

## Blacks Fork Complex



## QEP Field Services

**Perry Richards**

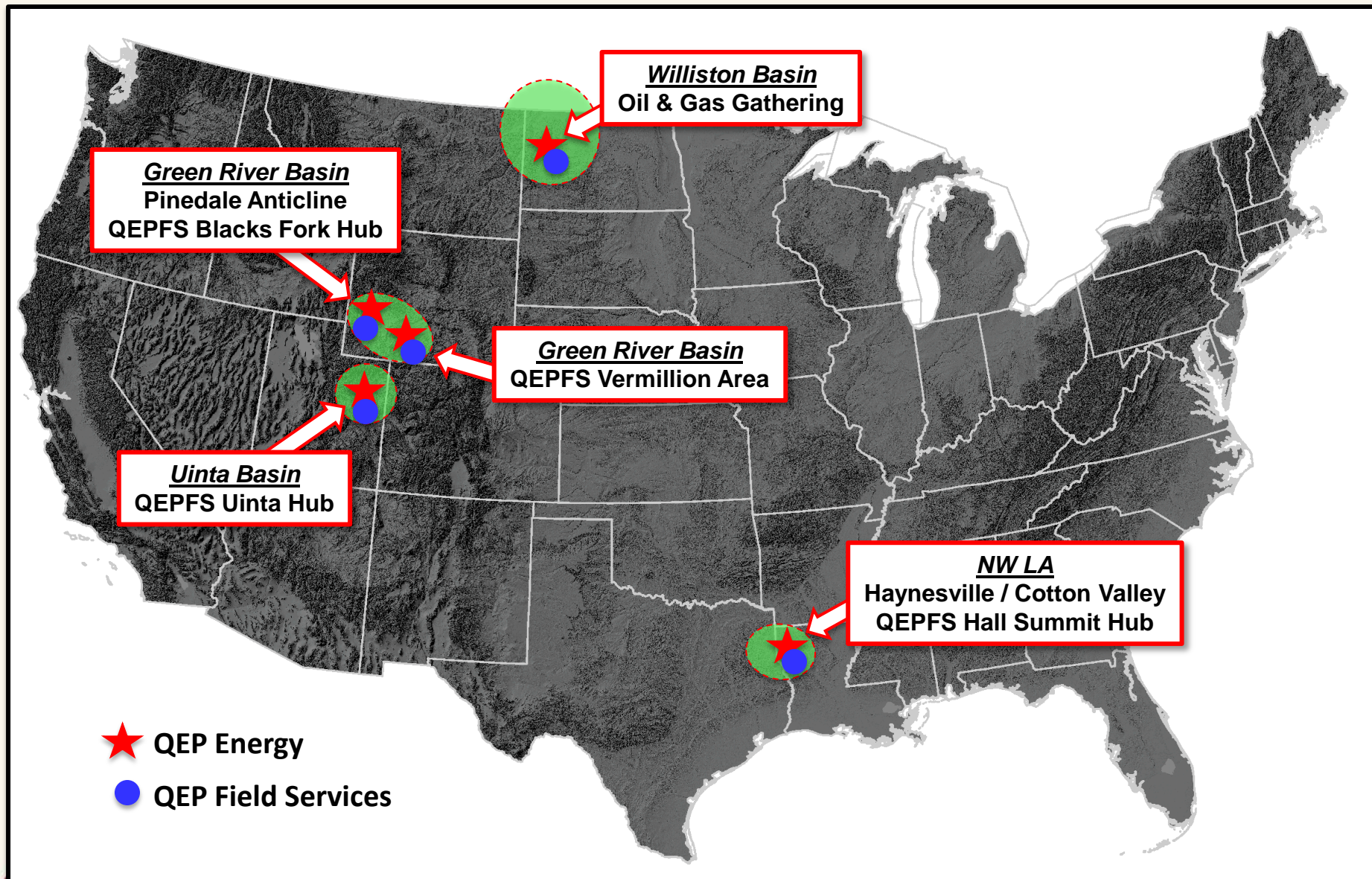
**Senior Vice President, Field Services**



The Resource Growth Company ♦ NYSE: QEP



# Field Services areas of operation



# The Natural Gas Value Chain

## Wellhead Production



Gas produced into gathering pipelines

## Gas Gathering Pipelines (low pressure)



Gas transported from the wellhead to  
compression facilities

## Compression



Provides low pressure service to gas  
fields and high pressure service for  
plants

## Gas Gathering Pipelines (high pressure)



Gas transported from compression  
facilities to the plants

## Gas Processing / Treating Plant



Recovers NGL's and removes other  
components such as CO<sub>2</sub> and H<sub>2</sub>S





# The Natural Gas Value Chain - Continued

## Gas Processing / Treating Plant



## Interstate Pipelines



Residue gas transported to the end user market

## NGL Transportation Options



Pipeline



Rail



Truck

## NGL Fractionator



Fractionates NGL's for use in refineries and  
petrochemical plants

## Refineries / Petrochemical Plants



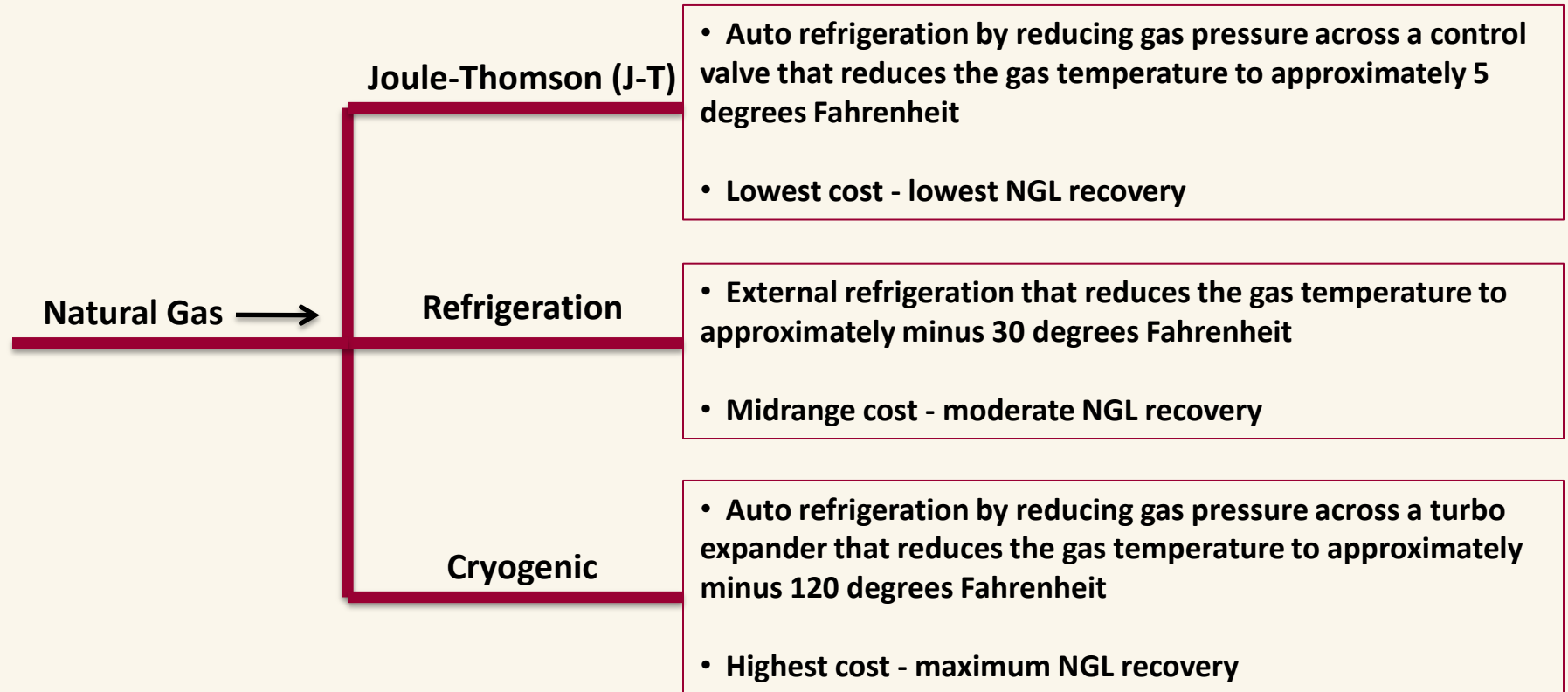
End User Market

### QEP Field Services Assets:

Approximately 2,300 miles of gathering pipe  
1.37 Bcfd of processing capacity  
600 MMcfpd of CO2 treating capacity  
5,000 Blpd of fractionation capacity  
Multiple gas and NGL pipeline connections  
Long-term contracts



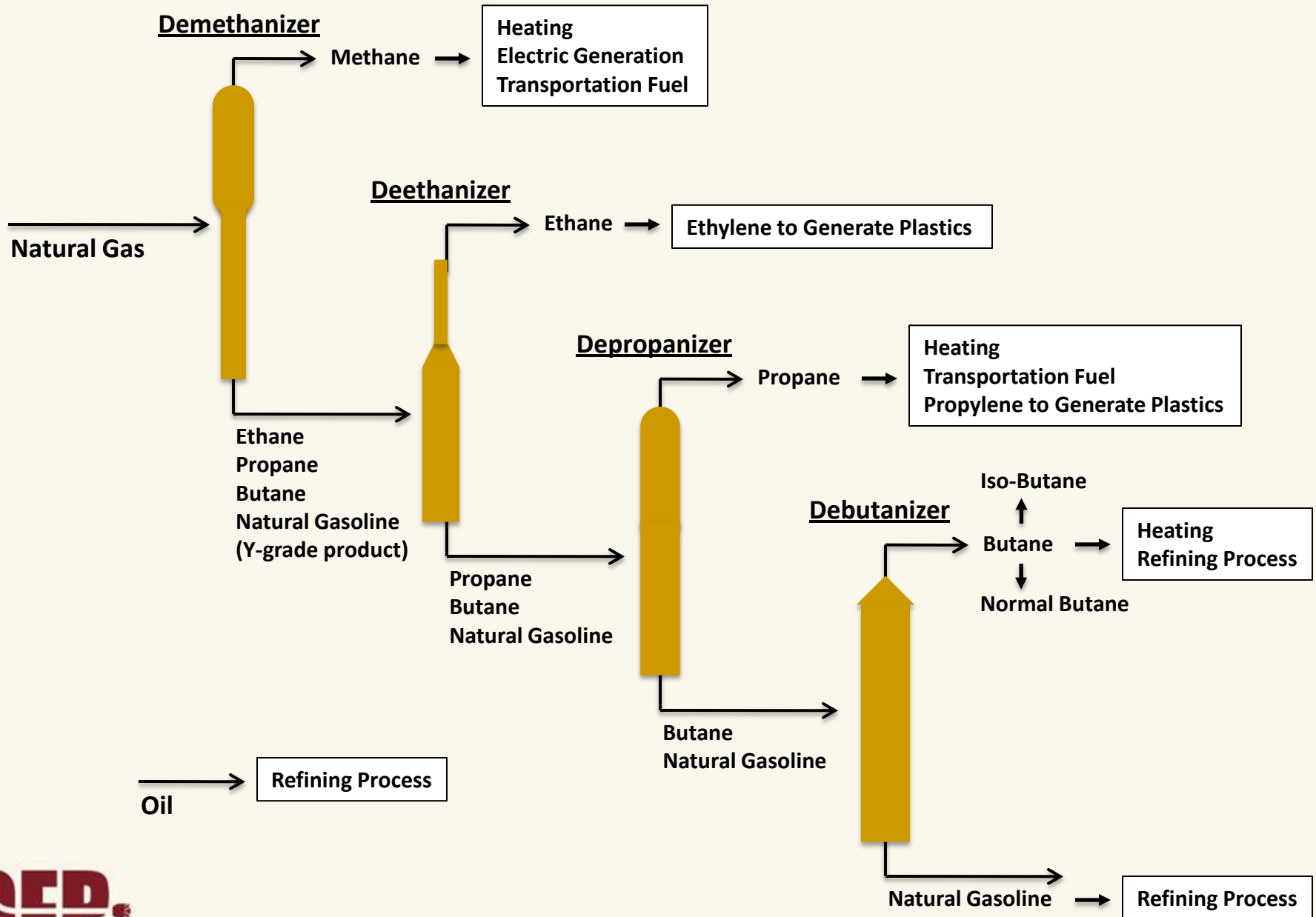
# Field Services offers various processing options



Stagecoach / Iron Horse  
Complex →



# Hydrocarbon Products - Fractionation Process



# Example NGL recoveries comparison

Assume plant inlet of 150 MMcfpd

Daily Production Volume

		Cryogenic Process		Refrigeration Process		J-T Process	
Product	Product GPM	Recovery Factors	Gallons Recovered	Recovery Factors	Gallons Recovered	Recovery Factors	Gallons Recovered
Ethane	1.20	82%	147,600	6%	10,800	1%	1,800
Propane	0.34	99%	50,490	30%	15,300	3%	1,530
N-Butane	0.08	100%	12,000	60%	7,200	10%	1,200
Iso-Butane	0.09	100%	13,500	60%	8,100	10%	1,350
Gasoline	0.17	100%	25,500	70%	17,850	35%	8,925
Totals	1.88		249,090		59,250		14,805

-120 degrees Fahrenheit

-30 degrees Fahrenheit

5 degrees Fahrenheit

**QEP Field Services  
Processing Capacity  
(1.37 Bcfd)**

**740 MMcfpd**

Blacks Fork II – 420  
Blacks Fork I – 80  
Emigrant Trail – 55  
Iron Horse – 150  
Vermillion – 35

**350 MMcfpd**

Stagecoach – 200  
Red Wash – 150

**280 MMcfpd**

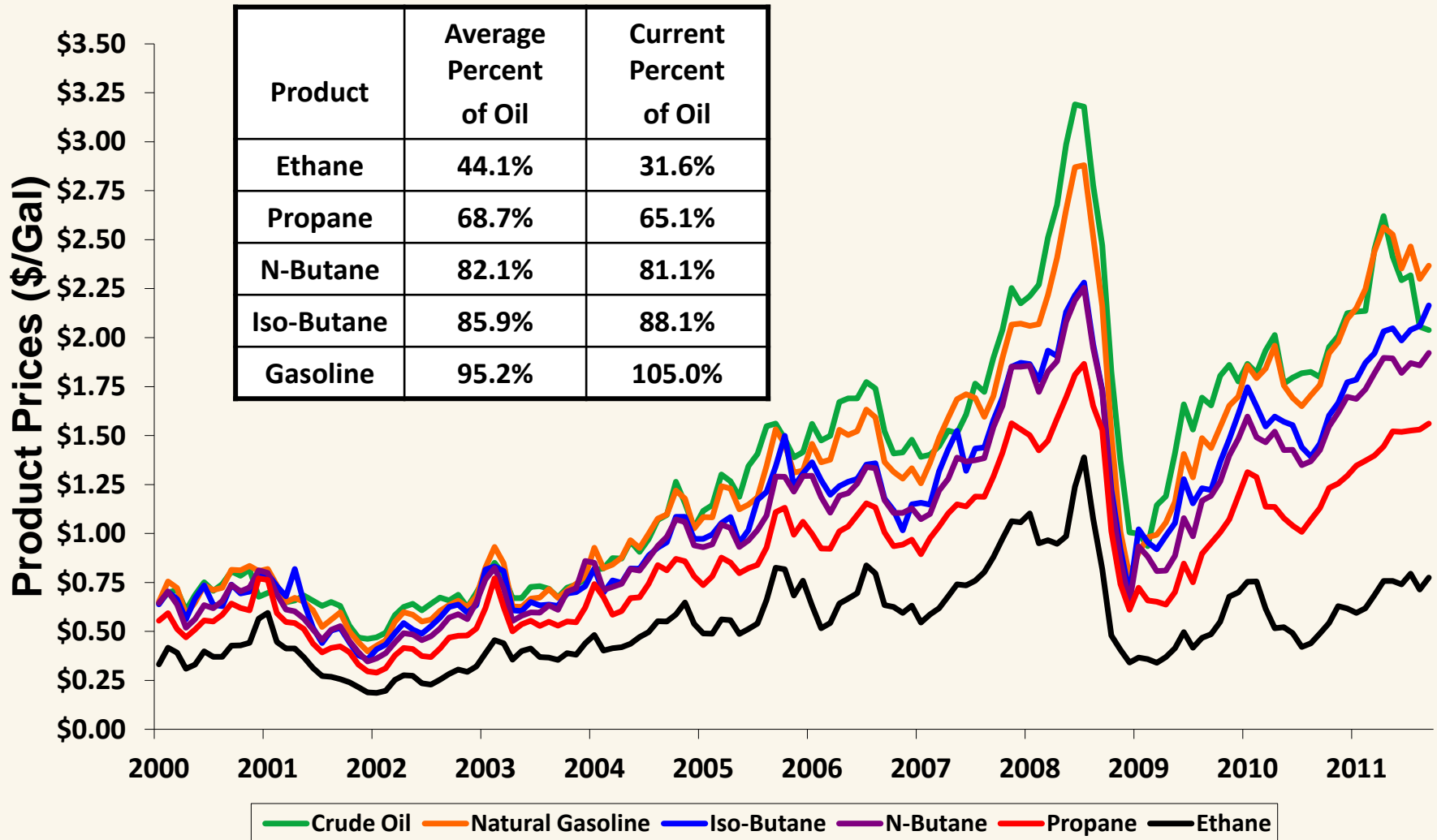
Blacks Fork JT – 280



# Liquid Prices

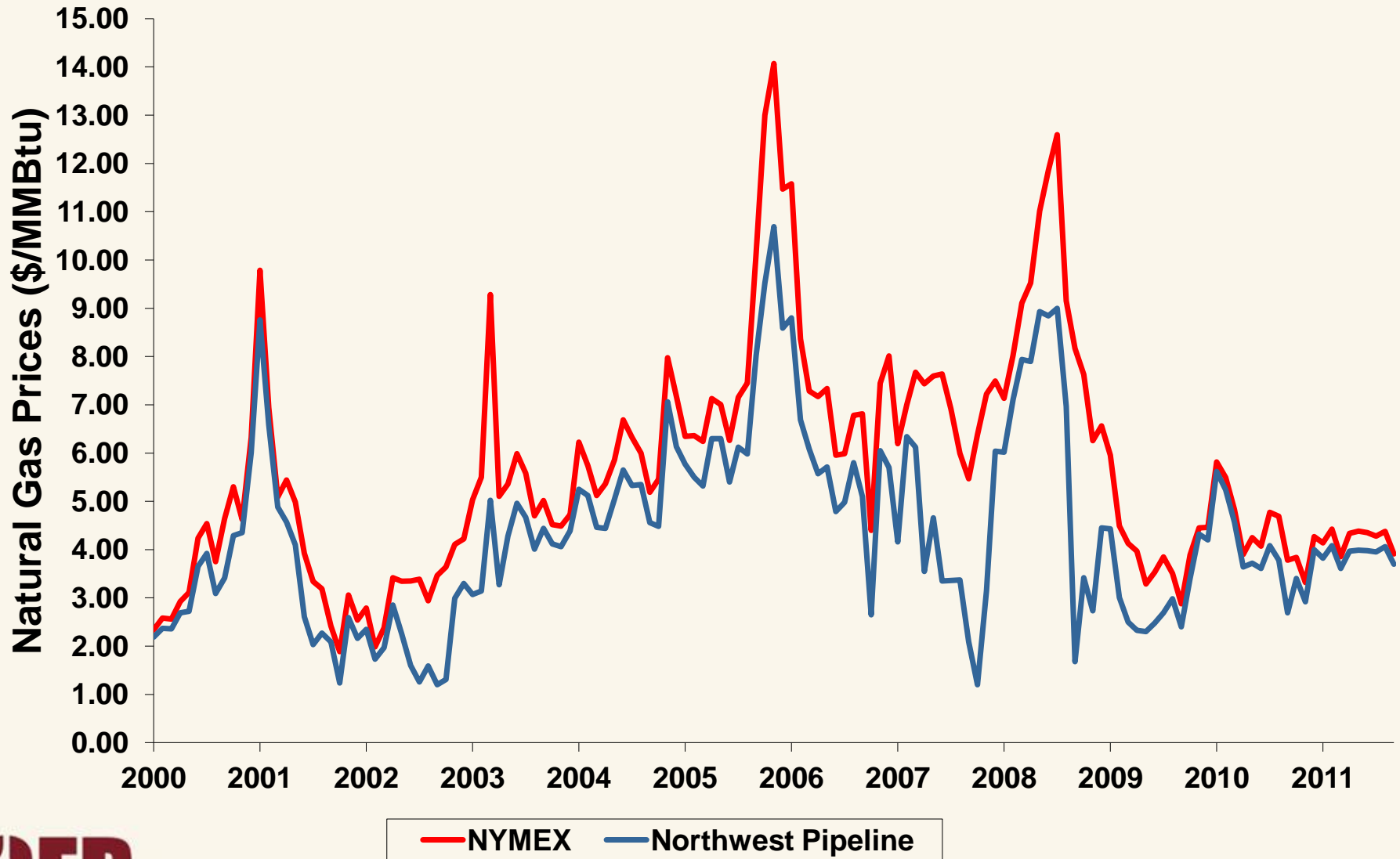
Oil Price – NYMEX

NGL Prices – Mont Belvieu





# Natural Gas Prices

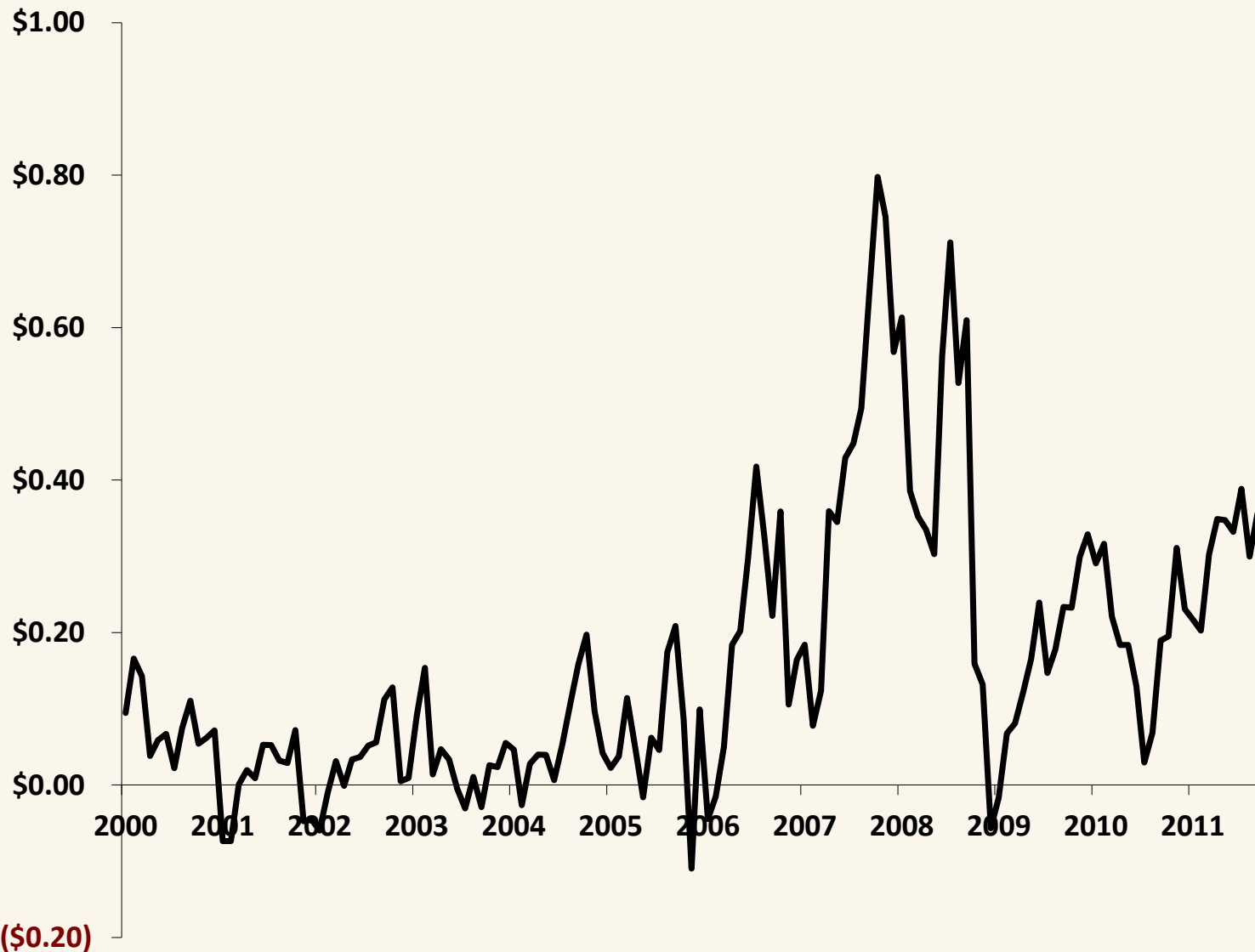


# Ethane Margin

## Net to the Plant (Frac Spread)

Mont Belvieu Pricing less Pipeline T&F and Rockies Gas Prices

Year	Margin (\$/Gal)
2000	0.0787
2001	0.0006
2002	0.0319
2003	0.0307
2004	0.0634
2005	0.0613
2006	0.1858
2007	0.4333
2008	0.3834
2009	0.1719
2010	0.1941
2011	0.3106

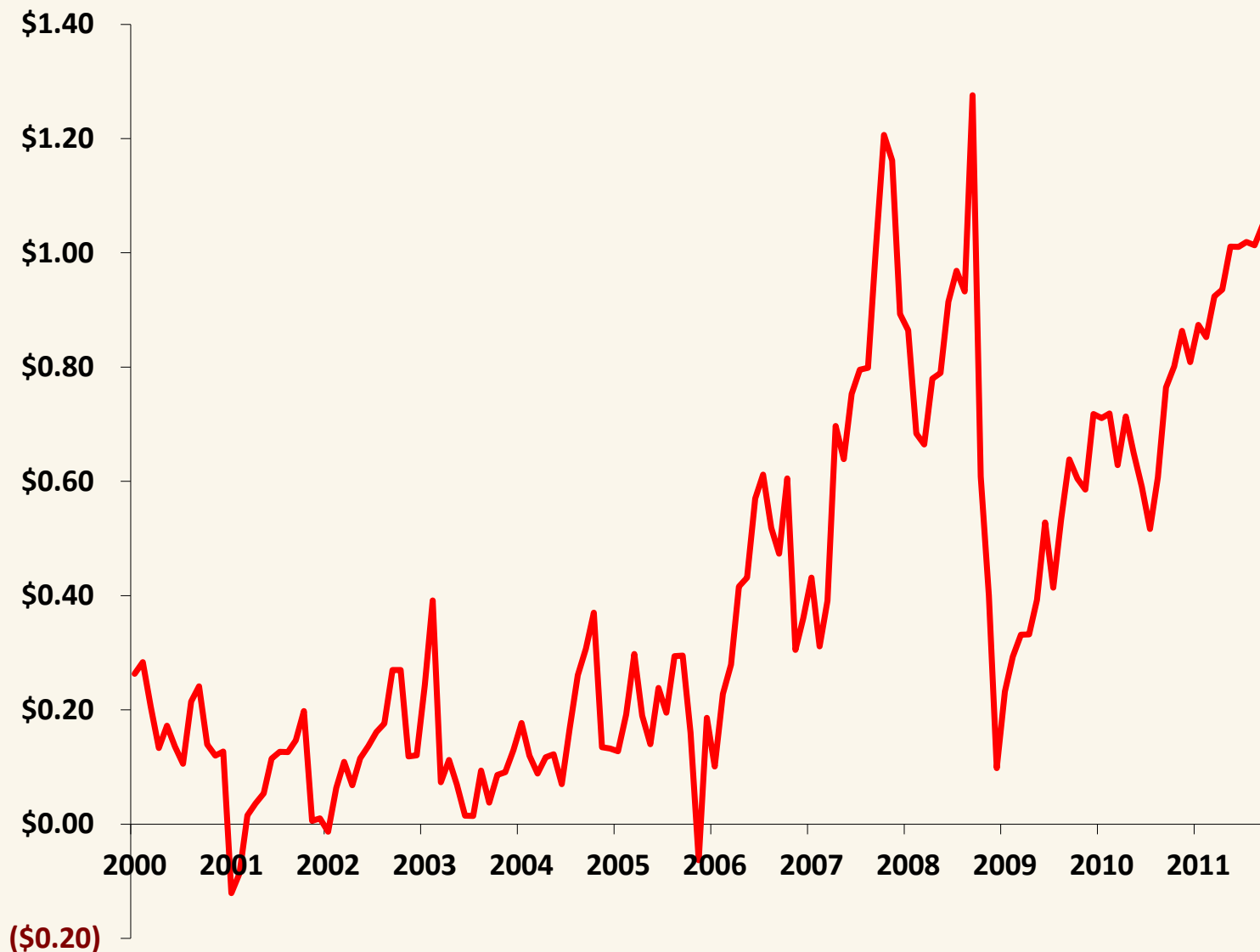


# Propane Margin

## Net to the Plant (Frac Spread)

Mont Belvieu Pricing less Pipeline T&F and Rockies Gas Prices

Year	Margin (\$/Gal)
2000	0.1759
2001	0.0495
2002	0.1313
2003	0.1099
2004	0.1684
2005	0.1824
2006	0.4040
2007	0.7540
2008	0.7436
2009	0.4646
2010	0.6948
2011	0.9654



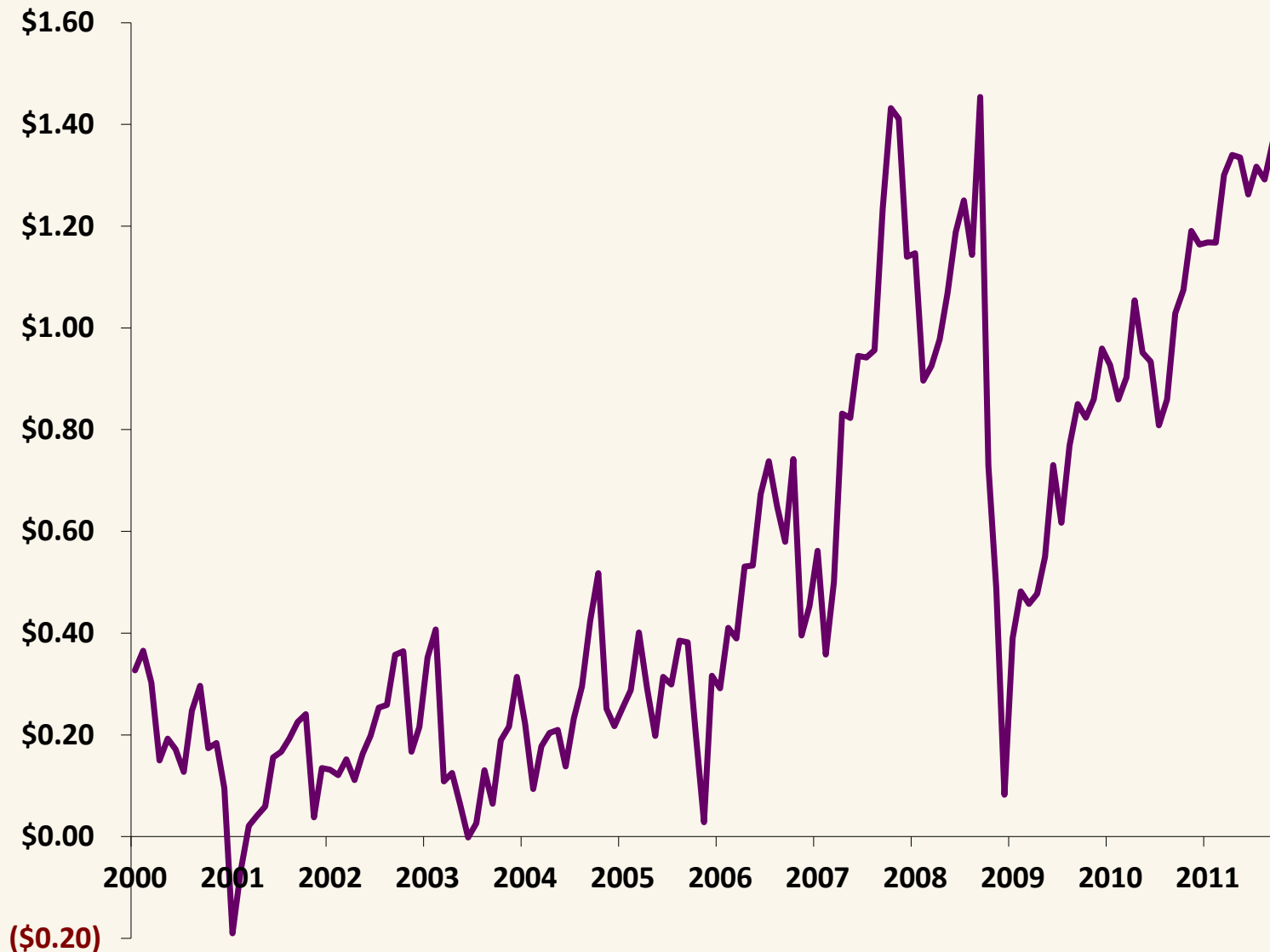


# N-Butane Margin

## Net to the Plant (Frac Spread)

Mont Belvieu Pricing less Pipeline T&F and Rockies Gas Prices

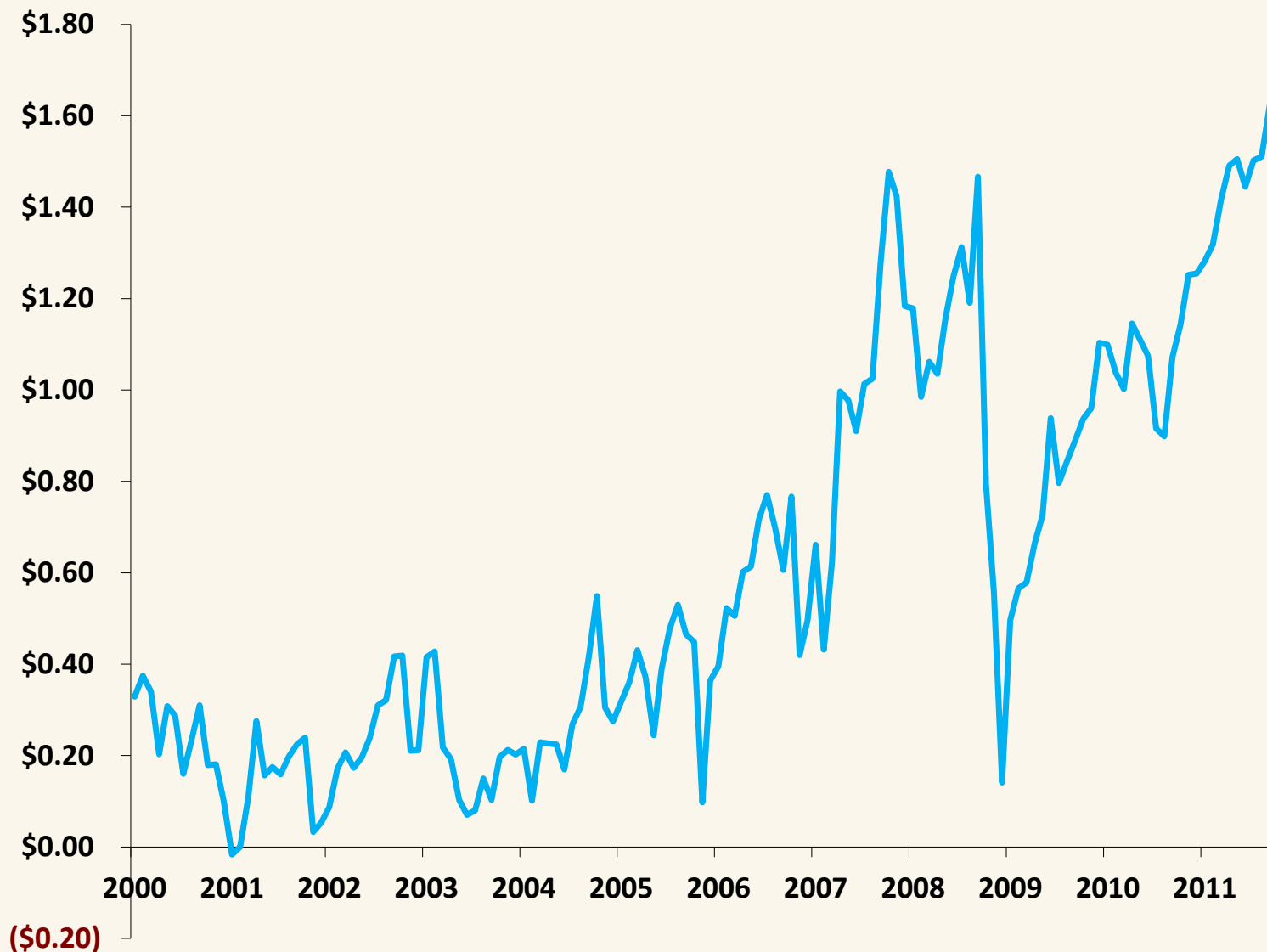
Year	Margin (\$/Gal)
2000	0.2165
2001	0.0734
2002	0.1977
2003	0.1627
2004	0.2442
2005	0.2739
2006	0.5275
2007	0.9246
2008	0.9404
2009	0.6613
2010	0.9762
2011	1.2830



# Iso-Butane Margin Net to the Plant (Frac Spread)

Mont Belvieu Pricing less Pipeline T&F and Rockies Gas Prices

Year	Margin (\$/Gal)
2000	0.2478
2001	0.1189
2002	0.2454
2003	0.1946
2004	0.2698
2005	0.3695
2006	0.5885
2007	0.9972
2008	1.0056
2009	0.7894
2010	1.0811
2011	1.4548

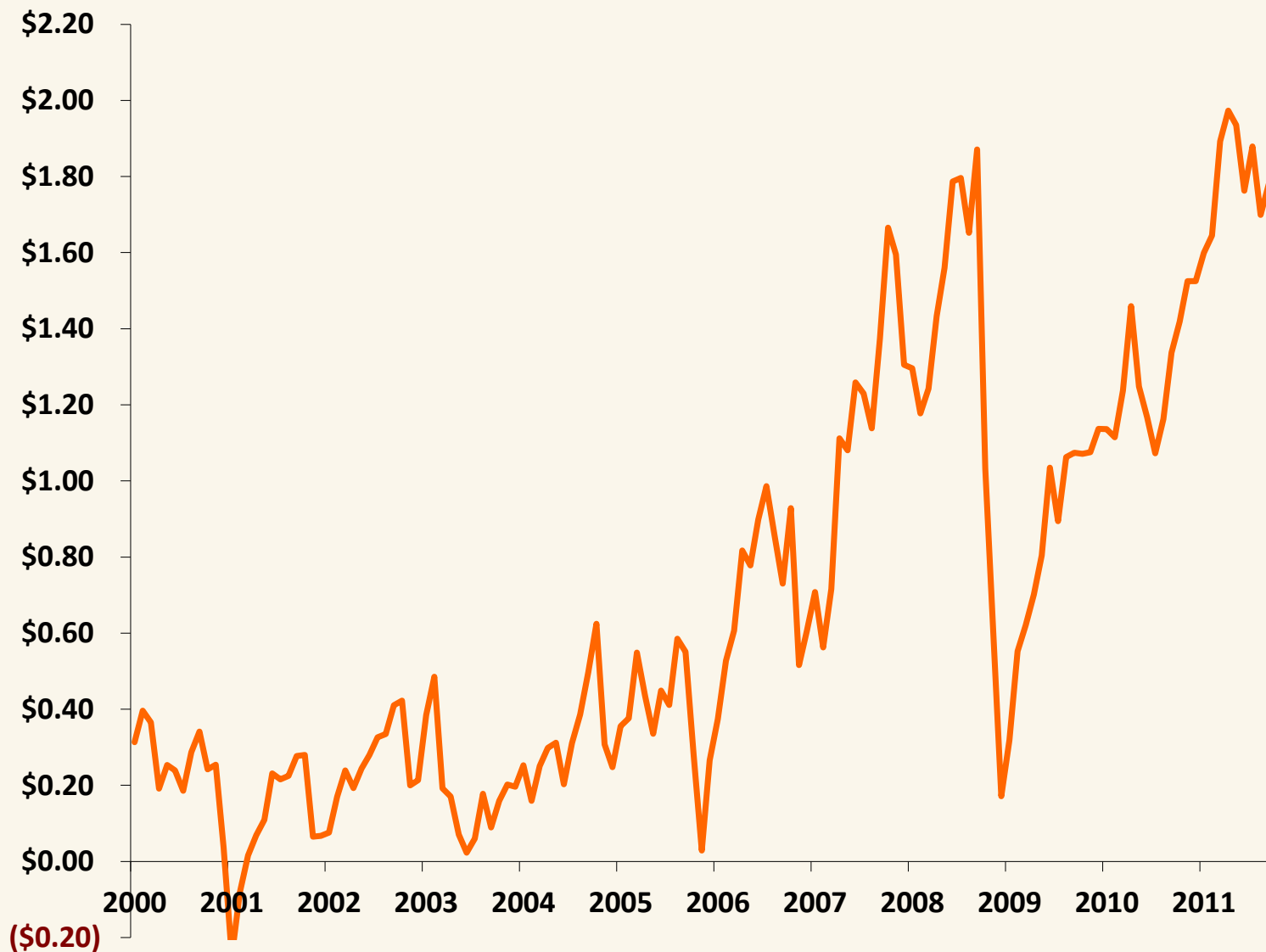


# Gasoline Margin

## Net to the Plant (Frac Spread)

Mont Belvieu Pricing less Pipeline T&F and Rockies Gas Prices

Year	Margin (\$/Gal)
2000	0.2587
2001	0.1021
2002	0.2590
2003	0.1842
2004	0.3209
2005	0.3852
2006	0.7187
2007	1.1453
2008	1.3024
2009	0.8623
2010	1.2837
2011	1.7961





# Example value of NGL Components vs Methane

Assume plant inlet of 150 MMcfpd

Daily Production Value

		Cryogenic Process		Refrigeration Process		J-T Process	
Product	2011 YTD Product Margin (\$/gal)	Gallons Recovered	Product Value (\$/day)	Gallons Recovered	Product Value (\$/day)	Gallons Recovered	Product Value (\$/day)
Ethane	0.3106	147,600	45,845	10,800	3,354	1,800	559
Propane	0.9654	50,490	48,743	15,300	14,771	1,530	1,477
N-Butane	1.2830	12,000	15,396	7,200	9,238	1,200	1,540
Iso-Butane	1.4548	13,500	19,640	8,100	11,784	1,350	1,964
Gasoline	1.7961	25,500	45,801	17,850	32,060	8,925	16,030
Totals		249,090	175,425	59,250	71,207	14,805	21,570

Annualized NGL Upgrade

\$64.0 MM

\$26.0 MM

\$7.9 MM



# Gas Processing Contracts

## Fee-Based (represents 75% of QEPFS contracted volume):

Producer pays processor a fee; producer receives 100% of the recovered NGLs plus 100% of the residue gas (less “shrink” and fuel)

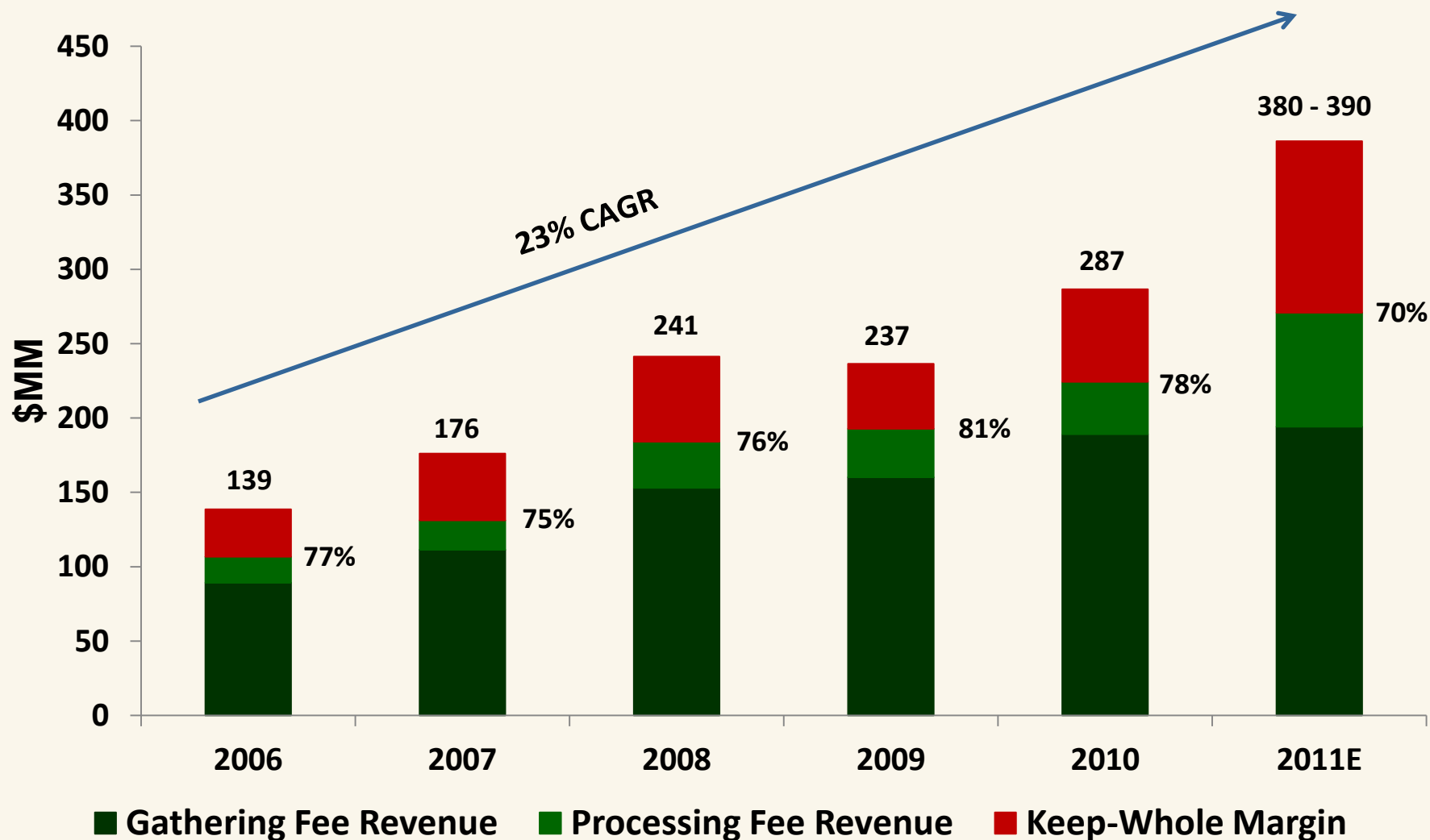
## Keep-Whole (represents 25% of QEPFS contracted volume):

Producer receives 100% of the Btu value of natural gas originally delivered to the processor; processor keeps 100% of the NGLs extracted from the processed gas and purchases natural gas to replace the Btu value of the extracted NGLs



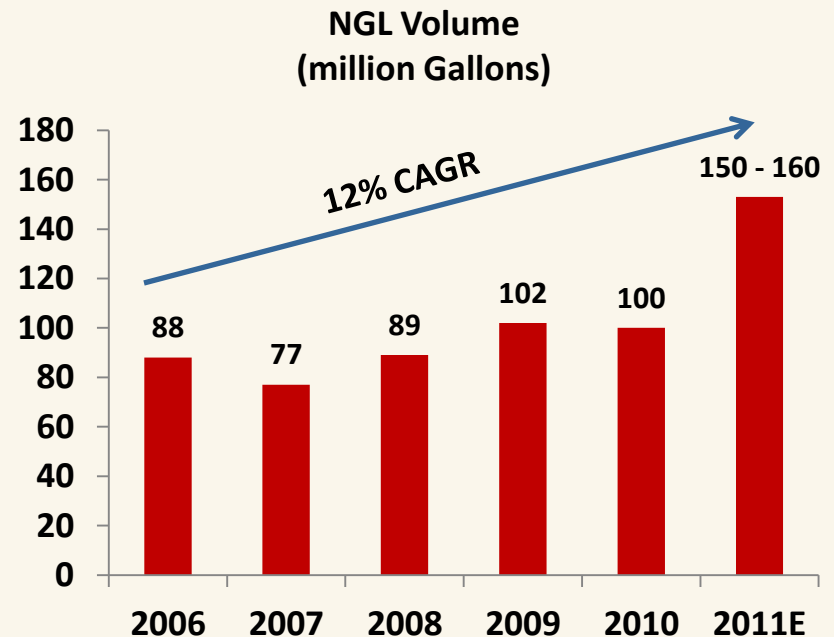
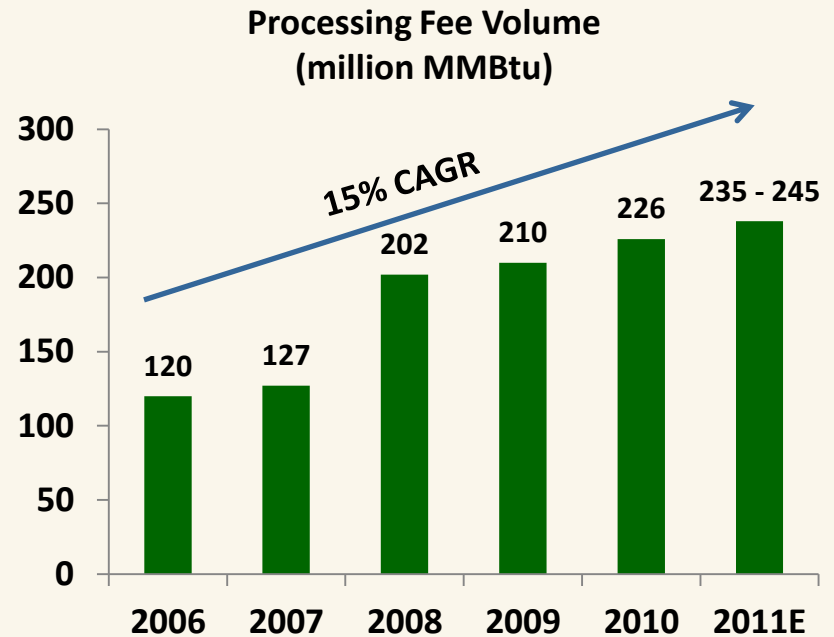
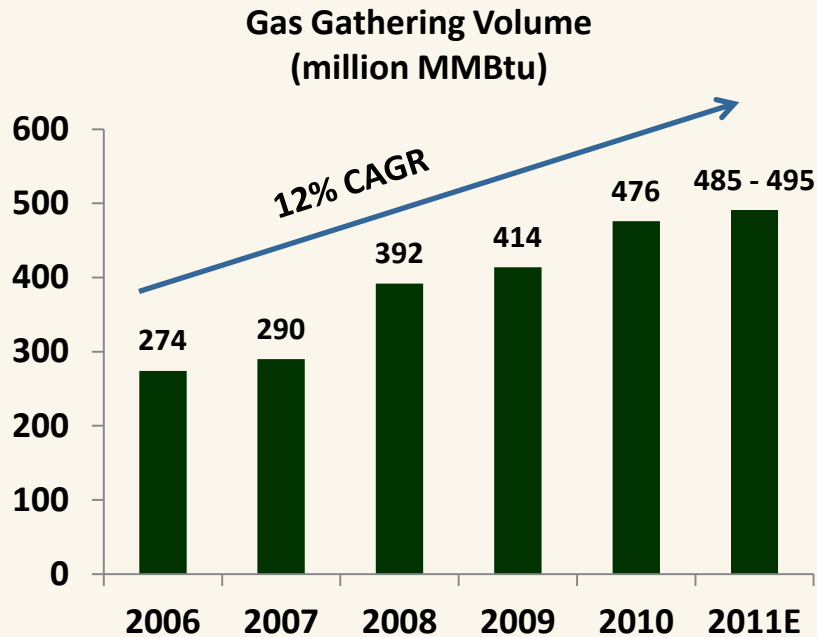
# Revenue Growth Comparison

70% of 2011 revenue is fee-based





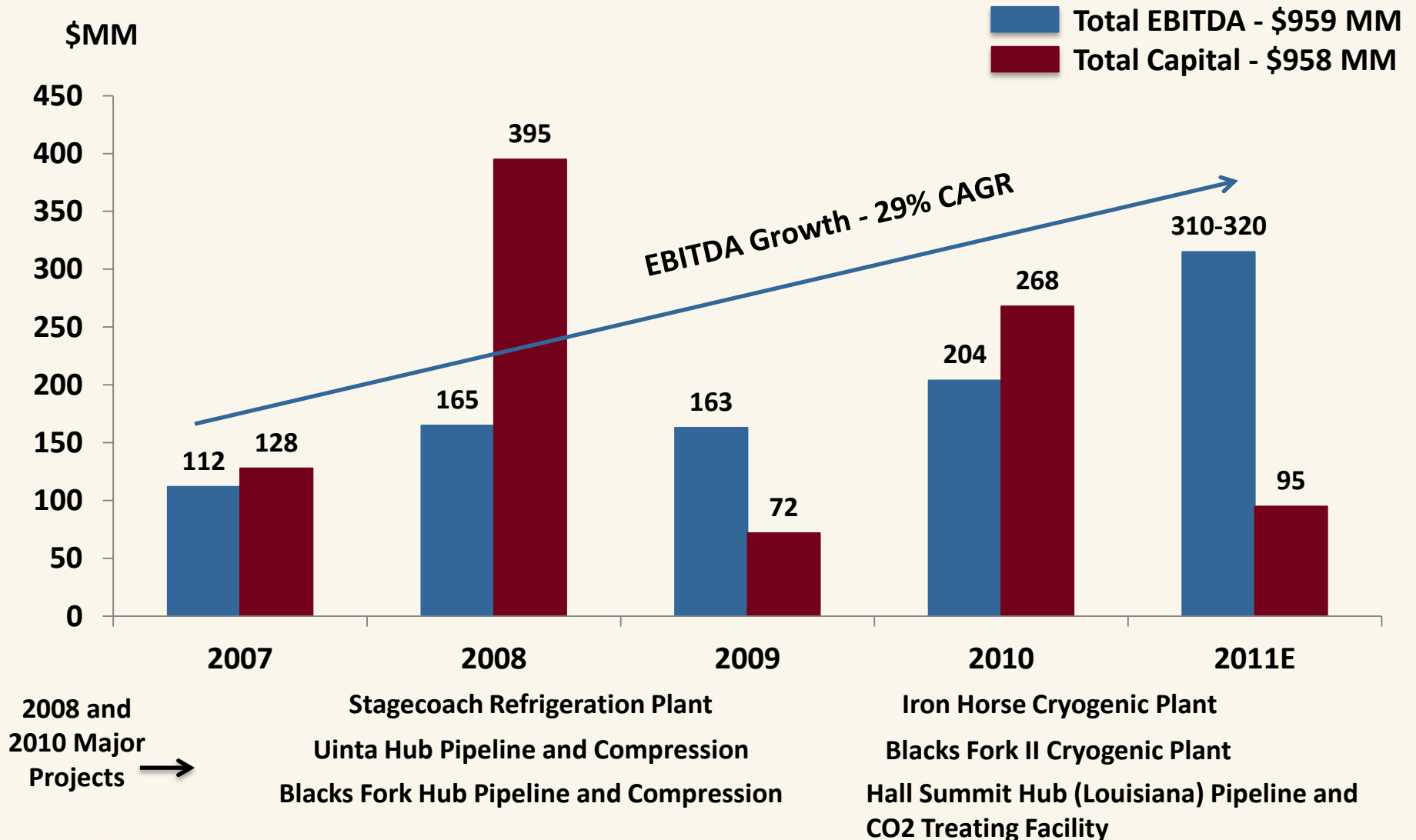
# Volume Growth



Hall Summit  
CO<sub>2</sub> Treating  
Facility →



# EBITDA vs Capital Expenditures – Organic Growth



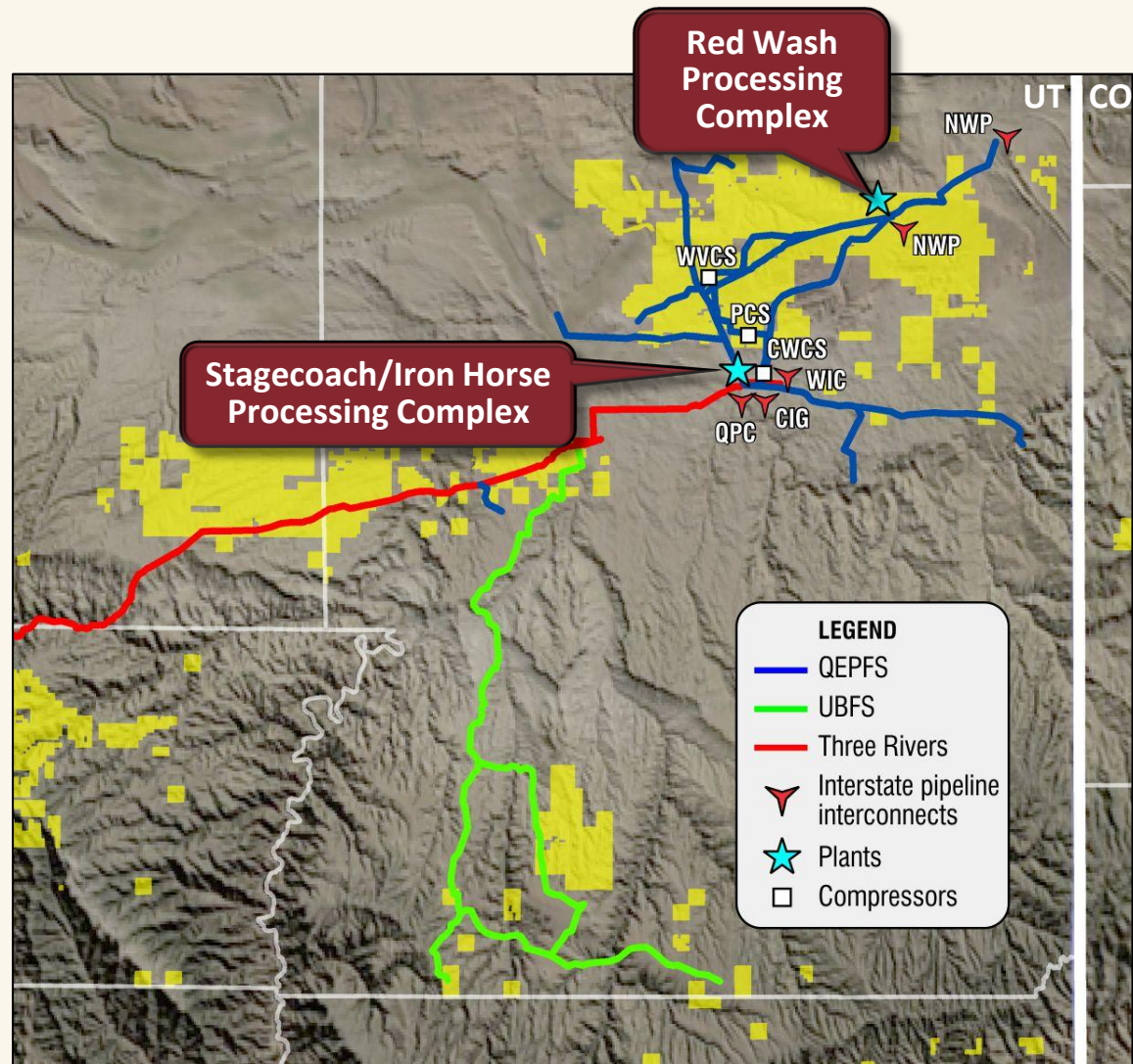
# Uinta Hub – 2012 and future projects

## Iron Horse II Processing Plant

- 150 MMcfpd cryogenic processing plant adjacent to Iron Horse
- Projected startup – Q1 2013

## Red Wash Processing Plant

- 150 MMcfpd cryogenic processing plant adjacent to the Red Wash refrigeration plant
- Projected startup – Q1 2014





# Blacks Fork Hub – 2012 and future projects

## Fractionator Expansion

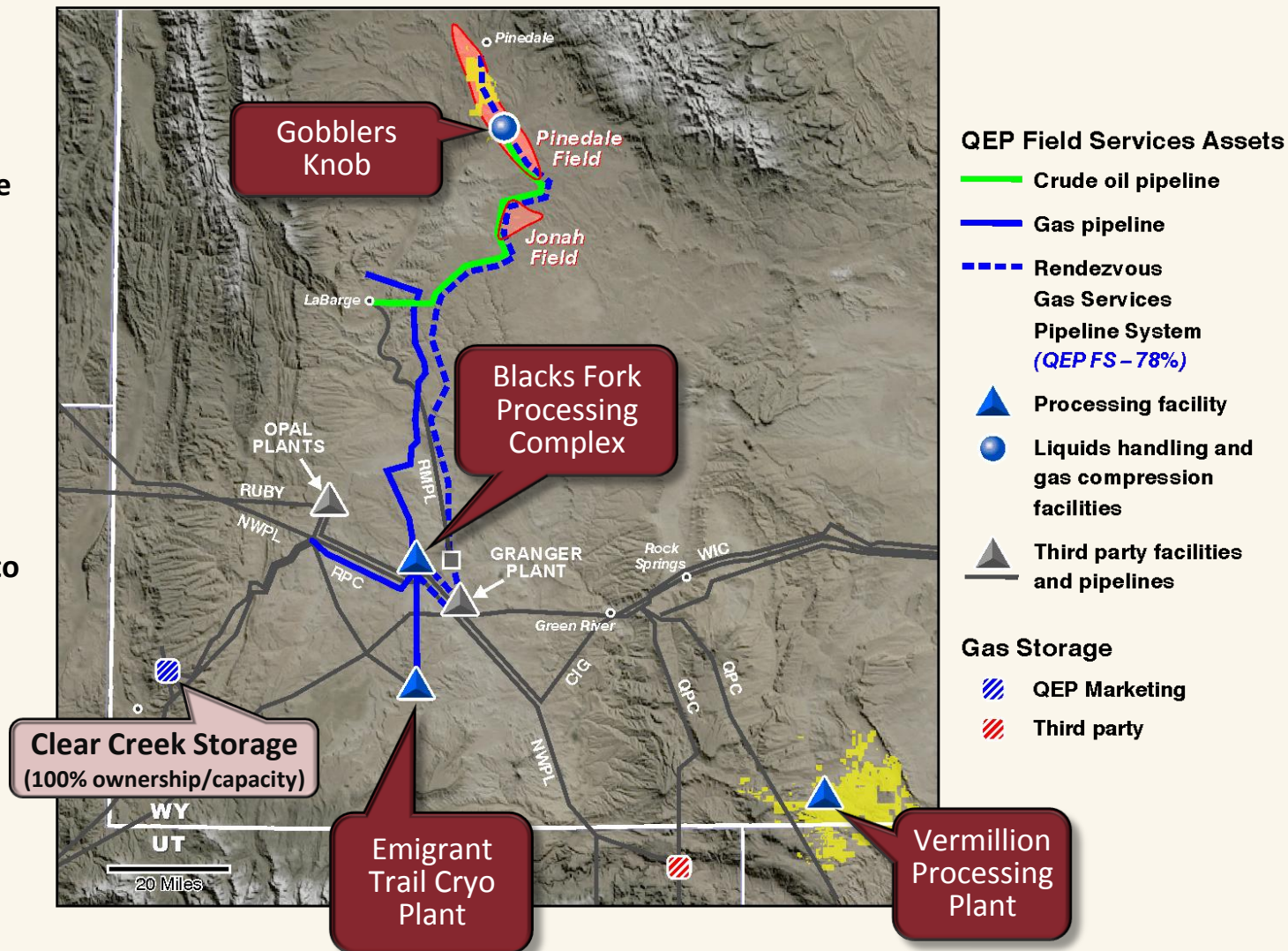
➤ 10,000 Blpd new fractionator adjacent to the existing 5,000 Blpd facility

➤ Projected startup – Q1 2013

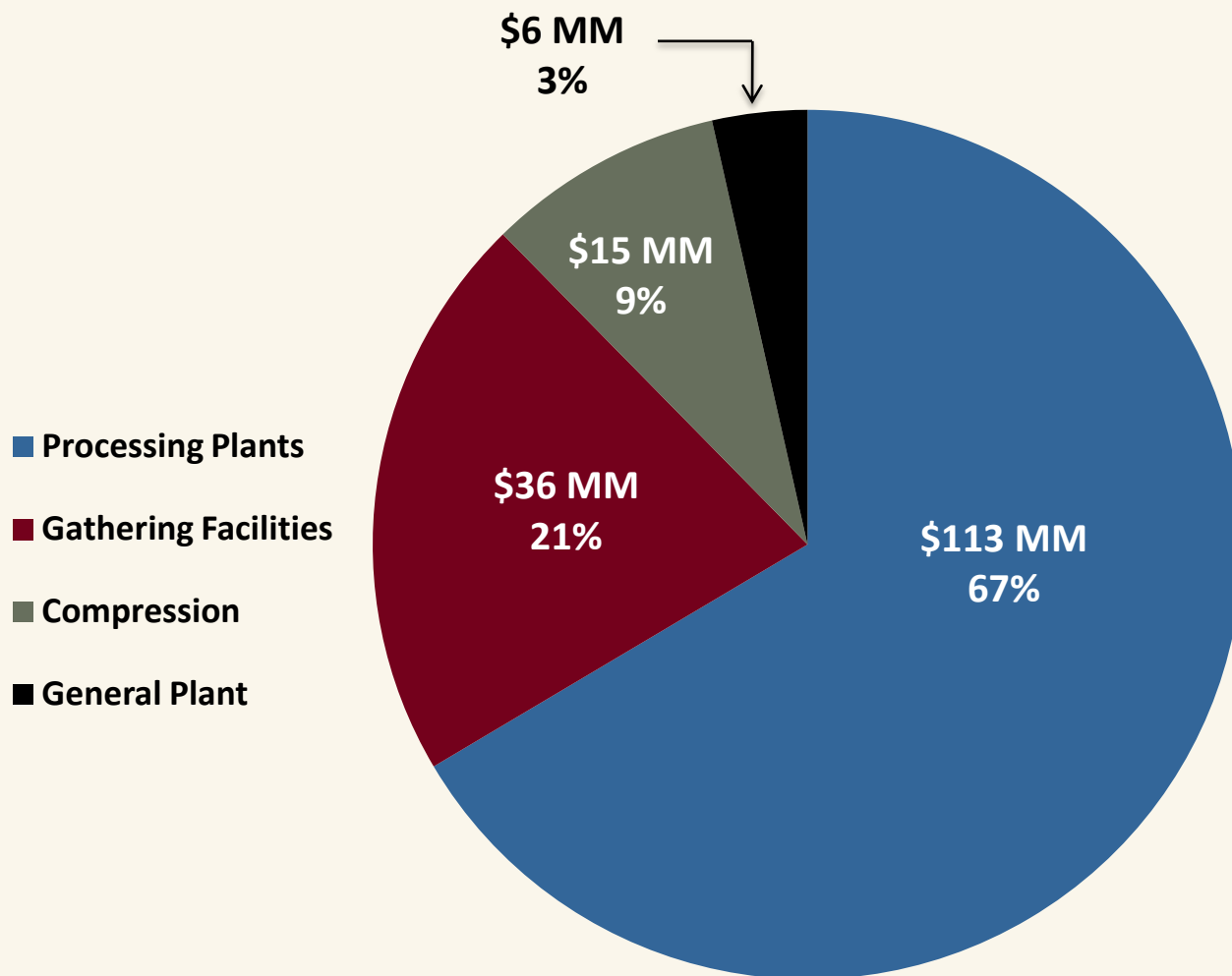
## Blacks Fork 3 Plant

➤ Future cryogenic processing plant adjacent to Blacks Fork II

➤ Projected startup – Q1 2015



# 2012 Capital Expenditures



Turbine Compressor



Projects	Cost (\$MM)
Iron Horse II Cryo Plant	40
Red Wash Cryo Plant	20
Blacks Fork Fractionator	30
Vermillion Expansion	15
Other Plant Projects	10
Well Hook-ups & Pipelines	20
Compression	15
Other	20
-----	
<b>Total Capital</b>	<b>170</b>

# **QEP Field Services is poised for continued growth**

- **QEPFS is a complementary business to QEP Energy**
  - 1<sup>st</sup> mover presence in many areas
  - 70% of 2011E revenue is fee-based
  - 50% of 2011E volume is 3<sup>rd</sup> party
  - Control timing and scope of gathering and processing infrastructure build
  - Add value downstream of wellhead
  
- **QEPFS has identified multiple new organic growth opportunities**
  - Expected to double the size of the gathering and processing business within 5 years

