Honours in Investment Management

Coterra Energy Inc. (NYSE: CTRA) Fall 2022

Energy & Utilities

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October 26, 2022







Executive Summary

Recommend a HOLD – More potential downside to come before thesis materialization

Business Overview

- An independent oil and gas company, engages in the development, exploration and production of oil, natural gas, and natural gas liquids in the United States
- Merger of Cabot Oil & Gas and Cimarex Energy in October 2021
- Operates in 3 major plays in the United States:
 - Marcellus Shale (~177,000 Net Acres)
 - Anadarko (~182,000 Net Acres)
 - Permian (~234,000 Net Acres)
- 2022E exit guidance: 635 Mboepd.

Investment Theses

Market Valuation

Values as of October 24, 2022	
Share Price	\$29.67
Shares Outstanding (M)	795.6
Market Capitalization	23,605.3
Add: Total Debt	3,420.0
Add: Minority Interest	-
Add: Preferred Stock	11.0
Less: Cash & Cash Equivalents	(1,059.0)
Enterprise Value	\$ 25,977.3

US natural gas prices are on track to begin converging with European prices

Supply constraints, increasing domestic demand, and exponential LNG export growth will eventually unify natural gas markets



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Market is underappreciating Coterra's positioning to capitalize on our bullish outlook on US gas prices

Excellent positioning due to high quality rock combined with an aggressive hedging strategy and industry-leading Capex program

Current Price:	Price Target:	Implied Upside:
\$29.67	\$33.77	13.8%
Source: Bloomberg, CapIQ, Company Filings		



I. DCM Energy Team's Strategy

II. Sector Overview

- i. Upstream overview
- ii. U.S. Deep Dive
- iii. Asset Review
- III. Company Overview

IV. Investment Theses

- I. Thesis 1: Stage set for US–European natural gas price convergence
- II. Thesis 2: Underappreciated capital allocation strategy, hedging position, asset base
- V. Valuation
 - I. Comparables Multiple Valuation
 - II. Discounted Net Asset Valuation
- VI. Risks & Catalysts

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Energy Portfolio & Sector Outlook

Section I







The DCM Energy Team closely monitored the market and capitalized on surge in O&G prices



Our Approach

1

2

What we have learned since we joined the program and how the learning is reflected in our approach / strategy

LESSON LEARNED



The Energy sector is heavily dictated by macroeconomic conditions

IMPLICATIONS ON THE DCM ENERGY'S APPROACH

- Time Allocation: disproportionately large amount of time spent on the Industry Overview to build conviction and to form an informed outlook on the industry and its subsector
- Screening: top-down approach (rather than bottom-up)
- Thesis Formation: "macro-based" theses



A major idiosyncratic factor differentiating one O&G player from another is the **quality of the assets** (rocks) themselves Importance of reaching out to O&G experts (ERs, PMs, geologists, etc.) to gather as much information as possible on the quality of the assets





Ray Kwan (ER MD @ BMO) Ada

Adam Frey (Partner @ Bain & Co.)

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Sector Overview

Section II







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Thank you, dinosaurs



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Thank you, dinosaurs



🐯 McGill

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Thank you, dinosaurs



The Big 3 of O&G

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		Common Benchmarks
	 Crude Oil Liquid hydrocarbon found in reserves beneath the earth's surface Product quality and ease of extraction varies significantly 10% of the world's crude reserves are in shale formation reserves 	WCS WTI Brent
	 Natural Gas Colourless, odourless and cleaner burning than petroleum products Largely composed of Methane (CH₄) Measured in cubic feet (1000s) or BTUs Extracted conventionally or unconventionally Very similar verticals to petroleum 	AECO HHub TTF
Ē	 Natural Gas Liquids (NGL) Also called associated hydrocarbons, often valuable by-products of natural gas Propane and condensate are common 	

- Useful in heating, crude refining, etc.
- Previously "flared off", now mainly captured and used
- An increasingly important percentage of production for some upstream producers

Source: RBC

Upstream Overview

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We got gassy, we got liquid, what you want?



Permian / Anadarko Basin

- More Liquid plays located in West Texas
- Composed mainly of 3 basins:
 - Midland Basin
 - Delaware Basin
 - Marfa Basin

Marcellus Shale (AKA Appalachia)

- More Gas plays
- Largest volume of recoverable natural gas in the U.S.

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Upstream Overview

To be (conventional) or not to be (conventional)

Conventional

- Includes traditional vertical drilling for crude oil and natural gas
 - Typically includes the extraction of oil that is liquid at normal atmospheric pressure and temperature conditions
 These techniques have been used for 90
 - These techniques have been used for 90 years
 - Usually considered as extracted without the use of heat or steam

Unconventional

- Traditional unconventional extraction includes hydraulic fracturing (fracking) and horizontal drilling to extract shale oil and gas as well as process oil sands.
- Modern extraction techniques have opened up reserves that were previously unviable

Oil Sands

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Cap Rock

Cap Rock

Reservoir Rock

Shale Rock

Despite having larger footprints, Unconventional wells require less space overall

AER, EIA, Statcan

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Company Overview

Section III







Company Overview



Cabot + Cimarex = One Great Company

Coterra Energy Inc.

- Merger of Cabot Oil & Gas (49.5%) and Cimarex Energy (50.5%) in October 2021
- 85% of CapEx is drilling related
- Operates in 3 major plays in the United States:
 - Marcellus Shale (~177,000 Net Acres)
 - Anadarko (~182,000 Net Acres)
 - Permian (~234,000 Net Acres)
- Focusing on strong execution and performance while maintaining capital discipline and maximizing shareholder returns
- 2022E exit guidance: 635 Mboepd

2021 YE Reserves Data (net)

	Crude Oil NGLs Natural Gas		Total	
Reserve Category	(Mbbl)	(Mbbl)	(MMcf)	(Mboe)
PDP	153,010	193,598	10,691,000	2,128,441
PDNP	5,240	6,104	411,936	80,000
PUD	31,179	20,913	3,792,064	684,103
1P	189,429	220,615	14,895,000	2,892,544

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2022E Revenue by Commodity



CTRA primarily focuses on the Marcellus Shale, with significant plays in the Permian Basin and Anadarko Basin

Company website, CapIQ

Operations

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East > West



CTRA has strong positions in both major plays in the U.S.

Company Filings, EIA

Annotated Stock Performance

More volatile to Commodity pricing than market information



ESG Initiatives

Environmentally friendly fracking!



Installation of pneumatic controllers

Well-site compression resulting in reduction

Further investment in emission monitoring

of emissions from liquid unloading events

Methane Emission Intensity Projection

Greenhouse Gas Emissions Intensity Projection



- Focused on Engineering Solutions
- Higher relative Permian volume growth
- Strengthening of Leak Detection and Repair program

Management is focused on strong ESG initiatives to drive the company into the future

Company Filings

Management Initiatives

technology

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Investment Theses

Section IV







Macros are positive, CTRA is well positioned



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Thesis 1: Natural Gas Price Convergence

Section IV







Macros are positive, CTRA is well positioned



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NG Prices standardized to \$/MWh



CapIQ

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Setting the stage for a price convergence

Contributing Factors



Net US Natural Gas Production and Consumption



DESAUTELS Capital Management Gestion de capitaux

Consumption Growth is Overtaking Production Growth

Setting the stage for a price convergence

Contributing Factors



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Natural gas reached an all-time high production in 2022, but can it last?

US Shale Gas Production by Basin (Bcf/d)



Identifying Supply Risks

Decreasing Rigs in US Basins

- Reduced Capex has led to a shortage of new wells
- Labor costs and inputs have been rising due to inflation

DUC Well Count Dwindling

 Drilled but uncompleted well inventory expanded over COVID, but may slow as wells are completed and not replaced

Uncertainty Regarding Future Reserves

 Very little geological research has been done in the Marcellus since 2017, raising questions as to the longevity of production

Marcellus Rig Count



Near-term demand destruction obfuscating long-term supply issues

Source: EIA

Transatlantic LNG Trade

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US Natural Gas Export Forecast



Increasing Export Capabilities – Rapid Growth

- Sabine Pass and Cove Point adding capacity
- Golden Pass and Calcasieu will add 3.6 Bcf/d (25%)
- Export capacity projected to 2x to 28Bcf/d by 2030



US Freeport LNG Fire – Supply Disruption

- Largest export terminal caught fire in June
- Makes up 20% of US LNG exports
- Led to prices crashing in the US due to oversupply

EU LNG Import Forecast



- Import Bottleneck Lacking Infrastructure
- 36 LNG carriers are circling the Mediterranean
- Regasification plant capacity set to double by 2027
- Germany building plants to supplement Nordstream

Energy Security – Rebuilding without Russia

- US already supplying more NG than Russia did
- Long-term US-EU contracts + support from Biden
- US LNG imports doubled YoY, over 50% of demand

Monumental investments to increase LNG capacity on both sides

EU Council, EIA, Golden Pass LNG, Cheniere LNG, Bloomberg



US replacing Russia as Europe's #1 friend NG supplier

4,500 4,000 3,500 3,000 2.500 2.000 1,500 1,000 500 Mar-21 Jun-21 Sep-21 Dec-21 Mar-22 Jun-22 Jun-20 Sep-20 Dec-20



Realistic rescue or impossible promises?

Biden Pledges Additional 15Bcm LNG to Europe in March

- Met with skepticism from both sides of the aisle
- US blew past promise and hit 39Bcm before Freeport fire

Accelerated Regulatory Permits

- Current timeline from proposal to construction is 6-8 years
- About 60% of that is moving through the regulatory pipeline

Production Defense Act

- Last invoked by Trump during COVID for PPE & ventilators
- Worst case scenario measure, unlikely to be used

Future LNG Export Capacity (Mta)



Long process between refining and end product

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Associated Press, Reuters, Statista





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Thesis 2: CTRA's strategic positioning Section IV







Macros are positive, CTRA is well positioned



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Source: EIA

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Coterra's Asset Portfolio

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Marcellus, Permian, and Anadarko Assets



Source: EIA

Acreages in The Marcellus, Permian, and Anadarko Basins - a gas-heavy portfolio to capitalize on thesis #1

	PERMIAN BASIN	ANADARKO BASIN	MARCELLUS SHALE
Brief Description	Acreage is located in the Delaware Basin region which spans west Texas and southeast New Mexico.	Acreage currently focused on the Woodford Shale in Western Oklahoma	Acreage operations in the region are primarily concentrated in Susquehanna County, Pennsylvania.
Acreage	234,000	182,000	177,000
Oil / Gas Mix (2021)	64% Liquids	46% Liquids	100% Natural Gas
Target Zones	t Zones Upper Wolfcamp, Bone Spring, and Avalon		Lower Marcellus Upper Marcellus
YE 2021 Reserves	serves 514 MMBOE		2,179 MMBOE
2021 Production Volume	186 MBOEpd	59 MBOEpd	2,228 MMCFpd
ESG Practices	Use of electric horsepower for power generation, an on- demand pipeline system for recycling water, and lowering emissions through reducing flaring activity	Use of electric horsepower for compression and continuous emission monitoring	Field site reclamation, water recycling at nearly 100%, and the restriction of flaring to safety concerns only

Acreages in The Marcellus, Permian, and Anadarko Basins - a gas-heavy portfolio to capitalize on thesis #1

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Academic Research Supporting the Relationship Between TOC and Petroleum Rotential RRA

Some of the highest TOC content of the O&G plays in the US

EIA's Geology Review Report on the Marcellus Shale

Review of Academic Literature



Analytical results from multiple well core samples indicate that Total Organic Carbon (TOC) content in the Marcellus formation ranges from less than 1% to 20% (Zielinski and Mciver, 1982; Nyahay et al., 2007; Reed and Dunbar, 2008). Known good source rocks typically contain 2.0% TOC or higher. As such, the Marcellus Shale has some of the highest TOC content of plays in the United States.

- Total Organic Carbon (TOC): important parameter in reservoir evaluation, exploration, and source rock characterization
- Positive correlation between total organic carbon content and petroleum potential

High TOC, high petroleum potential

Source: ResearchGate, EIA

Exposure to Appalachia via the acquisition of Cabot (2021)

Increasing Initial Production (IP) Rates As a Result of Well Productivity



- More effective drilling techniques
 - Injection of more proppant—sand or similar particulate material suspended in water or other fluid—during the hydraulic fracturing process
 - Ability to drill longer horizontal well components (laterals)
- Improvement in well productivity

Appalachia (Marcellus Shale) Represents The Largest Natural Gas Basin in the US



Monthly gross natural gas production in selected regions (2007–2019) billion cubic feet per day

- Since 2007, gross natural gas production from the Appalachia region has grown at an average annual rate of 20% (same for Haynesville)
- Production of associated natural gas in the oil regions remains significant, accounting for 46% of the natural gas production from all regions

Source: EIA

Adam says the less hilly, the better

Comparison between Marcellus vs Permian Basins' Topography





Source: U.S. Energy Information Administration based on DrillingInfo Inc., Bureau of Economic Geology, U.S. Geological Survey.

Source: U.S. Energy Information Administration, based on DrillingInfo Inc., New York State Geological Survey, Ohio State Geological Survey, Pennsylvania Bureau of Topographic & Geologic Survey, West Virginia Geological & Economic Survey, and U.S. Geological Survey. Note: Map includes production wells from January 2003 through December 2014.

An Avant Garde DD Process

Jordan

Try to look up hikes in susquehanna on google and see what ppl are saying



Easy or difficult LMAO

I think we won

Les memeures randonnees (13)



Modérée • 📌 4.4 (508)

#1 - Rock Run Grist Mill Trail Susquehanna State Park Distance : 7,7 km • Est. 2h 16m

Source: EIA

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Valuation

Section V







These are some liquid companies pt.2

	Criteria 1: Location	Criteria 2: Liquids Mix	Criteria 3: Reserve Size
E&P Companies	> 80 % Permian Basin & Marcellus Shale	< 40% Liquids	< 3000 Mmboe
devon	\checkmark	\checkmark	\checkmark
S eog resources	\checkmark	\checkmark	\checkmark
CNX	\checkmark	\checkmark	\checkmark
			^



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Public Comparable Companies	Stock Price	Enterprise		Per	formance Mea	sures	Valuation Multiples			
(In USD millions, except per share and reserves data)	10/25/2022	Value	Mboe/D	Liquids Mix	EBITDA FY1	1P Reserves (Mmboe)	EV/ FY1 EBITDA	EV/Production	EV/ 1P Reserves	P/E
Devon Energy Corporation (NYSE:DVN)	\$74.94	52,849	570.3	32%	10575	1626	5.00x	92.67x	32.51x	9.54x
EOG Resources, Inc. (NYSE:EOG)	\$132.86	81,151	847.5	28%	16195	3747	5.01x	95.75x	21.66x	13.63x
CNX Resources Corporation (NYSE:CNX)	\$34.10	5,766	269.6	7%	1408	1604	4.10x	21.39x	3.59x	-
Antero Resources Corporation (NYSE:AR)	\$26.27	15,333	547.0	31%	4078	2956	3.76x	28.03x	5.19x	12.11x
Range Resources Corporation (NYSE:RRC)	\$27.09	7,890	355.1	30%	2208	2963	3.57x	22.22x	2.66x	13.38x
25th Percentile	ĺ	7,890	355.1	28%	2,208	1,626	3.8x	22.2x	3.6x	11.5x
Average		32,598	517.9	26%	6,892	2,579	4.3x	52.0x	13.1x	12.2x
Median		15,333	547.0	30%	4,078	2,956	4.1x	28.0x	5.2x	12.7x
75th Percentile		52,849	570.3	31%	10,575	2,963	5.0x	92.7x	21.7x	13.4x
Coterra Energy Inc. (NYSE:CTRA)	\$29.67	26,463	634.2	26%	6995	2893	3.78x	41.73x	9.15x	7.12x
% of Premium / Discount to Average					1.49%	12.15%	(11.78%)	(19.78%)	(30.28%)	

Source: Cap IQ, CME Group, Yahoo Finance

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Net Asset Value



As easy as 1,2,P



UFCF Forecast



Source: Cap IQ, CME Group, Yahoo Finance

Bridge to Equity - NAV WACC Enterprise Value 31,862.81 add: Cash & Cash Equivalents 1,059 less: Total Debt 3,420 less: Preferred Shares 11 less: Minority Interest **Equity Value** 29,491 FD Shares Outstanding 795.6 **Implied Share Price** 37.07 Upside 24.93%

As easy as 1,2,P – Or is it?



UFCF Forecast



Source: Cap IQ, CME Group, Yahoo Finance

<u>NAV – 2P</u>

Historical non-disclosure of 2P - "Only proved reserves in accordance with definitions of Rules 4-IO(a) (1)-(32) of Regulation S-X of the SEC have been evaluated for this report."

 Higher discount rate (15%) to account for additional riskier reserves

Bridge to Equity - NAV WACC							
Enterprise Value		31,862.81					
add: Cash & Cash Equivalents		1,059					
less: Total Debt	-	3,420					
less: Preferred Shares	-	11					
less: Minority Interest		-					
Equity Value		29,491					
FD Shares Outstanding		795.6					
Implied Share Price		37.07					
Upside		24.93%					

Football Field Analysis

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Recommended HOLD with a price target of \$33.77, for an implied upside of 14%



Football Field								
Valuation		Low		High	Av	erage / Base	Weight	
52-Week Range	\$	18.39	\$	36.55	\$	27.47	-	
Equity Research	\$	36.04	\$	41.72	\$	38.88	-	
1P NAV WACC	\$	31.19	\$	37.26	\$	34.23	50%	
1P NAV PV10	\$	24.74	\$	31.55	\$	28.15	15%	
EV / FY1 EBITDA	\$	30.08	\$	40.98	\$	35.53	35%	
Target Price							\$ 33.77	

Source: Cap IQ, CME Group, Company Filings

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Risks and Catalysts

Section VI









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Appendix

Section X







Stock Performance



Coterra has consistently outperformed both the E&P and Energy index



CapIQ



Natural gas prices cool

UK, Europe and US natural gas price benchmarks, \$/mn Btu







© FT



Figure 6. Initial Yields (oil-to-gas ratios, barrels per million cubic feet (bbls/MMcf)) of Marcellus wells as of December 2016

Source: U.S. Energy Information Administration based on DrillingInfo Inc., and U.S. Geological Survey.

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Largest Liquids Producers in Q3/22 (mmB/d)

