zone 0 North that take place in Panola County, TX in our E. Tx Haynesville index.

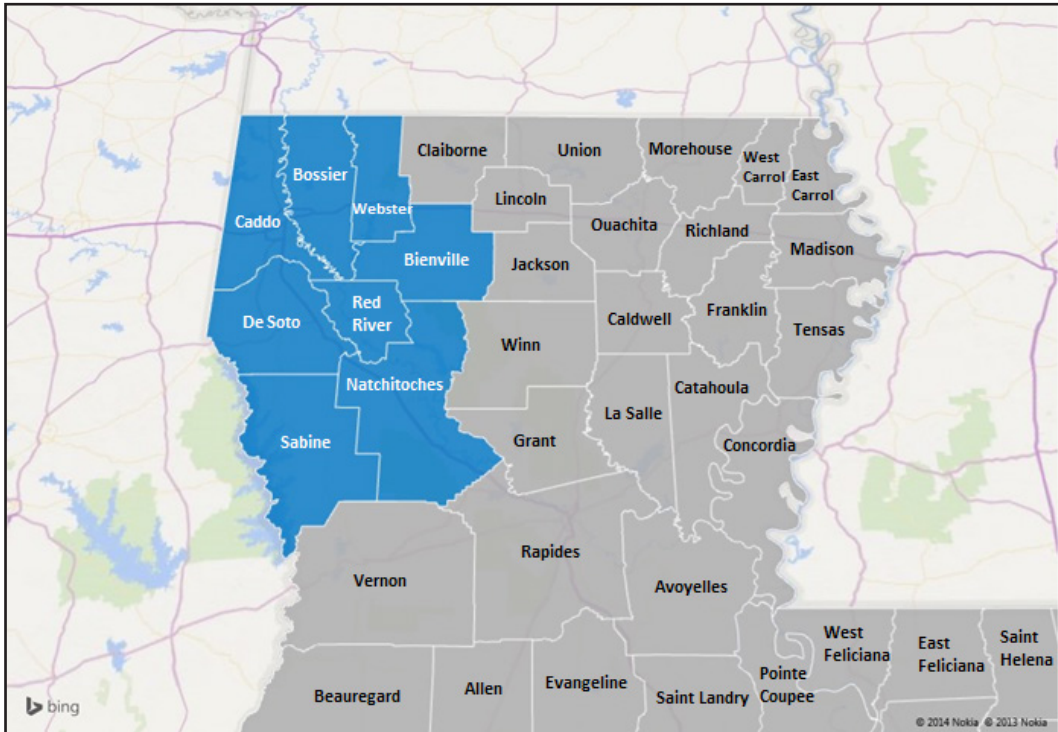
Pipeline/Hub	Default or OIS?	Description
TETCO E. TX	Default	Although Texas Eastern Transmission's Zone "ETX" serves both the Texas and Louisiana sides of the Haynesville Shale, we believe the majority of the receipt volumes into the ETX segment of TETCO come from Angelina, Gregg, Harrison, Marion, Nacogdoches, Panola, Rusk, San Augustine, and Shelby Counties, TX, all of which either make up and are adjacent to the Texas portion of the play. As a result, we default all TETCO ETX trades to this index.
Texas Gas Transmission Zn 1	OIS	We only include the portion of TGT Zn 1 that extends into Panola County, TX. These trades are likely to be conducted at the Carthage Hub, and are likely submitted to us as having occurred at Carthage.

Haynesville – N. LA

The North Louisiana portion of the Haynesville Shale houses what many consider to be the "core" area of the play. We separated our North Louisiana Haynesville index from our East Texas Haynesville posting for the reasons listed in our Haynesville – E. TX description.

Parishes¹

Louisiana – Bienville, Bossier, Caddo, De Soto, Natchitoches, Red River, Sabine, Webster



Haynesville – N. LA Pipeline Descriptions:

Pipeline/Hub	Default or OIS?	Description
Acadian Gas System	OIS	An intrastate pipeline that serves a large portion of Louisiana. Acadian includes Haynesville Extension Pipelines that we include in our index when those deals are specifically labeled as such.
Enable CP	OIS	Enable CP receipts occur in both the Texas and Louisiana portions of the Haynesville, so we cannot assign Enable CP receipts to either index automatically. We only include Enable CP receipts within Bienville, Bossier, Caddo, De Soto, and Red River Parishes, LA in this posting.
Enable South	OIS	Although Enable's South Pooling Area serves Bossier, Caddo, Claiborne, De Soto, Lincoln, and Webster Parishes, LA, which are all within or adjacent to the N. La Haynesville, the Southern Pool also extends into the Haynesville in Texas, the Lower Smackover/Brown Dense area in Northeastern Louisiana, as well as the southern half of Arkansas. As a result, we only include receipts that occur within the aforementioned Haynesville and adjacent parishes in our N. La Haynesville index.
Gulf South Area 7	OIS	Gulf South's Area 7 receives gas in both the North Louisiana Haynesville and the Delhi/Perryville area in Northeast Louisiana. Because of the distance and basis differentials between these two areas, we only include Gulf South Area 7 receipts in our N. La. Haynesville index if they are specifically labelled as having been transacted in Bienville, Caddo, Claiborne, Natchitoches, Red River, Sabine, and Webster Parishes, LA.
Gulf South Area 17	OIS	This is another pipeline segment on Gulf South that serves both the Haynesville and the Delhi/Perryville area, and as previously mentioned, we therefore cannot automatically assign trades from Area 17 to our N. La Haynesville index. We only include Area 17 receipts within Bienville, De Soto, and Red River Parishes, LA in this posting.
Gulf South Area 20	Default	Area 20 on Gulf South serves Bienville, Bossier, De Soto, Red River, Union, and Webster Parishes, LA. All but Union Parish are part of the N. La Haynesville.
Gulf South Zone 1	OIS	Gulf Coast Zone 1 serves a variety of areas with unconventional production in Texas and Louisiana, so we cannot automatically assign GS Zone 1 receipts to any one SPI formation. However, we do include GS Zone 1 receipts that occur in Caddo Parish, LA in our N. La Haynesville index.
Gulf South Zone 2	OIS	Zone 2 in Gulf South serves a variety of production areas, including the unconventional N. La Haynesville, TMS, and the Lower Smackover/Brown Dense, and more conventional production along the Gulf Coast and in the Gulf of Mexico. As a result, we only include GS Zone 2 receipts within Bienville, Caddo, Claiborne, De Soto, Natchitoches, Red River, Sabine, and Webster Parishes, LA in this index.
LIG	OIS	Louisiana Intrastate Gas serves a large portion of Louisiana, so we cannot default trades to any one portion of the state. We only include those receipts labelled as occurring in or adjacent to the parishes that make up the play.

SHALE DAILY METHODOLOGY

Pipeline/Hub	Default or OIS?	Description
MRT Field Zone	OIS	MRT does indeed traverse through the Haynesville in North Louisiana, but because the MRT Field Zone extends through several producing areas in North Louisiana, Texas, and Arkansas, we only assign those transactions along the pipeline that are conducted in Bossier, Caddo, Claiborne, and Webster Parishes in this index.
RIGS	Default	As written on the Regency Energy Partners website, "RIGS primarily transports natural gas produced in northern Louisiana for delivery to end-users, intrastate pipelines and interstate pipelines." The overwhelming majority of that production is the Haynesville Shale, so we automatically include all gas that is delivered into RIGS in our N. La Haynesville index.
Sonat Zone 0	OIS	We only include the portion of Sonat Zone 0 that extends into Northwest Louisiana. More specifically, we include receipts into Sonat within Bienville and De Soto Parishes, LA in this posting.
Tennessee Zone 0 North	Default	As written in our NGL's Price Methodology for our Gas Price Index newsletters, "Tennessee Zone 0 North picks up at the East Bernard (Station 17) Compressor Station in Wharton County, TX, and continues on to Compressor Station 40 in Natchitoches, LA. Zone 0 North also includes the Carthage Line No. 701-1 lateral that starts in Carthage, TX and extends to Natchitoches, LA." This route traverses through the emerging Eaglebine area, as well as both the Texas and Louisiana sides of the Haynesville. However, we believe the majority of transactions along this portion of the pipeline in fact come from the North Louisiana Haynesville along the portions of the pipe that lie in De Soto, Natchitoches, and Sabine Parishes, and for that reason, we default all trades labeled at Tennessee Zone 0 North in our N La Haynesville index.
Tennessee Zone 1 100 Leg	Default	Tennessee Zone 1 100 Leg begins in Natchitoches Parish, LA, and extends through Mississippi and Tennessee to the Kentucky border. Despite covering such a large area, we believe the vast majority of deliveries into this segment of Tennessee Pipeline actually occur within Bienville and Natchitoches Parishes, LA, both of which are part of the Haynesville Shale. As a result, we default all Tennessee Zone 1 100 Leg receipts to our N LA Index. We recognize, however, there are a few receipt points within Zone 1 100 Leg that are significantly downstream of the Haynesville Shale in Northeast Louisiana, Mississippi, and Tennessee. Such transactions tend to trade at higher prices than those receipts in the Haynesville, but we believe the vast majority of these higher price receipts are caught and weeded out by our three standard deviations screen.
TETCO E. TX	OIS	Although we default all TETCO E. TX trades to the East TX Haynesville, the pipeline does receive gas within Bienville, Bossier, Caddo, and De Soto Parishes, LA. We assign any trades specifically marked as having been transacted in these parishes to our Haynesville N. LA index.

Pipeline/Hub	Default or OIS?	Description
Texas Gas Transmission Zn 1	OIS	TGT Zn 1 serves a number of unconventional formations, including the Texas and Louisiana sides of the Haynesville Shale, along with the Fayetteville Shale in Arkansas. Because of this, we only assign TGT Zn 1 trades to our N. La Haynesville index if they are labelled as having been conducted along the portion of the pipeline that is housed in Caddo, Bossier, Webster, Bienville and Claiborne Parishes, LA.
Tiger Pipeline	Default	Even though Tiger Pipeline connects with the Carthage Hub in Panola County, TX, which is part of the E. Tx Haynesville, we believe the overwhelming majority of receipts into Tiger occur in Bienville, Caddo, De Soto, and Red River Parishes, LA, all of which are part of the Haynesville Shale. Note we only include Tiger receipts in our N. La Haynesville index, since all deliveries along Tiger occur in and around the Perryville Hub in Northeast LA, which is some distance and oftentimes exhibits a different basis differential from the Haynesville.

Permian Basin

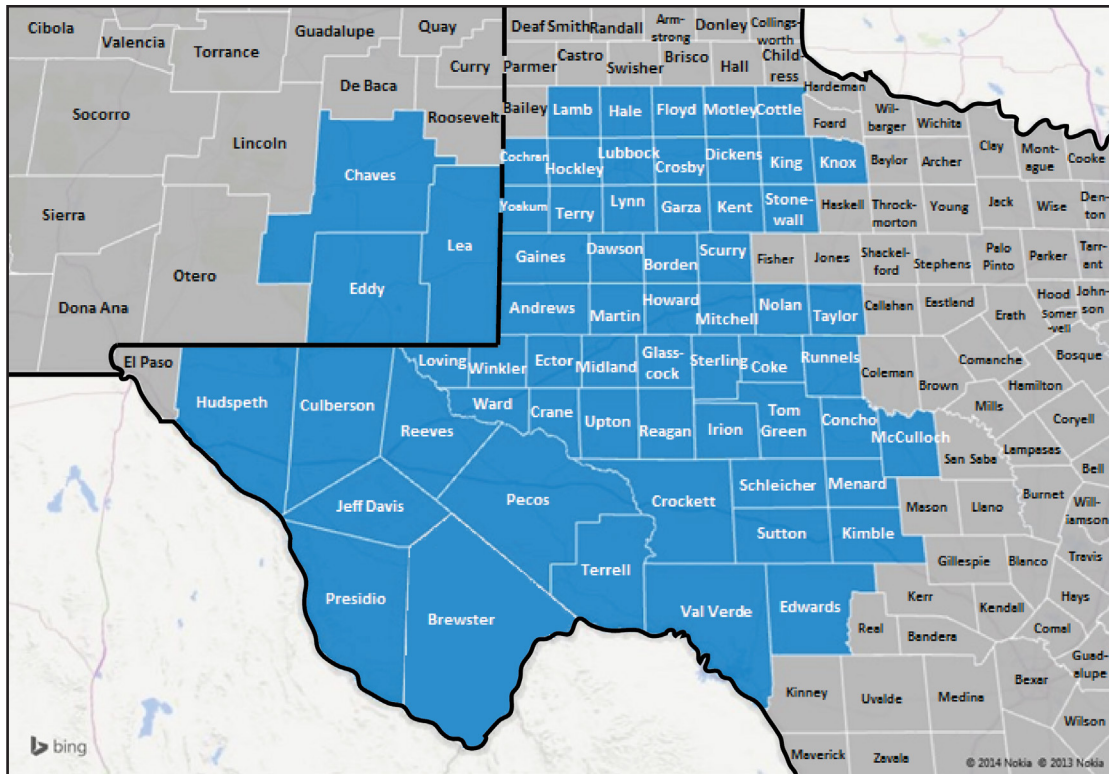
There appears to be some disagreement among several prominent sources as to which counties should be included in the Permian Basin. The Railroad Commission of Texas (RRC) includes all counties within its Districts 7C, 8, and 8A in the varying production and other operating statistics that appear on the Permian Basin portion of its webpage, yet it includes a different slate of counties in its official definition of the play on that same site. The U.S. Energy Information Administration assumes its own mix of counties in its production estimate of the play, and the Permian Basin Coalition uses a slightly different combination as well.

Our definition of which counties are included in the Permian appear below, and are based on current and historical drilling and permitting activity:

Counties¹

New Mexico – Chaves, Eddy, Lea

Texas – Andrews, Borden, Brewster, Cochran, Coke, Concho, Cottle, Crane, Crockett, Crosby, Culberson, Dawson, Dickens, Ector, Edwards, Floyd, Gaines, Garza, Glasscock, Hale, Hockley, Howard, Hudspeth, Irion, Jeff Davis, Kent, Kimble, King, Knox, Lamb, Loving, Lubbock, Lynn, Martin, McCulloch, Menard, Midland, Mitchell, Motley, Nolan, Pecos, Presidio, Reagan, Reeves, Runnels, Schleicher, Scurry, Sterling, Stonewall, Sutton, Taylor, Terrell, Terry, Tom Green, Upton, Val Verde, Ward, Winkler, Yoakum



Permian Basin Pipeline Descriptions:

Pipeline/Hub	Default or OIS?	Description
Atmos Zone 1	Default	Zone 1 lies within Pecos County, TX.
Atmos Zone 2	Default	Zone 2 extends from Pecos & Ward Counties, TX, into Crane, Ector, Midland, Glasscock, Sterling, Mitchell, and Nolan Counties, TX. All of these counties are within our definition of the Permian Basin.
El Paso Permian (Keystone, Plains, Waha Pools)	Default	All transactions with El Paso Natural Gas' Keystone, Plains, & Waha Pools.
El Paso Permian (Other)	OIS	We include any receipts that are outside of El Paso Natural Gas' Keystone, Plains, & Waha Pools that are still within the Texas and New Mexico counties that comprise our definition of the Permian Basin in this index.
Energy Transfer Fuel System	OIS	The ET Fuels systems connects to several key market hubs and production centers in Texas, most notably Waha (Permian Basin), Carthage (E. Tx Haynesville), and Katy. Since ET Fuels serves the Permian Basin and the Barnett and E. Tx Haynesville shales, in addition to other producing regions, we cannot automatically assign any ET Fuels trades to the Permian, unless those transactions are specified as having occurred in or adjacent to that basin.
Enterprise Texas Pipeline	OIS	Includes any deals within the portion of Enterprise Texas Pipeline that serves the Permian Basin.

Pipeline/Hub	Default or OIS?	Description
Kinder Morgan Texas Pipeline	OIS	Kinder Morgan Texas is another large intrastate pipeline system that connects production from the Permian Basin and South Texas (including the Eagle Ford) to the heavy Houston/Katy Gulf Coast Area. Because KM Texas serves multiple areas, we cannot assign trades along this pipeline to the Permian, unless those deals were pegged as occurring within or adjacent to the counties that make up the play.
NGPL Permian Zone	Default	We include all receipts within NGPL's Permian Receipt & Delivery Zone, which consists of all facilities south of Station 112 in Moore County, TX on the Amarillo Line.
Northern Natural 1-7 Pool	Default	Includes all deliveries into NNG's Mileage Indicator Districts (MIDs) 1-7. MIDs 1-7 encompass the portion of NNG that lies south of the terminus of MID 7 in Armstrong County, TX. Most of this area encompasses the Permian Basin.
Oasis Pipeline	OIS	Oasis connects Waha to Katy and its surrounding market hubs. We will only include receipts into Oasis in and adjacent to the Permian Basin within our Permian Index.
Oneok Westex Transmission	OIS	Oneok WestTex Transmission is a Texas Intrastate pipeline that transports natural gas between Mid-Continent pipes in the Texas Panhandle and those that serve the Waha (Permian) area. We only include those transactions that fall within the counties that comprise our definition of the Permian Basin.
Transwestern (Central & West Texas Pools)	Default	Includes transactions within Transwestern's West Texas and Central Pools. These two zones include transactions at all points along the West Texas Lateral between Station 8 in New Mexico and the terminus of the West Texas Lateral in Texas, and the portion of the Panhandle Lateral between Compressor Stations P-1 and Station 9.
Waha Hub	Default	Contains transactions at the Waha Hub in Pecos County, TX, which lies within the Permian Basin.

Tuscaloosa Marine Shale

The Tuscaloosa Marine Shale is more of an emerging crude oil play, but there is some associated gas production in this formation as well.

Parishes/Counties¹

Louisiana – Allen, Avoyelles, Beauregard, Catahoula, Concordia, East Baton Rouge, East Feliciana, Evangeline, Grant, LaSalle, Livingston, Natchitoches, Point Coupee, Rapides, Sabine, St. Helena, St. Landry, St. Tammany, Tangipahoa, Vernon, West Feliciana, Washington.

Mississippi – Adams, Amite, Franklin, Pike, Walthall, Wilkinson



Tuscaloosa Marine Shale Pipeline Descriptions:

Pipeline/Hub	Default or OIS?	Description
ANR Zone 2	OIS	ANR Zone 2 (also known as the Southeast Southern area of the pipeline) extends from southern Louisiana into Kentucky, and one of the few receipt points the pipe has in the Tuscaloosa Marine Shale occurs at the Pine Prairie Energy Center, which we include in a separately traded point. However, there are a handful of other receipt points along ANR Zone 2 in Central Louisiana that do skirt the TMS, and we include these in our index.
Columbia Gulf Mainline	OIS	Columbia Gulf Mainline encompasses the portion of the Columbia system between Rayne in Acadia Parish, LA and the Mississippi/Tennessee border. We estimate that only a small percentage of Columbia Gulf Mainline volumes are transacted in and around the Tuscaloosa Marine Shale, but we do include those Columbia receipts that occur within Evangeline, Iberia, and Rapides Parishes, LA in our TMS listing.
Florida Gas Zone 2	Default	Florida Gas Zone 2 extends through Acadia, Assumption, Calcasieu, East Baton Rouge, Iberville, LaFayette, Pointe Coupee, St. Landry, Vermilion, and West Baton Rouge Parishes, LA. We believe the overwhelming majority of deliveries into FGT Zone 2 are either within or adjacent to the counties that comprise the TMS, hence our decision to default all reported FGT Zone 2 trades to this posting.

SHALE DAILY METHODOLOGY

Pipeline/Hub	Default or OIS?	Description
Florida Gas Zone 3	OIS	FGT Zone 3 begins in East Baton Rouge Parish, LA, and extends through Mississippi, Alabama, and into Florida. Given the wide expanse of this service area, it is no surprise that the majority of flows along FGT Zone 3 tend to occur outside of the TMS area. However, we do include all FGT Zone 3 receipts within East Baton Rouge, St. Helena, and Washington Parishes, LA in our TMS price listing.
Gulf South Area 4	Default	GS Area 4 is located in Ascension, Assumption, East Baton Rouge, Iberville, Livingston, St. Helena, St. Martin, and Tangipahoa Parishes, LA. All these Parishes (except for St. Martin) are either part of or adjacent to the TMS, so we therefore include all Area 4 receipts in this index.
Gulf South Zone 3	OIS	Gulf South's Zone 3 is almost completely comprised of the pipeline's Areas 1 and 4. Area 1 does not receive much gas in the TMS area, so we cannot automatically assign all GS Zone 3 deals into this index.
Pine Prairie Energy Center	Default	The Pine Prairie Energy Center (PPEC) connects with eight different inter and intrastate pipelines in Evangeline Parish, LA. Although this is primarily a storage facility, we include PPEC deals in our TMS Index because the facility connects with multiple pipelines, per the inclusion criteria we listed earlier in this document.
Sonat Zone 0	OIS	Sonat Zone 0 serves both the northern and southeast portions of Louisiana, which means it draws production from the Haynesville, TMS, and more conventional areas. As such, our TMS index only reflects Zone 0 receipts that occur within Iberville (adjacent to the TMS), Livingston, St. Tammany, Tangipahoa, and Washington Parishes, LA.
Sonat Zone 1	OIS	Sonat Zone 1 is largely located within Mississippi, with portions of the system in the Perryville/Delhi area of Northern Louisiana, as well as Washington Parish at the LA/MS border. We only include Sonat Zone 1 receipts within Washington Parish, LA, and Walthall County, MS in our TMS index.
Tenn S LA 800 Leg	OIS	Activity along Tennessee Pipeline's S LA 800 Leg is largely focused in the Gulf of Mexico and along the Gulf Coast, but we do include 800 Leg receipts within Evangeline and Rapides Parishes, LA in our TMS Index.
TETCO E. LA	OIS	We believe the majority of volumes along the "ELA" section of Texas Eastern Transmission occur in Louisiana to the southeast of the TMS, so we do not automatically assign all TETCO E LA trades to our TMS index. However, we do include any TETCO E LA deals that are conducted within Iberville, Point Coupee, and St. Landry Parishes in Louisiana, and Wilkinson County, Mississippi.
TETCO W. LA	OIS	Most of TETCO W. LA serves southwest Louisiana, some distance from the TMS. However, we do include deliveries into TETCO from other pipelines in Evangeline and St. Landry Parishes, LA.

Pipeline/Hub	Default or OIS?	Description
Transco St. 65	Default	Transco Station 65 is located in St. Helena Parish, LA, which is well within the boundaries of the Tuscaloosa Marine Shale. Several things of note about our including St. 65 deals in our TMS index: 1.) St. 65 is part of Transco Zone 3, and as stated below, we do not automatically include all of Transco Zone 3 deals in this index. However, St. 65 deals are usually reported to us separately from Zone 3 deals, so we are far more comfortable including all St. 65 deals, since we know St. 65 is definitely within the confines of the TMS, 2.) We do not include Transco St. 30 deals in our Eagle Ford Index, because as explained in that section, St. 30 lies some distance outside the Eagle Ford, and trading at that point usually has extra charges baked in. However, we are comfortable including St. 65 trades in our TMS index, because there are several other counties/parishes within the TMS that are a bit farther "downstream" of where St. 65 is situated in Evangeline Parish. As such, we do not believe including St. 65 introduces any additional delivery related charges over and above those already factored into transactions that are conducted at these more downstream TMS locations.
Transco Zn 3	OIS	Transco Zone 3 runs between Beauregard and St. Helena Parishes, LA. Given the large amount of activity within Transco Zn 3 in the Southeast and offshore portions of the state, we cannot default all trades conducted within Zone 3 to our TMS index. However, we do include Zone 3 trades that are delivered into Transco in East Baton Rouge, East Feliciana, Evangeline, Livingston, Pointe Coupee, St. Helena, and St. Landry Parishes, LA.

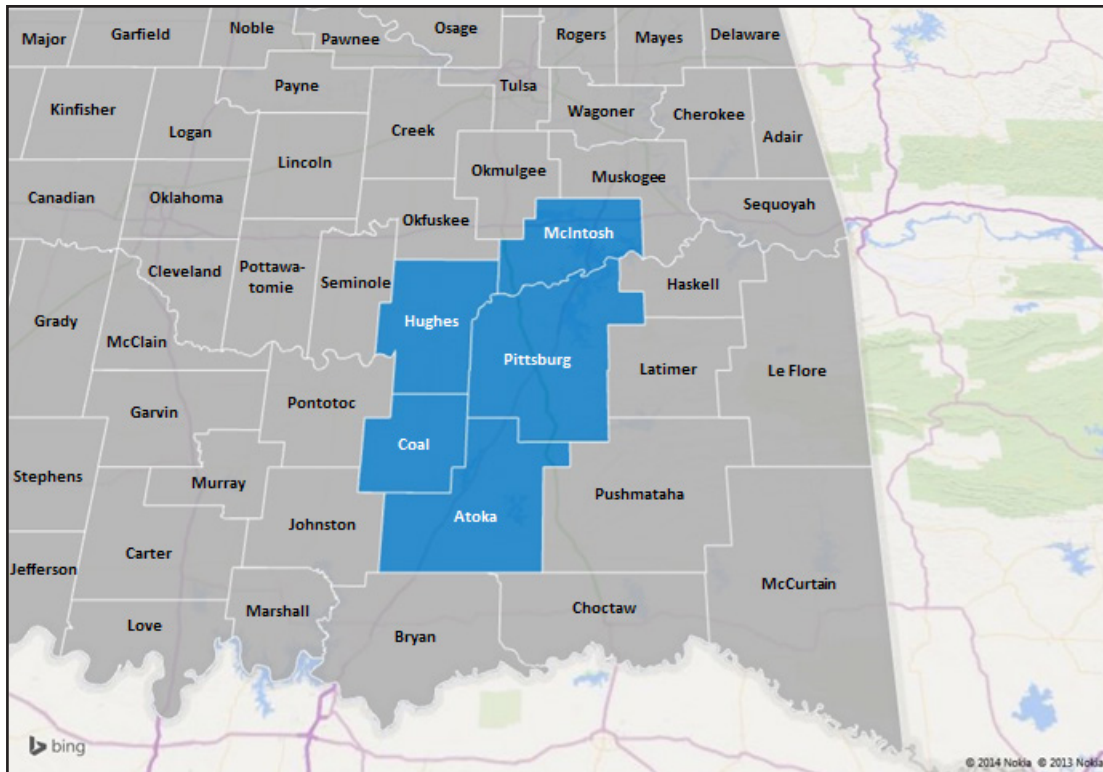
MIDCONTINENT

Arkoma-Woodford

Located in Southeastern Oklahoma, the Arkoma-Woodford Shale is one of the more established unconventional producing formations in the United States.

Counties¹

Oklahoma – Atoka, Coal, Hughes, McIntosh, Pittsburg



Arkoma-Woodford Pipeline Descriptions:

Pipeline/Hub	Default or OIS?	Description
Arkoma Connector	Default	Markwest's Arkoma Connector Pipeline has one receipt point, in Coal County, OK, and delivers this gas roughly 50 miles away to three interconnects in nearby Bryan County, TX.
Enable Neutral Pooling Area (a.k.a. Flex Pool)	Default	100% of the Enable Neutral Pooling area is located either directly within or just adjacent to the Arkoma-Woodford Shale.
Enable West 2	OIS	While we default all Enable West 2 Pooling Area receipts to the Cana-Woodford, we will include those West 2 Pool receipts that are specifically marked as having occurred in Hughes County, OK in our Arkoma-Woodford index.
Enogex East Pool	Default	Although Enogex East serves a vast portion of Eastern Oklahoma, the overwhelming majority of activity along Enogex East occurs within Coal, Haskell, Hughes, Latimer, and Pittsburg Counties, OK, all of which are either within or adjacent to the Arkoma-Woodford. As such, we default all Enogex East Pool trades to this index.
Gulf Crossing	OIS	According to Boardwalk Pipeline Partners, "Gulf Crossing Pipeline Company, LLC is an interstate natural gas pipeline that provides takeaway capacity from the Barnett Shale in Texas and the Caney/Woodford Shale in Oklahoma." However, because Gulf Crossing serves both areas, we can only assign trades that occur in its Bryan County, OK receipt points in our index.

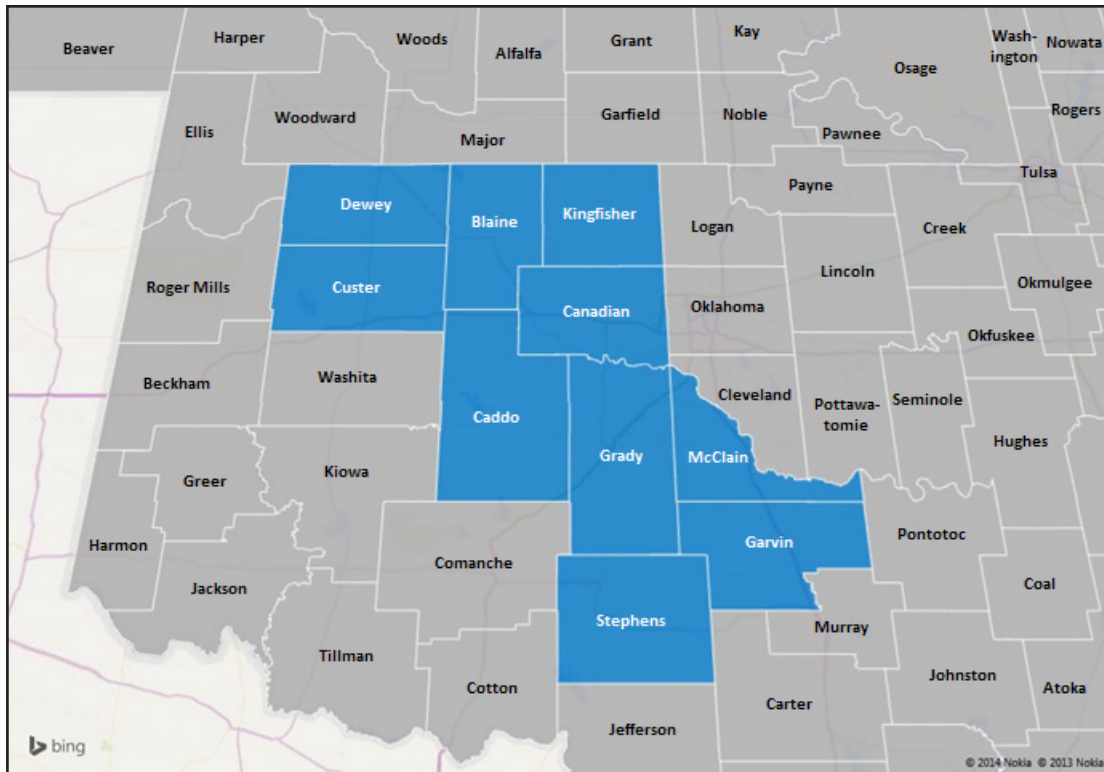
Pipeline/Hub	Default or OIS?	Description
Midcontinent Express Zn 1	OIS	Midcontinent Express is a 500+ mile pipeline that extends from Oklahoma through Texas, Louisiana, Mississippi, and Alabama. Just the sure size of this system makes it difficult to assign all trades in the system to any one area, but so does the fact that MEP travels through several production areas. For our Arkoma-Woodford index, we only include receipts that flow into the beginning of the MEP system in Bryan County, OK.
NGPL Midcontinent	OIS	NGPL Midcontinent does not have much of a presence in the Arkoma-Woodford, but we do include any receipts reported into NGPL in Atoka County, OK in this posting.
NGPL TexOk	OIS	NGPL TexOk also does not have much of a presence in the Arkoma-Woodford, but we do include any receipts conducted in Latimer and Pittsburg Counties, OK in our Arkoma-Woodford index.
OGT	OIS	We default all generic OGT trades to our Cana-Woodford Index. However, we do include all OGT deals transacted in Latimer and Haskell Counties, OK in our Arkoma-Woodford index, as these two counties are adjacent to the Arkoma-Woodford fairway.
Ozark Pipeline	OIS	We believe the vast majority of gas that flows into Ozark Pipeline is derived from the Fayetteville Shale. However, Ozark also serves the Arkoma-Woodford, and we will include any gas delivered into Ozark from the Arkoma-Woodford into this index.

Cana-Woodford

The Cana-Woodford, which is also referred to as the Anadarko-Woodford by many in the industry, is one of the fastest growing production areas in the state of Oklahoma. The area includes not only the Woodford Shale, but also emerging “stacked” plays such as the SCOOP and STACK formations, which include the Springer and Meramec shales, respectively. Although we believe much of the industry focus in the Cana-Woodford has been centered in Blaine, Caddo, Canadian, Custer, Dewey, and Grady Counties, we also include the portions of the Anadarko-Woodford area that extend into Garvin, Kingfisher, McClain, and Stephens Counties in our Cana-Woodford index.

Counties¹

Oklahoma – Blaine, Caddo, Canadian, Custer, Dewey, Garvin, Grady, Kingfisher, McClain, Stephens



Cana-Woodford Pipeline Descriptions:

Pipeline/Hub	Default or OIS?	Description
Enable West	OIS	Enable West is comprised of the Enable West 1 and Enable West 2 Pooling Areas. While we default the West 1 Pool to the Granite Wash, and the West 2 Pool to the Cana-Woodford, we believe the vast majority of Enable West trades are conducted within the West 1 Pool. We therefore default all trades that are simply reported to us as Enable West in our Granite Wash Index, and will only include such trades in our Cana-Woodford index if they are labeled as having occurred in or adjacent to the counties that comprise the Cana.
Enable West 2	Default	We believe the majority of volumes within the Enable West 2 Pooling Area come from Caddo, Grady, McClain, and Stephens Counties, OK, all of which are part of the Cana-Woodford, so we therefore default all reported West 2 trades to this index. We recognize, however, that some gas flows into West 2 from the Arkoma-Woodford Shale, but we believe any such deals tend to be weeded out by our three standard deviations test.
Enogex West	OIS	While we automatically default all Enogex West trades into our Granite Wash index, we will include trades within Enogex West that were specifically conducted in the portion of the pipeline that serves Canadian, Grady, Kingfisher, and McClain Counties, OK in our Cana-Woodford listing.

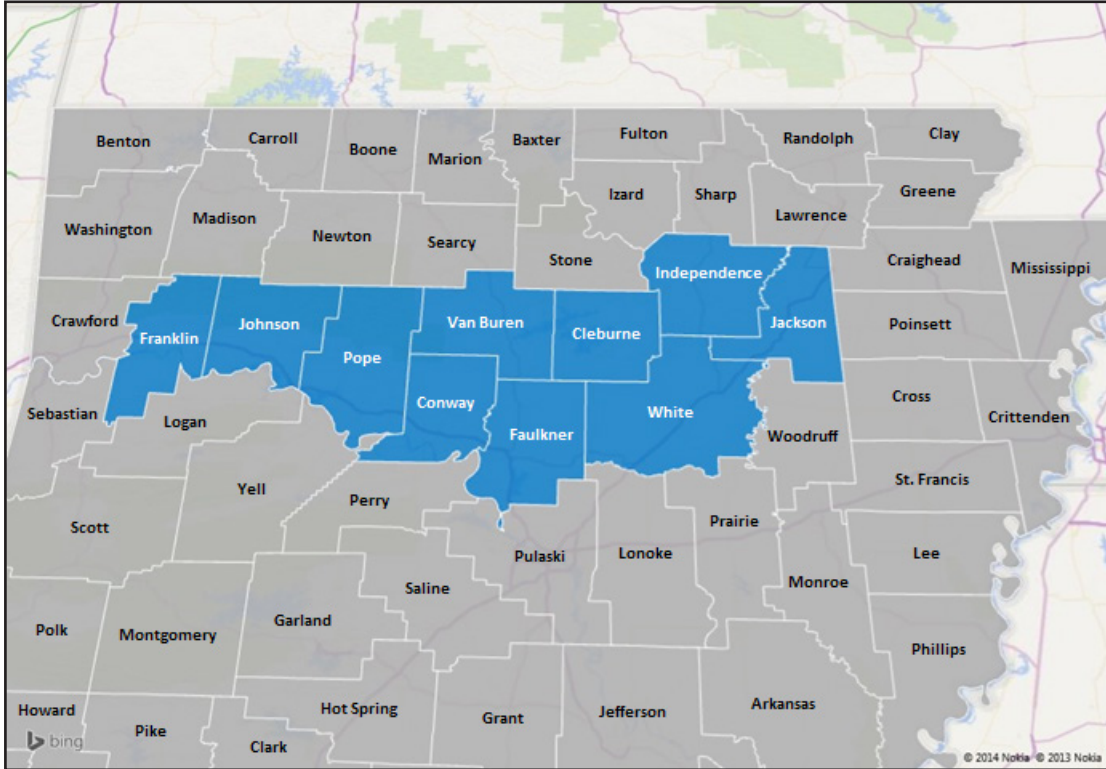
SHALE DAILY METHODOLOGY

Pipeline/Hub	Default or OIS?	Description
NGPL Midcontinent	OIS	NGPL Midcontinent serves a number of unconventional basins, including the Ardmore-Woodford, Arkoma-Woodford, Barnett Shale, Cana-Woodford, Granite Wash, and the Mississippian Lime. As such, we only include NGPL Midcontinent receipts that occur in Caddo, Dewey, Grady, and Stephens Counties, OK in our Cana-Woodford index.
OkTex Pipeline	OIS	Oneok's OkTex Pipeline is actually a series of discontinuous pipelines that mostly serve the non-Panhandle portion of Northwest Oklahoma, and a few scattered counties in the Texas Panhandle. We default any transactions that occur on the "OkTex 9" segment in Dewey and Roger Mills Counties, OK, and Hemphill County, TX, and the "OkTex 8" and "OkTex 11" segments that both run through Beckham County, OK and Wheeler County, TX. Otherwise, OkTex is far too scattered for us to automatically assign any generic OkTex trades to this index.
OGT	Default	Although OGT serves several different formations within the State of Oklahoma, including the Cana-Woodford, Arkoma-Woodford, Mississippian Lime, and the Granite Wash, we have elected to default all OGT trades to our Cana-Woodford index for the following reasons: 1.) we believe the majority of OGT's receipt capacity, in terms of both number of points and total maximum capacity, is located in or adjacent to the counties that comprise the Cana, 2.) natural gas production in the Cana region has been increasing as a percentage of total Oklahoma production in recent quarters, thanks in no small part to the development of the SCOOP and STACK formations that lie within the Cana-Woodford fairway, and 3.) we believe there is a high likelihood that any non-Cana Woodford deals we capture in the generic OGT reported trades to us would be filtered out by the three standard deviation screen we described earlier in this document.
Panhandle Eastern (Field Zone)	OIS	We currently default PEPL Field Zone trades to the Granite Wash, but we do include deliveries into PEPL in Dewey and Kingfisher Counties, OK in our Cana-Woodford index.
Southern Star (Production Area)	OIS	Southern Star serves a number of producing areas, including the Granite Wash, Green River Basin, Mississippian Lime, and the Hugoton, in addition to the Cana-Woodford. As such, we cannot assign Southern Star trades to this index unless they are specifically denoted as having occurred with the counties that define the Cana-Woodford Shale. Most likely such trades would occur in the South Edmond pool, as explained below.
Southern Star South Edmond Pool	Default	This is the one section of Southern Star we are comfortable defaulting to our Cana-Woodford Index, because the South Edmond pool is located in Kingfisher, Logan, Canadian, Oklahoma, Grady, Cleveland, McClain, Garvin, Stephens, and Carter Counties, OK, all of which are either within or adjacent to the Cana-Woodford Shale.

Fayetteville

Counties¹

Arkansas – Cleburne, Conway, Jackson, Johnson, Faulkner, Franklin, Independence, Pope, Van Buren, White



Fayetteville Pipeline Descriptions:

Pipeline/Hub	Default or OIS?	Description
Enable North	Default	While Enable’s North Pooling Area serves Northern Arkansas, along with a small portion of Western Oklahoma, we believe the overwhelming majority of Enable North receipts occur in Conway, Faulkner, Franklin, Jackson, Johnson, Logan, Pope, Sebastian, Yell, and White Counties, AR, all of which are either within or adjacent to the Fayetteville Shale.
Fayetteville Express	Default	Fayetteville Express was built to transport production from the Fayetteville Shale, so we therefore default all receipts into this pipeline into our Fayetteville Shale SPI. While we do not include deliveries from pipelines in our various SPI listings, per our methodology, we take particular care not to do so from Fayetteville Express, since those deliveries occur in Quitman County, MS, which is located some distance from the Fayetteville region.
MRT	OIS	We include any transactions on the portion of MRT within its Field Zone that extends into Faulkner and White Counties, AR.

Pipeline/Hub	Default or OIS?	Description
NGPL Gulf Coast-Mainline	Default	We believe the majority of volumes along the Gulf Coast-Mainline section of NGPL are receipts, and the lion's share of those occur in White County, AR, which is part of the Fayetteville Shale.
Ozark Pipeline	Default	Although Ozark serves both the Fayetteville Shale and the Arkoma-Woodford, we believe the vast majority of flows into and along Ozark are sourced from the Fayetteville Shale in Conway, Faulkner, Franklin, Pipe, Sebastian, and Van Buren Counties, AR. We have therefore elected to default all transactions along Ozark to our Fayetteville Index, unless the trades we receive in our survey are specifically marked as having occurred in the Arkoma-Woodford.
TGT Zn 1 (Fayetteville Lateral)	Default	Similar to our treatment of Fayetteville Express, we stress that we only include receipts into the Fayetteville Lateral portion of Texas Gas Transmission in our Fayetteville Index, because while receipts occur in the Fayetteville area, the lateral connects with the TGT Mainline in Coahoma County, MS, which is several counties farther downstream.
TETCO M-1 24"	OIS	We include deliveries into TETCO at Bald Knob in White County, Arkansas in our Fayetteville Shale index.
Trunkline Zn 1A	Default	Although Trunkline Zn 1A serves a variety of unconventional plays, including the Fayetteville, Lower Smackover/Brown Dense, and the Tuscaloosa Marine Shale, we have elected to default all Trunkline Zn 1A trades to our Fayetteville Index, for the following reasons: 1.) we believe a significant portion of the flows into this section of Trunkline are in fact sourced from the Fayetteville, and 2.) Trunkline Zn 1A prices are consistent with other pipelines that serve the Fayetteville. For example, the mean price differential between Trunkline Zn 1A and NGPL Gulf Coast – Mainline (which receives the majority of its receipts in White County, AR, well within the boundaries of the Fayetteville Shale) between October 2010 and August 2014 was \$0.00. Including Trunkline Zn 1A deals therefore adds liquidity without skewing the index price, in our view.

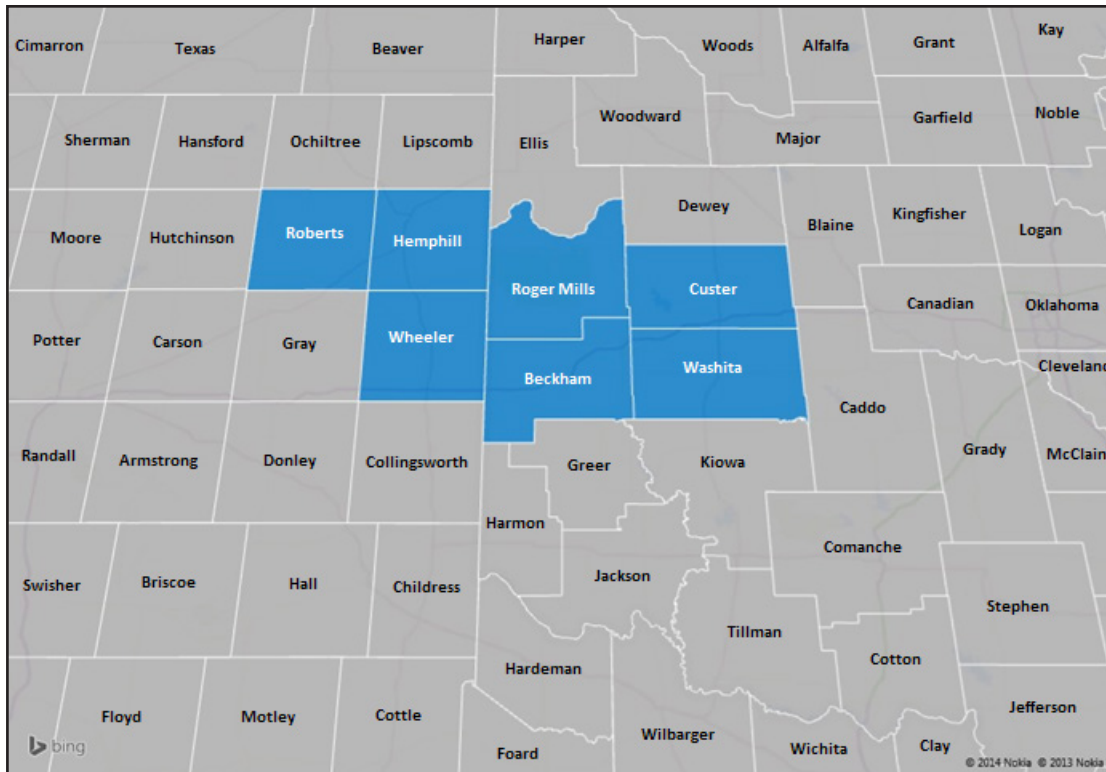
Granite Wash

Our index includes Granite Wash production on both the Texas and the Oklahoma sides of the play.

Counties¹

Oklahoma – Beckham, Custer, Roger Mills, Washita

Texas – Hemphill, Roberts, Wheeler



Granite Wash Pipeline Descriptions:

Pipeline/Hub	Default or OIS?	Description
ANR SW	Default	ANR's Southwest Area includes all points along ANR Pipeline in Texas and Oklahoma, along with those locations in Kansas that are upstream of and include the SW Headstation in Greensburg, KS. Despite the pipeline's presence in Kansas, we believe the majority of daily volumes within ANR SW take place within or just next to the Granite Wash, so we default all ANR SW trades into our Granite Wash SPI.
Enable West	Default	Enable West is comprised of the Enable West 1 and Enable West 2 Pooling Areas. While we default the West 1 Pool to the Granite Wash, and the West 2 Pool to the Cana-Woodford, we believe the vast majority of Enable West trades are conducted within the West 1 Pool. We therefore default all receipts that are simply reported to us as Enable West in our Granite Wash index.
Enable West 1	Default	Enable's West 1 Pooling area receipt points are located in Beckham, Blaine, Caddo, Custer, and Roger Mills Counties, OK; Hemphill and Wheeler Counties, TX; and Sumner County, KS. Nearly all these counties are either within or adjacent to the Granite Wash, so we default all reported West 1 receipts to this index.

SHALE DAILY METHODOLOGY

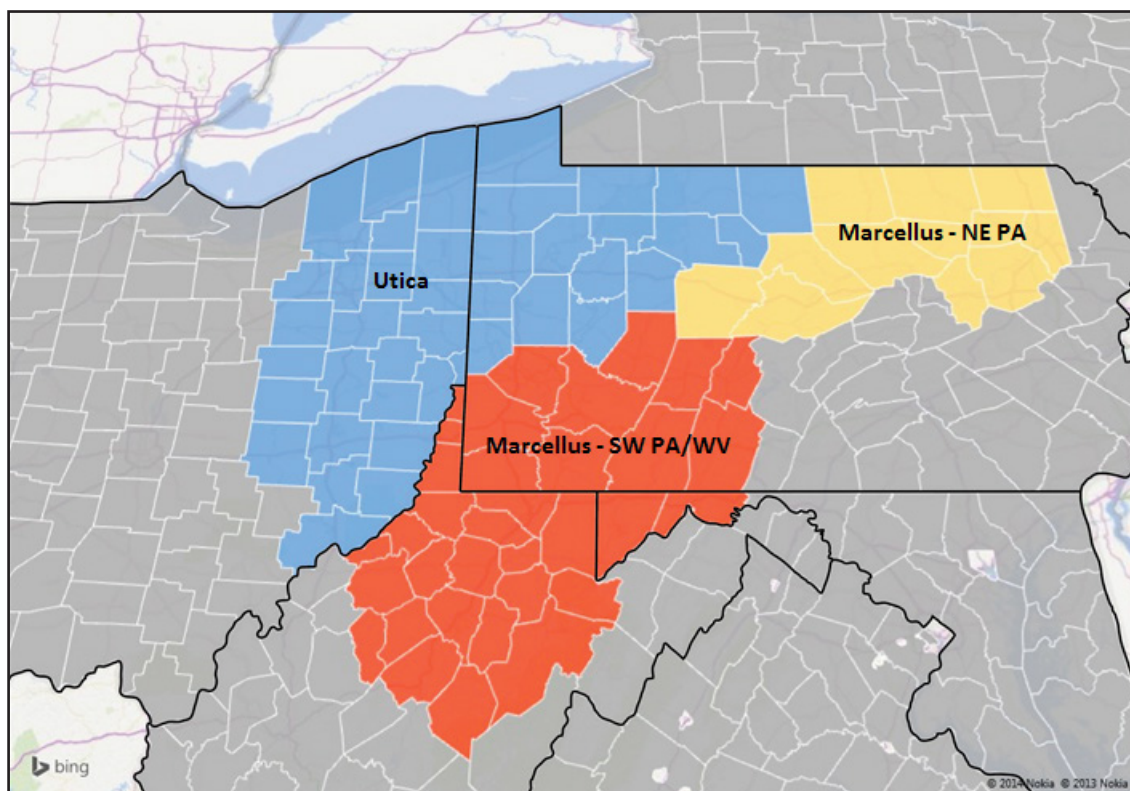
Pipeline/Hub	Default or OIS?	Description
El Paso Anadarko Pool	OIS	El Paso defines the Anadarko as all points along its system at or north of its Dimmitt Station in Castro County, TX (within the Texas Panhandle), including the portion of the line that extends into Oklahoma. While the Anadarko Pool does run through the heart of the Granite Wash, we believe a significant amount of transactions in this portion of the pipeline occur far enough away from the Granite Wash that we cannot automatically include Anadarko Pool trades in this index. We will only include those deals that are done within or adjacent to the counties that make up the play.
Enogex West	Default	We believe the majority of volumes that comprise the West Zone of Enogex Pipeline occur in Beckham, Custer, Roger Mills, and Washita Counties, OK, all of which comprise the Granite Wash. We therefore default all delivered-to-pipeline trades that are labelled Enogex West into this index.
Enogex Gathering "U" Zone	Default	Includes all deliveries from the Enogex Gathering facility into connecting pipelines within the Enogex "U" Zone, which lies within Beckham and Roger Mills Counties, OK.
NGPL Midcontinent	OIS	NGPL Midcontinent serves a multitude of unconventional basins, including the Ardmore-Woodford, Arkoma-Woodford, Barnett Shale, Cana-Woodford, Granite Wash, and the Mississippian Lime. As such, we only include NGPL Midcontinent receipts that occur in Beckham, Custer, and Washita Counties, OK, and Hemphill and Wheeler Counties, TX in our Granite Wash index.
Northern Natural 8-12	OIS	Northern Natural's Mileage Indicator Districts (MIDs) 8-12 serve the Texas Panhandle, as well as Beaver, Custer, Harper, Roger Mills, and Woodward Counties, OK. Even though we believe the Granite Wash is the most prevalent natural gas formation in this region, there are enough other producing regions in the NNG 8-12 area that among all Northern Natural 8-12 receipts, we only assign those designated as having occurred in the counties that either make up or are adjacent to the Granite Wash in this index.
OGT	OIS	Although we default OGT trades to our Cana-Woodford index, we include deals transacted at OkTex Caprock, along with any OGT deals specifically done in Beckham, Roger Mills, and Washita Counties, OK in our Granite Wash SPI.
Panhandle Eastern (Field Zone)	Default	Panhandle Eastern receives gas in Beckham, Custer, Major, and Woodward Counties, OK, all of which are either within or adjacent to the Granite Wash. Despite the fact that we currently default all generic PEPL Field Zone trades to our Granite Wash index, we believe such PEPL deals are in fact likely more representative of activity within the nearby but still emerging Mississippian Lime formation. The Miss Lime covers a large portion of Kansas and Northern Oklahoma, but we expect only a portion of it will be prospective for horizontal drilling. Operators are still delineating the play, but once we have a better idea of where true horizontal portion of the Miss Lime is located, we may introduce a new Miss Lime Index. If so, it is possible we would reassign at least some PEPL Field Zone trades from the Granite Wash to the Miss Lime Index.

Pipeline/Hub	Default or OIS?	Description
Southern Star (Production Area)	OIS	Southern Star serves a number of producing areas, including the Cana-Woodford, Green River Basin, Mississippian Lime, and the Hugoton, in addition to the Granite Wash. As such, we cannot assign Southern Star trades to this index unless they are specifically denoted as having occurred in Hemphill County, TX.
Transwestern Panhandle Pool	OIS	Transwestern's Panhandle Pool is largely a delivery area. However, we do include receipts within Hemphill and Roberts Counties, TX in our Granite Wash index.

NORTHEAST

We start with a map that shows the counties we include in our two Marcellus NE – PA prices (shaded in yellow), our Marcellus SW PA/WV posting (red), and our new Utica Shale price (blue) that we debuted in October 2013. We have included a list of the counties that make up each play in the individual descriptions below. Please note that we have designated these areas by what we believe are the primary producing formation in each area. We realize that there is in fact some overlap among the various unconventional

formations within the shaded regions of this map. For example, as of November 2014, several operators had been reporting they were drilling successful Utica Shale wells in West Virginia. However, we do not designate any West Virginia counties in our Utica Shale index, because we believe the Marcellus continues to dominate activity in that area. Similarly, the Marcellus does in fact extend a bit into Eastern Ohio, but because industry activity in that area is largely focused on the Utica, we do not include any Ohio counties in our SE PA/WV Marcellus posting.

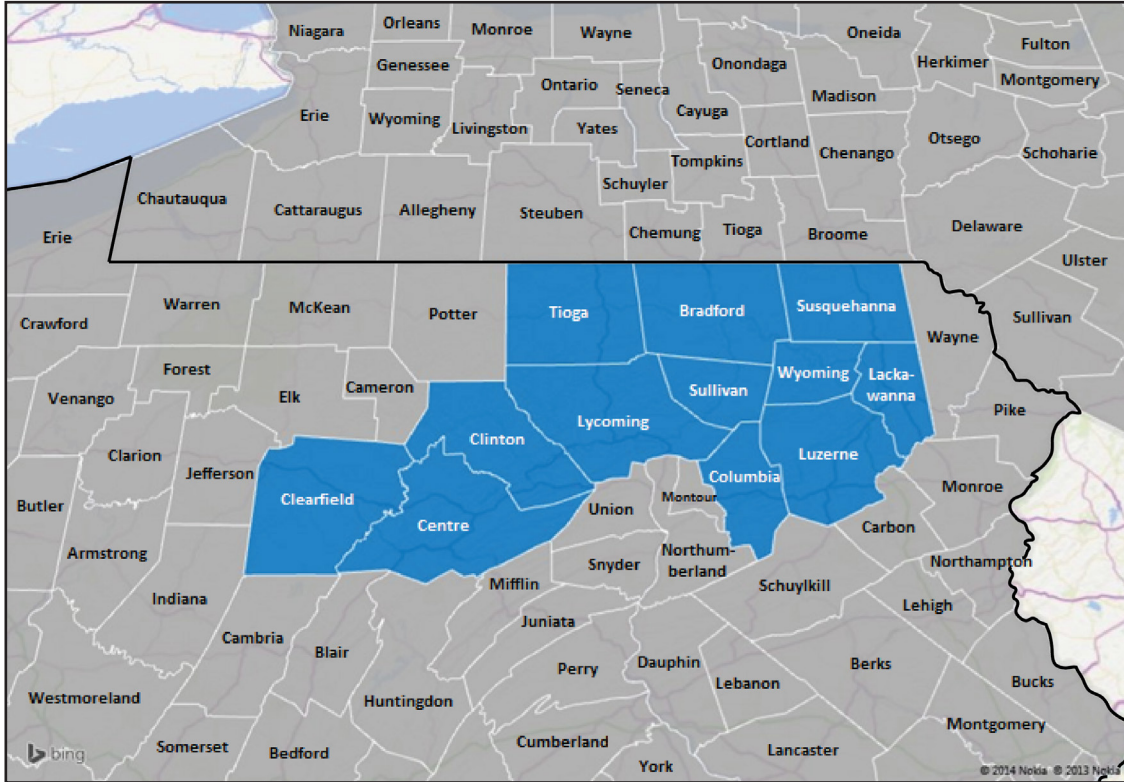


Marcellus – NE PA

Our Marcellus – NE PA index is a volumetric weighted average of our separate Marcellus – NE PA: Other and Marcellus – NE PA: Tenn indexes.

Counties¹

Pennsylvania – Bradford, Centre, Clearfield, Clinton, Columbia, Lackawanna, Luzerne, Lycoming, Sullivan, Susquehanna, Tioga, Wyoming



Marcellus – NE PA: Other

Marcellus – NE PA: Other Pipeline Descriptions:

Pipeline/Hub	Default or OIS?	Description
Bluestone Midstream	Default	We include all deals for gas delivered from the Bluestone Gathering system in Susquehanna County, PA to its interconnect with Millennium Pipeline in Broome County, NY in this index.
Dominion North Point	OIS	Includes any transactions within the portion of Dominion Transmission (DTI) that extends through Clearfield, Clinton, and Tioga Counties, PA. We believe the majority of DTI pipeline flows in these counties occur at the Leidy Hub and Sabinsville, both of which we describe in more detail below.

SHALE DAILY METHODOLOGY

Pipeline/Hub	Default or OIS?	Description
Empire Pipeline	OIS	Empire Pipeline is located primarily within New York State (hence its name), which falls outside of our definition of the Marcellus in Northeast PA. However, in November 2011, the pipeline completed its Tioga County (PA) extension project, that connects Empire at Corning, NY to Marcellus production in Jackson Township, PA within Tioga County. We do include receipts within this Tioga County extension in our Marcellus NE PA – Other SPI price, but we exclude all other Empire trades.
Laser Midstream	Default	Just like with the Bluestone Midstream system, we include all deals delivered from the Laser Midstream facility in Susquehanna County, PA to its terminus with Millennium Pipeline in Broome County, NY.
Leidy Hub	Default	Includes all deliveries in and out of the Leidy Hub in Clinton County, PA via Dominion Transmission, National Fuel Gas, Texas Eastern, Transco, and Tennessee.
Millennium East Pool	Default	We include all receipts within the Millennium East Pool, which is defined as the portion of Millennium Pipeline that extends east of the Corning Compressor Station. However, we note that as of November 2014, more than 95% of receipts into Millennium came from three points, all of which receive Marcellus NE PA production: Stagecoach Receipts (via Stagecoach Midstream) in Tioga County, NY, Laser Midstream in Broome County, NY, and Sanford (via Bluestone Midstream), also in Broome County, NY.
Sabinsville Interconnect	Default	Sabinsville is the interconnect between Tennessee Pipeline and Dominion Transmission in Tioga County, PA. We specifically list Sabinsville here because this point lies in “no man’s land” between Station 313, which is an endpoint of the Tennessee 313 Pool, and Station 315 that forms the western boundary to our Marcellus NE PA – Tenn index.
Stagecoach	Default	Stagecoach is a small pipeline that connects Tennessee Pipeline at its Station 319 in Bradford County, PA to Millennium Pipeline in Tioga County, NY. The South Lateral is the portion of Stagecoach that lies in Pennsylvania, and the North Lateral is the segment that is located in New York. We include all trades delivered from Stagecoach in our Marcellus NE PA – Other index.
TETCO M-3 receipts	OIS	Texas Eastern has a handful of receipt points in Centre and Clinton Counties, PA that we include in our Marcellus NE PA – Other index.
Transco Leidy Line	Default	Contains all transactions on the Transco - Leidy Line from Compressor Station 505 in New Jersey up to but not including the terminus of the line in Leidy, PA. We believe the vast majority of volumes that flow through Transco’s Leidy Line is Marcellus production from NE Pennsylvania.

Marcellus – SW PA/WV Pipeline Descriptions:

Pipeline/Hub	Default or OIS?	Description
Blue Racer Midstream	OIS	As explained in the Oho Utica section, Blue Racer Midstream was put together specifically to process Utica Shale production, and we include most volumes delivered from Blue Racer in our Utica Shale index. However, one of Blue Racer’s four processing plants is the Natrium Plant in Marshall County, WV. Natrium processes both Utica and Marcellus supply. Since we include Marshall County, WV in our Marcellus SW PA/ WV index, we therefore incorporate gas processed at Natrium and delivered into Dominion Transmission in this index.
Columbia Gas Transmission IPP Pool	Default	We believe that the majority of all IPP Pool transactions tend to occur within counties that make up our definition of the Marcellus SW PA/ WV area, so we therefore include all IPP trades within that index, unless those trades are specifically tagged by our price survey contributors as having taken place outside of our defined Marcellus SW PA/WV area. We also include all transactions within Aggregation Pools A4 (Alexander – Upshur County, WV), A5 (Delmont – Westmoreland County, PA), and A6 (McClellandtown – Fayette County, PA). We do not include any Segmentation (SEG) Pool (defined as being west of the Lanham Compressor Station in Putnam County, WV) deals in this index.
Dominion South Point	Default	We include all receipts within Dominion’s South Point in our Marcellus SW PA/WV Index, which includes all points on Dominion Transmission within Pennsylvania, Ohio, and West Virginia that are south and/or west of Valley Gate Junction in Armstrong County, PA. However, we believe the vast majority of such receipts are typically sourced from counties that comprise or are adjacent to those in the definition of our Marcellus SW PA/WV index.
Equitrans	Default	Includes all transactions along the Equitrans system, which is located in Southwest Pennsylvania and West Virginia. Nearly 100% of the Equitrans system lies within the counties we have assigned to our Marcellus SW PA/WV index.
National Fuel Gas	OIS	National Fuels Gas serves Western Pennsylvania and Western New York. Our Marcellus SW PA/WV index includes receipts into NFG in Greene and Washington Counties, PA.

Pipeline/Hub	Default or OIS?	Description
TETCO M-2 30" Receipts	Default	We automatically include all receipts along the 30" portion of Texas Eastern Transmission that runs through the "Market Zone 2" area. The 30" line begins at the Kentucky/Tennessee border, and extends to two separate terminus points. One is the suction side of the Delmont Compressor Station/Oakford, PA storage facility, and the other is the discharge side of Station 22 in Southwest Pennsylvania. We do not include the 24" segment of Texas Eastern that traverses Indiana and Ohio. Obviously, the 30" portion of TETCO M-2 covers a large geographic area, including Kentucky and Ohio. However, we believe the overwhelming majority of receipts on the TETCO M-2 30" line are coming from counties we have designated as being part of the Marcellus PA/SW index. Most of the remaining receipt volumes on TETCO M-2 30" tend to occur at Clarington, which we include in our Utica Shale Index, but these trades usually get reported to us separately at the Clarington Hub. We are therefore extremely comfortable that any non-designated TETCO M-2 30" trades we receive in our price survey are likely Marcellus SW PA/WV transactions.
TETCO M-3 Receipts	OIS	We incorporate all receipts along the portion of Texas Eastern Transmission's Market Zone 3 (M-3) that lies within Westmoreland, Indiana, Blair, Cambria, Somerset, and Bedford, Counties, PA.

Utica

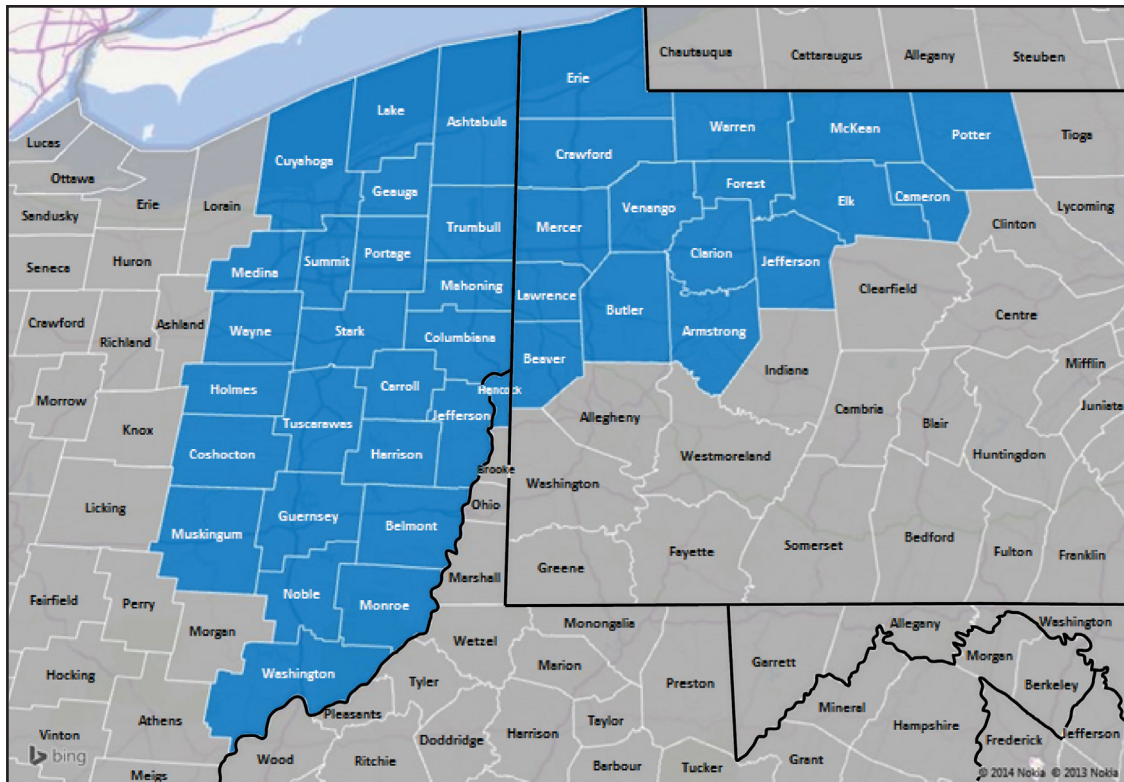
Our Utica index covers the portions of the formation that lie in Ohio and Pennsylvania. We do realize, however, that as of the time of this writing (November 2014), several operators were testing the economics of the Utica within the non-Panhandle portion of West Virginia. Those West Virginia counties are included in our Marcellus – SW PA/WV Index.

Counties¹

Ohio – Ashtabula, Belmont, Carroll, Columbiana, Coshocton, Cuyahoga, Geauga, Guernsey, Harrison, Holmes, Jefferson, Lake, Mahoning, Medina, Monroe, Muskingum, Noble, Portage, Stark, Summit, Trumbull, Tuscarawas, Washington, Wayne

Pennsylvania – Armstrong, Beaver, Butler, Cameron, Clarion, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, McKean, Mercer, Potter, Venango, Warren

West Virginia – Hancock



Utica Pipeline Descriptions:

Pipeline/Hub	Default or OIS?	Description
Blue Racer Midstream	OIS	Although Blue Racer was devised specifically for Utica Shale production, wet Utica production can be shipped to the Natrium Processing Plant (which processes both Utica and Marcellus gas) in Marshall County, WV, which we include in our Marcellus SW PA/WV index. We therefore incorporate Natrium Plant gas into our Marcellus SW PA/WV index. However, Blue Racer's other three processing facilities (Berne, Lewis, and Petersburg) are firmly within our definition of the Utica Shale, and deliveries to pipelines from those three facilities are included in this index.
Clarington Hub	Default	Includes all deals conducted at the interconnect between Rockies Express Pipeline and Dominion Pipeline, Dominion East Ohio Gas, and Texas Eastern Transmission at Clarington, OH in Monroe County.
Columbia Gas Transmission	OIS	For the Utica Shale, we only include transactions conducted on Columbia Gas Transmission that are specifically marked as being done in Aggregation Pools A9 (York – Medina County, OH) and A10 (Dungannon – Columbiana County, OH).

SHALE DAILY METHODOLOGY

Pipeline/Hub	Default or OIS?	Description
Dominion East Ohio Gas	OIS	According to a presentation Dominion gave to its customers in August 2012, Dominion East Ohio Gas (DEOG) processed 83% of all natural gas production in Ohio at the time. Moreover, the gathering system lies in the heart of the counties we have identified on the Ohio side of the Utica. However, we cannot automatically include Dominion East Ohio trades in our Utica Shale index for the following reasons: 1.) we believe trading within DEOG is highly seasonal, and not very liquid, 2.) many of the trades we do receive from our contributors are delivered to the LDC, and we specifically seek to exclude deliveries to LDCs from our SPI prices, 3.) DEOG has contributed a significant portion of its gathering (and processing) assets to its nascent Blue Racer Midstream Joint Venture with Caiman Energy, so it remains to be seen just how much pure gathering and transport activity will remain on the DEOG system going forward.
Dominion Transmission North Point	OIS	Includes receipts north of the Dominion North Point/South Point dividing line at Valley Gate Junction in Armstrong County, PA that are conducted in Armstrong, Clarion, Jefferson, McKean, and Potter Counties, PA. NOTE: We originally included Dominion Transmission North Point deals in our Marcellus NE PA – Other SPI listing, starting from the time we launched Shale Daily in October 2010. However, we moved DTI North Point deals into our new Utica Shale index once we began publishing that listing in October 2013.
National Fuel Gas	OIS	National Fuel Gas serves portions of Western Pennsylvania and Western New York. We incorporate receipts into NFG within Beaver, Lawrence, Butler, Clarion, Jefferson, Elk, Cameron, Potter, McKean, Warren, Erie, Crawford, Venango, and Mercer Counties, PA in our Utica index. These counties encompass the majority of NFG within the Commonwealth of Pennsylvania.
Rockies Express Zone 3	OIS	Most natural gas deliveries from REX in East Ohio are made in Monroe County at the Clarington Hub, which we include in our Utica Shale index. We also include deliveries from REX into Tennessee Gas Pipeline in Guernsey County, OH, as well as into Dominion Transmission in Noble County, OH. Starting in the summer of 2014, REX began reversing from a west-to-east pipeline to moving gas east-to-west within Zone 3, in order to allow more takeaway capacity for production from the Utica and Marcellus shales. We therefore also include receipts for gas at Clarington, as well as gas delivered into REX from the Markwest Seneca Processing Plant in Noble County, OH. We will include any future Zone 3 receipt points that may develop within and adjacent to the counties that define the Utica in Ohio.

Pipeline/Hub	Default or OIS?	Description
Tennessee 313 Pool	Default	Transactions within Tennessee Gas Pipeline's Zone 4 "300 Leg" west of the Wellsboro Compressor Station (#315) in Tioga County, PA up to but not including the Mercer (#219) Compressor Station in Mercer County, PA. Our index includes the small portion of Line 300 that extends Northeast from the Coudersport (Station #313) Compressor Station in Potter County, PA to the PA/NY border. NOTE: We originally included Tennessee 313 Pool deals in our Marcellus NE PA – Other SPI listing, starting from the time we launched Shale Daily in October 2010. However, we moved all 313 Pool deals into our new Utica Shale index once we began publishing that listing in October 2013.
Tennessee Zn 4 200 Leg	Default	We automatically include in our Utica Shale index all transactions along Tennessee Gas Pipeline's Zone 4 "200 Leg" that runs from the Ohio/Kentucky border to the Pennsylvania/New York border just south of the Clymer (#224) Compressor Station in Erie County, PA, including 219 Pool trades, but specifically excluding deals done at Duke Energy's Hanging Rock Energy Facility in Scioto County, OH, since we do not include deliveries to power plants in our SPI indexes.

ROCKY MOUNTAINS / WEST

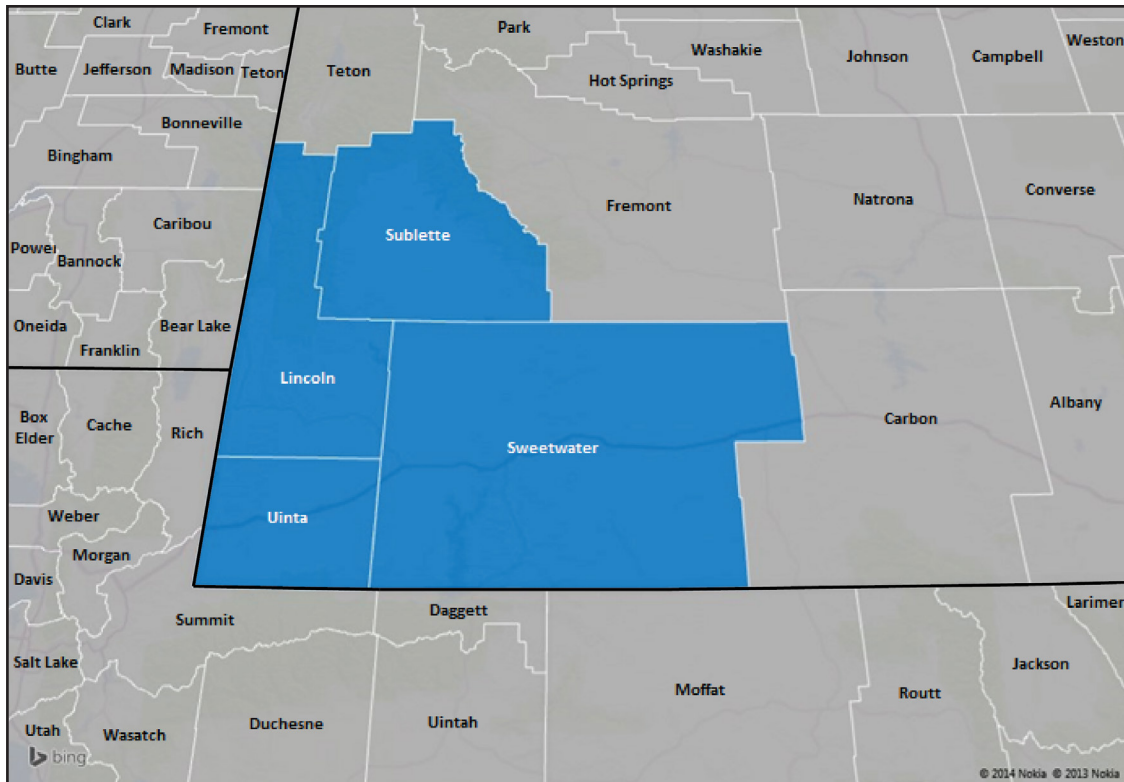
Green River Basin

The Green River Basin (GRB) is actually a subset of what the United States Geological Survey calls the Greater Green River Basin, which also includes the Great Divide, Vermillion, and Washakie Basins in Wyoming, and the Sand Wash Basin in Colorado. For our purposes, we define the Green River Basin as all

production within Lincoln, Sublette, Sweetwater, and Uinta Counties in Wyoming. This includes production in eastern Sweetwater County, which includes the aforementioned Great Divide, Vermillion, and Washakie Basins.

Counties¹

Wyoming – Lincoln, Sublette, Sweetwater, Uinta



Green River Basin Pipeline Descriptions:

Pipeline/Hub	Default or OIS?	Description
CIG Mainline	OIS	Our index includes deliveries into CIG within Lincoln and Sweetwater Counties, WY.
Kern River	Default	Contains all receipts into Kern River within Lincoln and Uinta Counties, WY.
Northwest Wyoming Pool	Default	Includes all receipts within Northwest Pipeline’s Wyoming Pool in Lincoln, Sweetwater, and Uinta Counties, WY. These counties are squarely within the Green River Basin.
Overland Trail Transmission	Default	Overland Trail is an intrastate pipeline in Wyoming that primarily serves the Green River Basin.
Opal	Default	Includes all deals done at the Opal Hub in Lincoln County, WY. Connecting pipelines in the Opal area include Kern River, Northwest, Colorado Interstate Gas (CIG), Rockies Express, Questar, Overthrust Pipeline, and Wyoming Interstate Company (WIC).
Questar – North System	Default	Our Green River Basin index includes all deliveries into Questar Pipeline’s North System, which serves Carbon, Lincoln, Sweetwater, and Uinta Counties in southern Wyoming. Although there is no official demarcation point between Questar’s North & South systems per se, a Questar representative told <i>NGI</i> that for internal purposes, the company uses the Clay Basin storage field in Northeast Utah as the dividing point between the two.

Pipeline/Hub	Default or OIS?	Description
Questar Overthrust	Default	100% of the Questar Overthrust system is located within Lincoln, Uinta, and Sweetwater Counties, WY, all of which are included in our definition of the play.
Rendezvous Pipeline	Default	The Rendezvous Pipeline is a 21 mile system designed to transport Pinedale Anticline and Jonah production that is processed at the Blacks Fork Processing Complex in Uinta County, WY to the Muddy River interconnect on Kern River Pipeline in Lincoln County, WY.
Rockies Express Zone 1	OIS	Includes all Rockies Express Zone 1 receipts within Sweetwater, Lincoln, and Uinta Counties, WY, all of which are part of the Green River Basin. REX Zone 1 also serves the Piceance and Niobrara-DJ Basins in Colorado, so we cannot assume all trades reported to us as REX Zone 1 deals occur in Wyoming.
Ruby Pipeline	Default	While Ruby Pipeline stretches from Wyoming into Utah, Nevada and Oregon, all Ruby receipts occur in Lincoln and Uinta Counties, WY. We therefore default all Ruby receipts to our Green River Basin index, but we exclude all deliveries to Malin, Oregon from this posting .
Wamsutter Hub	Default	Includes all deals at the Wamsutter Hub in eastern Sweetwater County, WY. The Hub connects to CIG, Questar Overthrust, Rockies Express, Southern Star, and WIC.
Wyoming Interstate Company (WIC)	OIS	WIC, as the name suggests, primarily serves Wyoming, with a lesser presence in Colorado and Utah. We only include deliveries into the portion of WIC that lies in Sweetwater County, WY in our Green River Basin SPI.

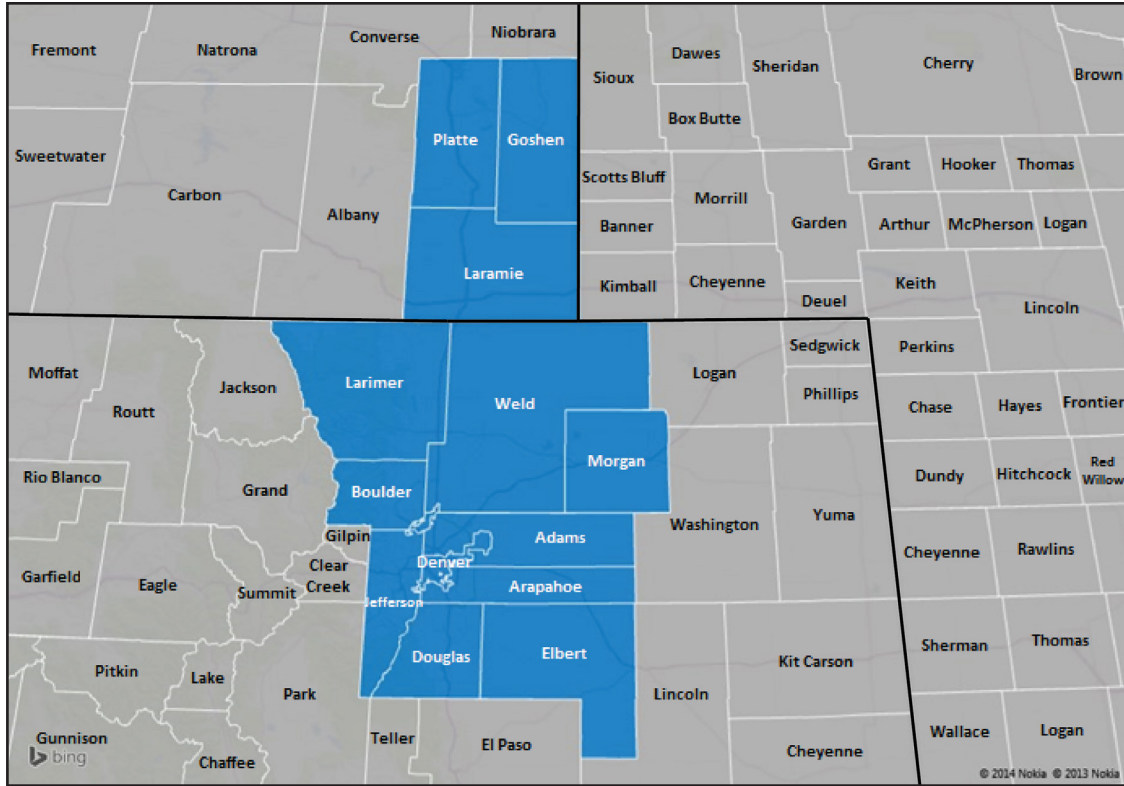
Niobrara-DJ

Our Niobrara-DJ index aims to measure the price of natural gas within the Denver-Julesburg Basin. This includes not only the Niobrara Shale, but also the prolific Wattenberg Field, and the emerging Codell Formation that lies beneath the Niobrara.

Counties¹

Colorado – Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Elbert, Larimer, Jefferson, Morgan, Weld

Wyoming – Goshen, Laramie, Platte



Niobrara-DJ Pipeline Descriptions:

Pipeline/Hub	Default or OIS?	Description
Cheyenne Hub	Default	The Cheyenne Hub is located in Weld County, CO, the county that accounts for the majority of production within the DJ Basin.
Cheyenne Plains	OIS	Cheyenne Plains is an interstate pipeline system that stretches from Northeast Colorado into Northwest Kansas. We include all deliveries into Cheyenne Plains that are transacted in Weld County, CO. in our Niobrara-DJ index.
CIG-DJ Basin	Default	According to our sister publication <i>NGI's Gas Price Index</i> , the CIG-DJ Basin index in that newsletter "contains transactions along the CIG system between (and including) the Cheyenne Compressor Station at the WY/CO border, and the Kit Carson Compressor Station in Southeast CO. Our index includes deals on the portion of the line marked by the Totem, Fort Morgan, Niobrara, and Latigo Compressor Stations, but does not include transactions on the portion of the pipeline that extends due south from Watkins." Stated more simply, we believe the vast majority of receipts that occur within the DJ Basin portion of CIG are in Adams and Weld Counties, CO. As such, we have elected to default all reported receipts within the CIG-DJ Basin to our Niobrara-DJ index.
Rockies Express Zone 1	OIS	Includes all REX Zone 1 receipts that occur in Weld County, CO.

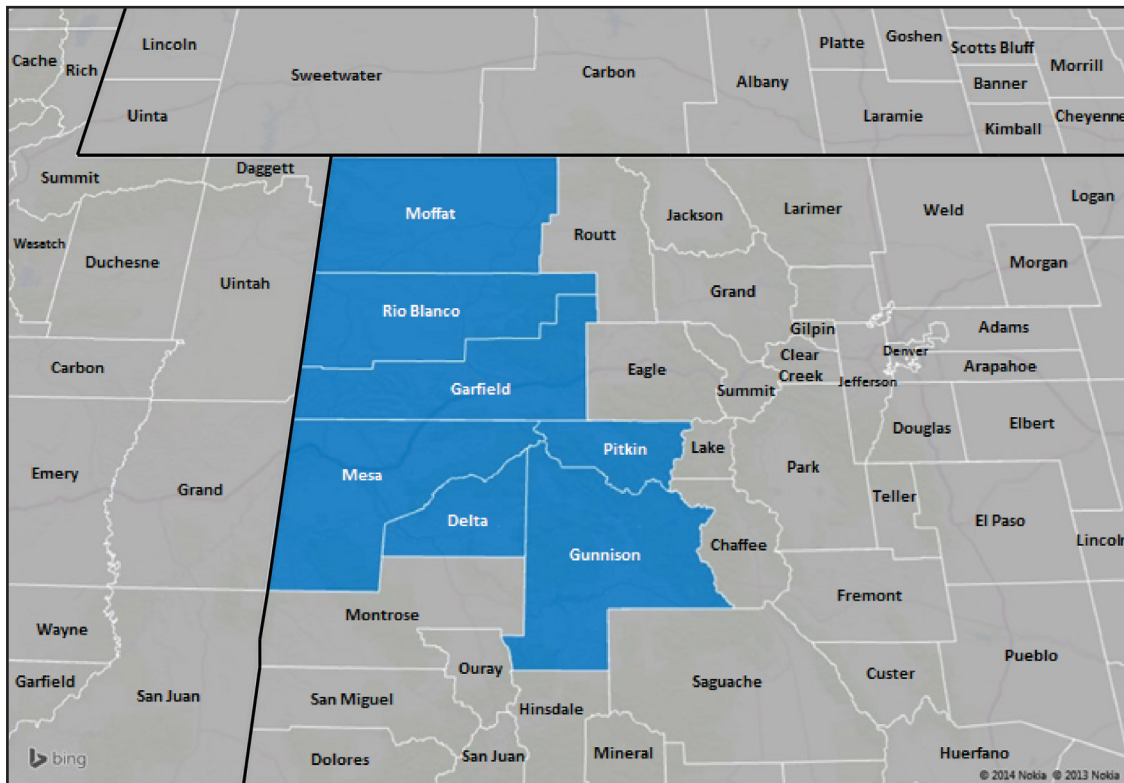
Pipeline/Hub	Default or OIS?	Description
Tallgrass Interstate Gas Transmission	OIS	Tallgrass travels through five states (Colorado, Kansas, Missouri, Nebraska, and Wyoming), and serves several producing regions, including resources plays in the Niobrara-DJ Basin, the Powder River Basin, and the Mississippian Lime. Moreover, we do not believe that any one of these areas accounts for the majority of volumes into the pipelines, so we only include those Tallgrass receipts that occur in Logan and Weld Counties, CO in our Niobrara-DJ index.
Trailblazer Pipeline	Default	Trailblazer transports natural gas from Northeast Colorado to Southeast Nebraska. The overwhelming majority of deliveries into Trailblazer occur in Weld County, CO, right in the heart of the Niobrara DJ.

Piceance Basin

Production within the Piceance Basin, and therefore that captured by our Piceance Basin index, is primarily comprised of tight sands gas whose development began in earnest more than a decade ago. Today, the Basin also has become prospective for both the Mancos and Niobrara Shales, although industry development in these two formations is still very much in the initial stages.

Counties¹

Colorado – Delta, Garfield, Gunnison, Mesa, Moffat, Pitkin, Rio Blanco



Piceance Basin Pipeline Descriptions:

Pipeline/Hub	Default or OIS?	Description
CIG Mainline	OIS	We cannot automatically assign any trades along CIG to any unconventional area, because the pipeline serves several formations over multiple states. For the Piceance Basin, we include deliveries into Moffat and Rio Blanco Counties, CO.
Northwest Pipeline – Piceance Pool	Default	Includes all receipts within Northwest Pipeline’s Piceance Pool in Colorado.
Questar-South System	OIS	Questar-South System, which we define as the portion of the Questar Pipeline system that is south of Clay Basin Gas Storage at the Northeast Utah/Wyoming Border, serves both the Uinta and the Piceance Basins. However, we believe that only a small percentage of volumes along the South System flow from the Piceance, so we only include receipts from Questar in Garfield, Moffat, and Rio Blanco Counties, CO in our Piceance Basin index.
Rockies Express Zone 1	OIS	We include Rockies Express Zone 1 for completeness, since REX connects to the White River Hub in Rio Blanco County, CO, which is part of the Piceance Basin. However, there are only four receipt points into REX in Northwest Colorado, and we believe the majority of these deals are reported as having occurred at the White River Hub.
TransColorado	OIS	TransColorado, which traverses the western part of the state, serves both the Piceance and San Juan Basins, so we cannot automatically assign trades to either. We include TransColorado receipts within Rio Blanco, Garfield, and Mesa Counties in our Piceance Basin index.
White River Hub	Default	The White River Hub is located in Rio Blanco County, CO, and exists primarily to handle production from the Piceance Basin.
Wyoming Interstate Company (WIC)	OIS	We include all deliveries into WIC in Rio Blanco, CO in our Piceance Basin index.

Uinta Basin

Although the Uinta touches several counties in Utah, the overwhelming majority of recent oil & gas permitting activity in the Uinta – and in the entire state of Utah, for that matter – has been focused in Duchesne and Uintah Counties.

Counties¹

Utah – Carbon, Duchesne, Emery, Grand, Uintah, Wasatch



Uinta Basin Pipeline Descriptions:

Pipeline/Hub	Default or OIS?	Description
CIG Mainline	OIS	We cannot automatically assign any trades along CIG to any specific unconventional area, because the pipeline serves several formations over multiple states. For the Uinta Basin index, we include CIG receipts within the small portion of the pipeline that extends into Uintah County, UT.
Northwest Pipeline – Rocky Mountain Pool	Default	We automatically include all Northwest Pipeline receipts done within its Rocky Mountain Pool in our Uinta Basin index. The Rocky Mountain Pool extends just south of Green River, and is located primarily in Utah.
Questar-South System	Default	Questar-South System, which we define as the portion of the Questar Pipeline system that is south of Clay Basin Gas Storage at the Northeast Utah/Wyoming Border, serves both the Uinta and the Piceance Basins. However, we believe that the vast majority of volumes along the South System flow from the Uinta, so we therefore default all Questar-South System trades to our Uinta Basin index.
Wyoming Interstate Company (WIC)	OIS	We include transactions into WIC within Uintah County, UT in this index.

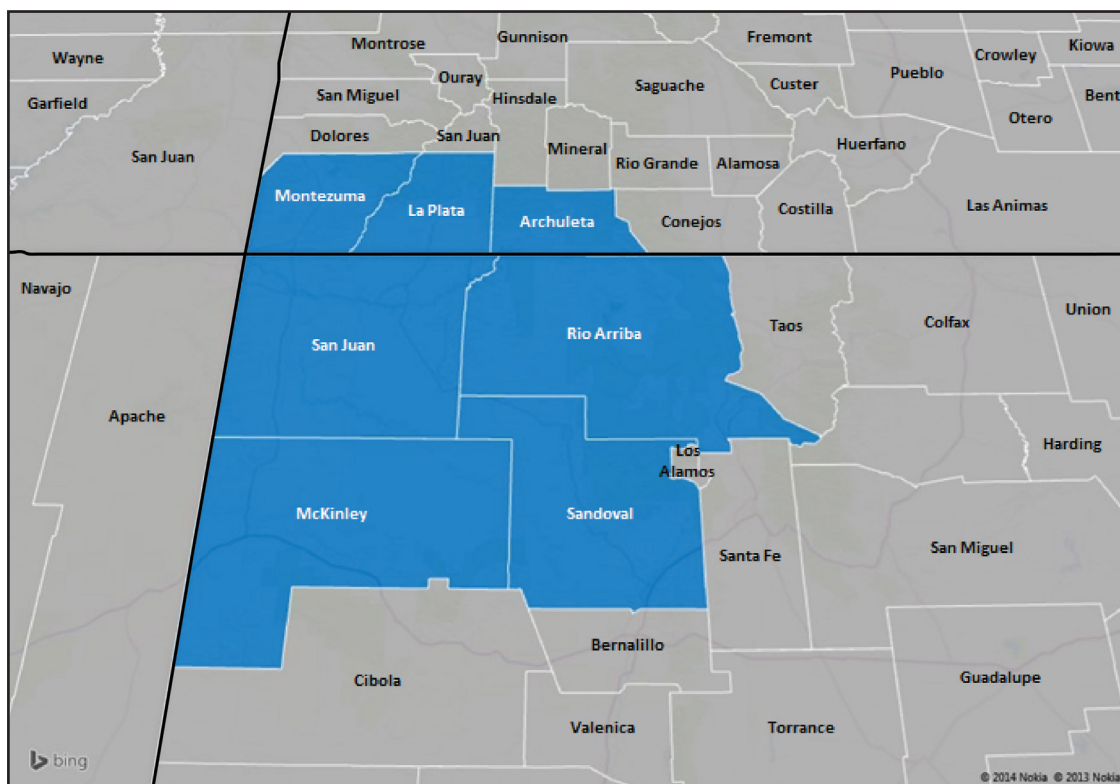
San Juan Basin

Our San Juan Basin index includes natural gas production from all sources within the basin, including tight sands, coal bed methane, conventional, and gas from the emerging deeper Mancos formation.

Counties¹

Colorado – Archuleta, LaPlata, Montezuma

New Mexico – McKinley, Rio Arriba, San Juan, Sandoval



San Juan Basin Pipeline Descriptions:

Pipeline/Hub	Default or OIS?	Description
El Paso Bondad	Default	Incorporates deliveries to El Paso’s Bondad Compressor Station in La Plata County, CO, near the Colorado/New Mexico border.
El Paso Non-Bondad (San Juan)	Default	El Paso Non-Bondad includes receipts within El Paso’s Blanco and Rio Vista regions. These areas lie primarily within San Juan and McKinley Counties in New Mexico, both of which are within our definition of the San Juan Basin.
Northwest Pipeline – San Juan Pool	Default	Includes all receipts within Northwest Pipeline’s San Juan Pool.
TransColorado Pipeline	OIS	TransColorado, which runs through western Colorado, serves both the Piceance and San Juan Basins, so we cannot automatically assign trades to either. We do include receipts in San Juan County, NM in this index.
Transwestern San Juan Pool	Default	The Transwestern San Juan Pool is located along the pipeline’s San Juan Lateral, in San Juan and McKinley Counties, NM. These two counties are within our definition of the San Juan Basin.

Pipeline/Hub	Default or OIS?	Description
Transwestern San Juan 2 Pool	Default	Transwestern's San Juan 2 Pool is also located along the pipeline's San Juan Lateral, in San Juan County, NM and La Plata County, CO. Both these counties are within our definition of the San Juan Basin.
Southern Trails	Default	Southern Trails has three receipt points along its system, all of which are located in San Juan County, NM.

¹The counties/parishes that appear in each section are those that we have determined comprise each particular unconventional formation. They do not include "adjacent" counties that border each location.

However, as we explained earlier in this document, we do in fact include transactions within those counties that border each play in calculating indexes for our various SPI formations.