Asset Risk Management, LLC

Energy Price Risk Management

TYPICAL PASSIVE OR STATIC HEDGING STRATEGIES

VS.

ACTIVE OR DYNAMIC MANAGEMENT OF HEDGE PORTFOLIO

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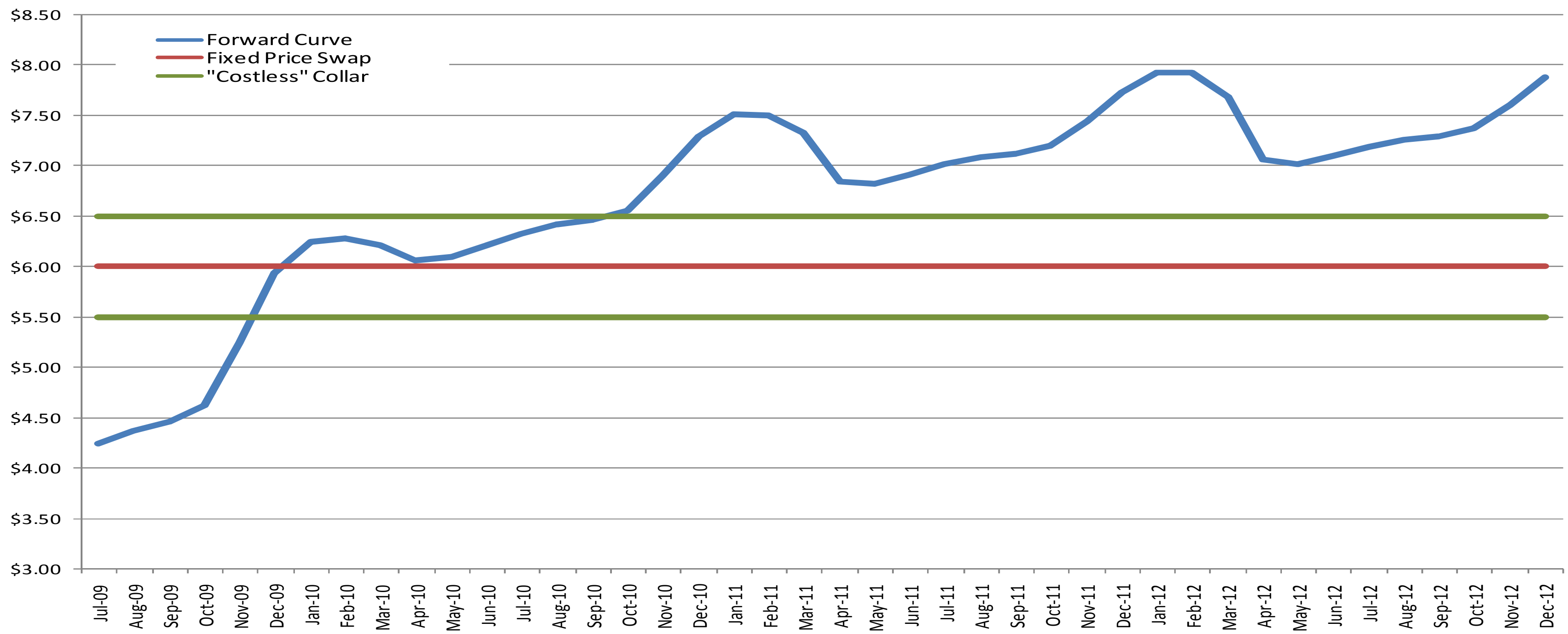
Common Themes in Hedge Portfolios

- Oil & gas producers manage the inherent risks of every aspect of their exploration, production and drilling activities down to the bore-hole, but typically there is a lack of emphasis on addressing commodity price risk.
- Hedging decisions (outside of acquisitions economics) are usually made from an emotional response to the market movements which is typically the exact WRONG time to be hedging.
- Most often, producers who **do** hedge tend to implement a “static” hedge strategy, i.e. fixed price lock-in or swaps and rarely revisit them throughout the term … enduring the good and the bad results for the life of the hedge.
- While this static hedge approach offers adequate protection at the time of implementation, the volatility of the market can often negate the effectiveness of the original hedge.

Typical Producer Hedging Strategies



- Producers hedge for various reasons:
  - To lock-in future cash flow on existing production.
  - To lock-in anticipated cash flow on production associated with acquisitions.
  - To increase the borrowing base within their banking facilities or lending syndicates.
  - And ultimately to reduce the impact of price volatility on company profits.
- Taking a “passive” approach to hedging by simply locking into a fixed-price using a swap or costless collar, is simply not effective in a dynamic, volatile market.

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Dynamically Managed Hedge Portfolios

Concept of a Managed Hedge Portfolio

A managed hedge program adjusts to the changing environment of the market allowing for better performance in terms of actual price realization without compromising the protective aspects of the initial hedge.

- ➢ Dynamically managed hedge programs create no additional risk to the producer than static hedge portfolios.
- Minimizes and mitigates any risk that is created through initial hedge.
  - The goal of hedging is to ensure future profitability by reducing forward price risk; however doing so actually introduces new risk that needs to be managed over time.

- ➢ Ongoing management of hedge positions can further enhance the financial rewards to the portfolio.
- Implement initial risk reducing hedge structures offering maximum upside potential without compromising downside protection.
- Optimize hedge instruments to improve price protection and open upside participation over time.
- Provide a strategic edge improving financial management of hedging portfolio and increase overall returns.

It All Starts with Fundamentals…

Supply
&
Demand

Weather

Storage

Geopolitical
Risk

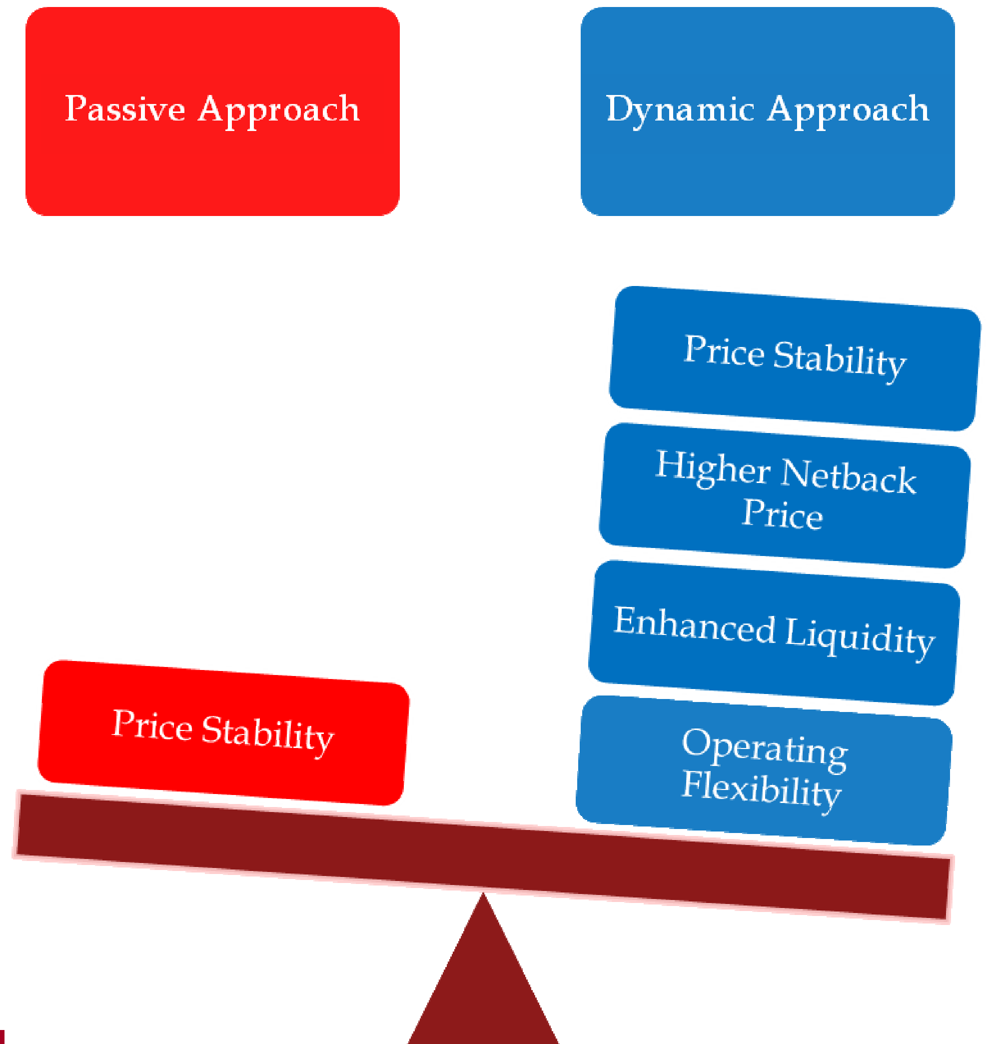
Financial Markets

Volatility
&
Option Skew

Current Market
Undervalued or Overvalued?

Opportunities to Hedge New Volume
or
Optimize Existing Hedges

Dynamic Risk Management



Examples of Typical Hedge Structures and Subsequent Optimizations

Case Study: Crude Oil Client

Existing Hedge Position:

- Fixed Price Swap at $80.00 for 2013
  - Board mandated position, made economic sense at the time

Risks Associated:

- This growth-oriented client could is sacrificing upside participation
- As the market price increases so does the cost of drilling those wells, therefore without any upside participation margins begin to erode.
- Although short term fundamentals looked weak, we were and we remain bullish on oil longer term.

Goals of Optimization:

- Increase upside potential in 2013.
- Keep $80.00 downside protection in place.

Case Study: Optimization Details

Optimization Strategy for 2013 timeframe:

- Increase upside participation to $100
  - Buy $80.00 Call offsetting short swap position
  - Sell $100.00 Call moving previous upside constraints from $80.00 to the $100.00 level
- Assure adequate downside protection
  - Sell $60.00 Put to complete the new structure and assist in financing upside participation
  - Implements $20.00/Bbl protection for settlements below $60.00/Bbl

Resulting Hedge Structure:

- New Position – $80.00 / $60.00 x $100.00 Producer 3-Way Collar

- Upside participation is increased from $80.00 to $100.00
- $80.00 Swap remains for 2013
- $80.00 / $60.00 Protective Spread provides $20.00 value (Market + $20.00) below $60.00

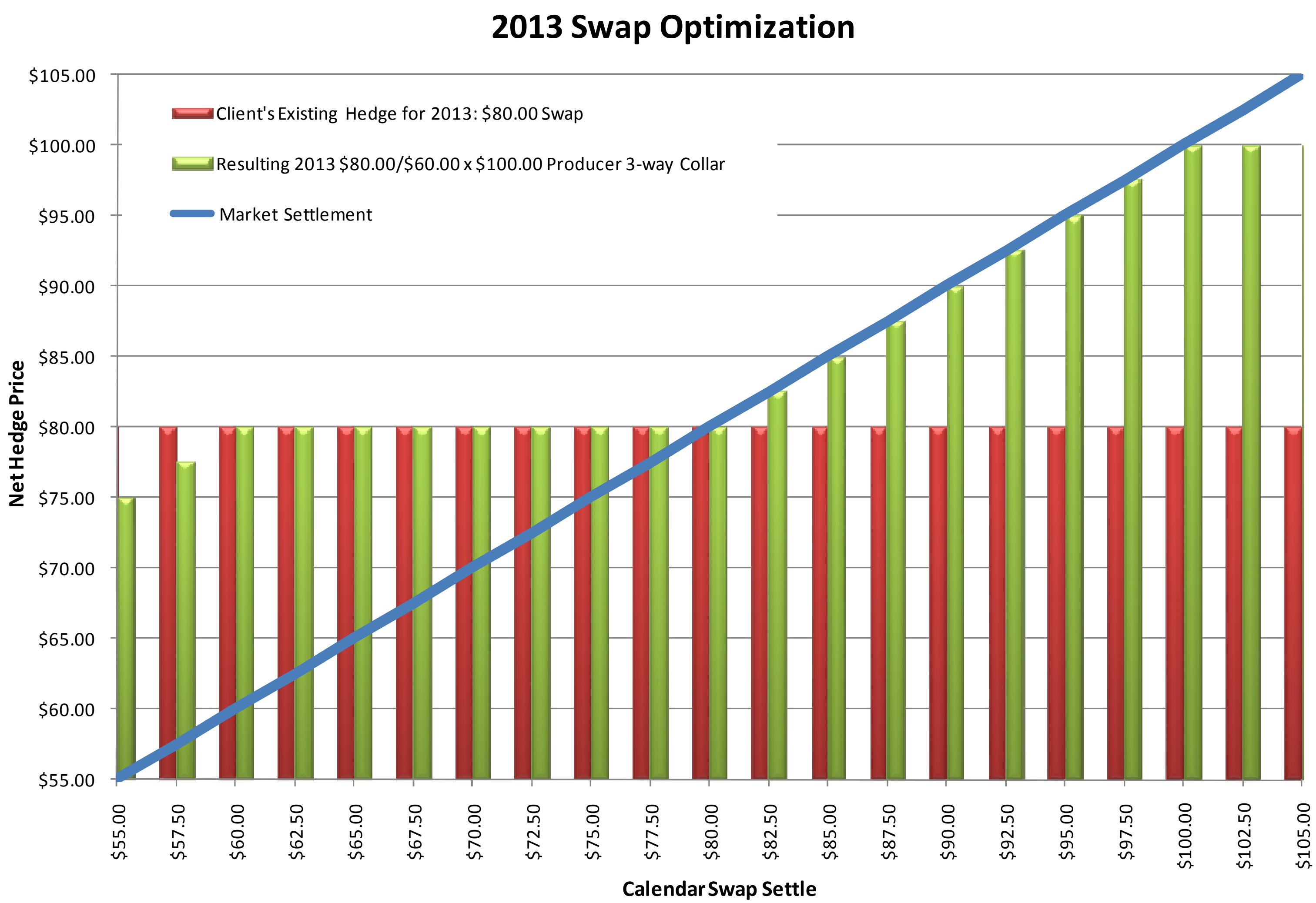
Market is validating view of higher prices in the latter part of the curve

- Current forward price for 2013 is $92.23 (11/4/11)

Subsequent Optimization Goal: Derisk the structure further

- Lowering the $60.00 Put (increasing the protective spread) or eliminating altogether.

Case Study: Result & Comparison



Case Study: Natural Gas Client

Existing Hedge Position:

- Fixed price swap at $6.00 for 2012
  - Legacy hedge position placed beginning of 2010

Obviously No Issues With This Hedge:

- No worries that we breach $6.00 in 2012
- Client loses inherent value as the market trades higher than current levels
- Question becomes, "How can we make it better or gain additional protective value without simply monetizing the hedge and taking the value?"

Goals Of Optimization:

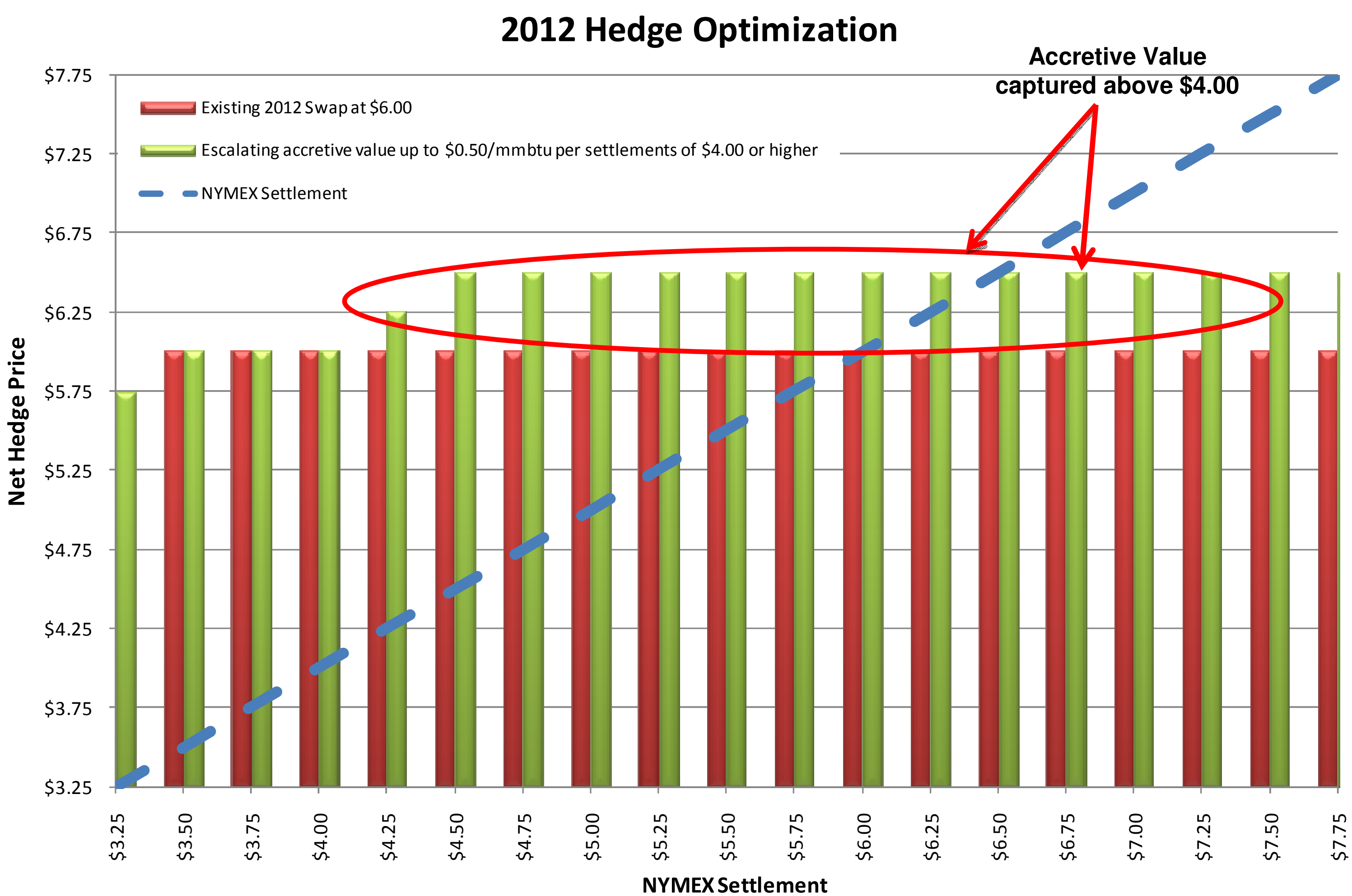
- Keep the $6.00 fixed price swap in place
- Build accretive value within the existing hedge structure given current price expectations

Case Study: Optimization Details

Optimization Strategy :

- Buy $4.00/$4.50 Call Spread (buy $4.00 call, sell $4.50 call)
  - Every $0.01 above $4.00 to a maximum of $0.50 is accretive value to the existing $6.00 swap.
  - If 2012 settles at $4.50, Client receives $6.00 on the swap + $0.50 from the call spread (total $6.50)
- Sell $3.50 Put
  - Finances the call spread purchase so the structure becomes costless
  - Creates $2.50 Protective Spread if prices dip below $3.50
    - Between $6.00 and $4.00 Client receives $6.00 + value from new call spread
    - Between $4.00 and $3.50 Client receives $6.00 (original swap value)
    - Below $3.50, Client receives *Market* + $2.50
- The $4.00/$4.50 call spread becomes an asset to the Client

Case Study: Result & Comparison



Asset Risk Management

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ARM has been assisting Oil & Gas Producers with their hedge portfolios since 2004. We bring a dynamic approach to risk management by implementing initial strategies that provide protection and the ability to adjust/enhance as the market provides opportunity.

Custom Tailored	Dynamic Approach	Aligned Interests
E&P Focus / Industry Expertise	Initiate balance sheet protection	In house think tank
Develop, implement, manage and maintain positions for clients	Enhance position as market provides opportunity	Fees and compensation tied to client success
Work within existing policies, procedures and capital structure needs	Actively manage hedge book as an asset	Execute as agent armed with market knowledge and size advantage
Tailor to asset base and investment/development objectives	Comprehensive Objective: reduce price risk, retain operating flexibility, enhance liquidity	Client retains ultimate decision making power
Provides clients a strategic advantage	Leads to higher realized prices and lower risk profile	ARM does not trade for its own book

Asset Risk Management, LLC

ARM Management Team: Unparalleled Industry Experience

Gil Burciaga

Chairman

Mr. Burciaga was a founding member of Dynegy, Inc. (formerly Natural Gas Clearinghouse). He served as one of six senior vice presidents involved in the startup and growth of this Fortune 500 trading company and market maker, and he was a member of the four-person team responsible for taking the company public. During his tenure (1986-1991), Dynegy was one of the fastest growing companies in the United States. From 1992-1997, Mr. Burciaga was President of NGC Energy Resources, a division focused on the acquisition and operation of downstream natural gas assets including gathering systems, processing plants and natural gas liquids fractionation plants. Acquisitions made in the U.S. and Canada under his direction exceeded $900 million. From 1985-1992, Mr. Burciaga served as Senior Vice-President of Natural Gas Supply & Trading. Because of deregulation to the merchant role and price controls during this period, Dynegy faced a very volatile natural gas market. Dynegy emerged as a dominant player during this time period and became the largest independent and the second largest natural gas marketer in the United States.

Zach Lee

CEO

Prior to forming Asset Risk Management, Mr. Lee worked for Duke Energy Trading & Marketing, where he managed the Structured Products and Derivatives marketing group. The goal of this team was to enhance the value of Duke's trading organization by leveraging the natural gas derivatives market to create natural gas physical and financial product opportunities for producers and end users. Prior to Duke, Mr. Lee worked for Entergy-Koch Trading in a number of trading roles with a focus on the natural gas and power markets.

Chris Croom

President

Mr. Croom has spent the past 10 years marketing structured products and energy derivatives, primarily for large financial institutions. Prior to joining Asset Risk Management, Mr. Croom was one of the original members of Bear Energy LP, a subsidiary of The Bear Stearns Companies Inc. He was responsible for the company's derivative marketing activities across natural gas, crude oil and crude product platforms. Prior to Bear Energy, Mr. Croom worked for the National Bank of Canada originating structured product opportunities and marketing energy derivatives to producers and end users across North America.

Mr. Croom began his career in derivatives with Enron as part of Enron's Industrial Markets Group, where he was focused on marketing hedging structures across various OTC commodity markets

Art Cipriani

President, ARM Appalachia

Mr. Cipriani has 30 years of experience and a proven track record of success and established relationships from wellhead to city gate. Prior to starting ARM Appalachia in October 2009, Mr. Cipriani was a senior member of Eagle Energy Partners (now EDFT). He joined the Eagle Energy team when the company was founded in 2004 and was directly responsible for building Eagle's presence in the Northeast, Mid-Atlantic and Appalachian areas. Prior to Eagle, Mr. Cipriani was an officer & Vice President of Dominion Transmission with overall responsibility for marketing, customer service, business development, rates and regulatory affairs for the company's regulated interstate pipeline, storage and LNG subsidiaries. Most notable in Mr. Cipriani's energy career was his role as a partner and Senior Vice President of Natural Gas Clearinghouse (now DYNEGY). During his 10-year tenure at NGC/Dynegy (1984-1995), he was responsible for directing all marketing, origination and trading activities in the East/Northeast, Mid-Atlantic and Midwest regions for the non-regulated gas marketing company, with regional offices in Pittsburgh, Chicago and Boston.

ARM Management Team: Unparalleled Industry Experience

Vinny McConnell
President, ARM Producer Services
Mr. McConnell was one of the first 20 employees of Dynegy, Inc. (formerly Natural Gas Clearinghouse). From 1987-2003 Mr. McConnell, held various managerial positions with Dynegy including Senior Vice President of Term Marketing, Trading Floor Vice President and General Manager, Senior Vice President of Term Supply and Senior Vice President of NGL Marketing and Trading. From 2004 until he joined ARM in 2011, Mr. McConnell utilized his 20 years of experience in the energy industry as a consultant to end users and LDCs in the natural gas and natural gas liquids business. Prior to joining Dynegy in 1987 he held marketing positions with Union Carbide Corporation and Northern Petrochemical.

Chris Lang
Sr. Vice President – Chicago Office
Mr. Lang has over 20 years of energy industry experience, the past 18 focused on providing energy risk management services to a broad array of energy market participants. Prior to joining Asset Risk Management, Mr. Lang was responsible for energy derivative sales to North American oil and gas producers and country coverage for Canadian clients at Barclays Capital. Prior to Barclays Capital, Mr. Lang was head of commodity sales at UBS AG. From 1990 to 2004, Mr. Lang worked in a variety of energy related roles at Bank One N.A., primarily as head of commodity sales for 11 years. Mr. Lang holds a BS degree from Marquette University and a MBA degree from the University of Notre Dame.

Frank Kronz
Sr. Vice President – Pittsburgh Office
Mr. Kronz has over 15 years energy derivatives experience, most recently with EQT Corporation as well as Columbia Energy Group and CNG Energy Services. Focused on natural gas asset management and marketing, Mr. Kronz had primary responsibility for asset management activities including in excess of 20Bcf contracted storage space on Equitrans, National Fuel, Dominion Transmission , Tennessee and Columbia Transmission as well as third party storage management. Production hedging responsibility included hedge portfolio with a 7 year tenor as well as monetization transaction executions hedge recommendations and market analysis. Mr. Kronz was also responsible for the supply portfolio and marketing to industrial and large commercial end users such as US Steel and General Motors. Mr. Kronz was first employed as a derivatives analyst in the energy industry, progressing to structured products followed by marketing and risk management. Prior to the energy industry Mr. Kronz worked in mutual fund accounting and public accounting. Mr. Kronz holds a BS degree in Accounting from Robert Morris University.

Thomas Heath
Sr. Vice President – Houston Office
Mr. Heath has more than 25 years of energy industry experience having started his career in the early 1980's with Columbia Gulf Transmission Company where he held various operational and commercial positions. In 1988, he began a 15 year stint with the evolving marketing units of Acadian Gas Pipeline System, Tejas Gas Corporation and Coral Energy, L.P. (now Shell Trading Gas & Power) where he served in various management roles and was involved with the construction of the West Region trading desk, Consumer Marketing group, Producer Services unit and the Risk Product Marketing team. Starting in 2004, Mr. Heath served as a Vice President of Union Bank of California, N.A., an affiliate of Bank of Tokyo-Mitsubishi UFJ, Ltd., where he created and lead a de novo energy derivatives desk supporting Energy Capital Services. Prior to joining Asset Risk Management, Mr. Heath was President of Blue Dolphin Energy where he was responsible for all commercial, operational and business development functions. He is an alumnus of the University of Houston.

Contact Information

Houston
(281) 655-3200

Zach Lee
Chris Croom
Tom Heath

Pittsburgh
(412) 886-1800

Art Cipriani
Frank Kronz

Chicago
(847) 920-5199

Chris Lang