



Corsa Coal Corp. Investor Presentation November 2019



Forward Looking Information and Statements



TSX-V: CSO | OTCQX: CRSXF

Certain information set forth in this Presentation contains “forward-looking statements” and “forward-looking information” (collectively, “forward-looking statements”) under applicable securities laws. Except for statements of historical fact, certain information contained herein relating to projected sales, coal prices, coal production, mine development, the capacity and recovery of Corsa’s preparation plants, expected cash production costs, geological conditions, future capital expenditures and expectations of market demand for coal, constitutes forward-looking statements which include management’s assessment of future plans and operations and are based on current internal expectations, estimates, projections, assumptions and beliefs, which may prove to be incorrect. Some of the forward-looking statements may be identified by words such as “estimates”, “expects” “anticipates”, “believes”, “projects”, “plans”, “capacity”, “hope”, “forecast”, “anticipate”, “could” and similar expressions. These statements are not guarantees of future performance and undue reliance should not be placed on them. Such forward-looking statements necessarily involve known and unknown risks and uncertainties, which may cause Corsa’s actual performance and financial results in future periods to differ materially from any projections of future performance or results expressed or implied by such forward-looking statements. These risks and uncertainties include, but are not limited to: risks that the actual production or sales for the 2019 fiscal year will be less than projected production or sales for this period; risks that the prices for coal sales will be less than projected; liabilities inherent in coal mine development and production; geological, mining and processing technical problems; inability to obtain required mine licenses, mine permits and regulatory approvals or renewals required in connection with the mining and processing of coal; risks that Corsa’s preparation plants will not operate at production capacity during the relevant period, unexpected changes in coal quality and specification; variations in the coal mine or preparation plant recovery rates; dependence on third party coal transportation systems; competition for, among other things, capital, acquisitions of reserves, undeveloped lands and skilled personnel; incorrect assessments of the value of acquisitions; changes in commodity prices and exchange rates; changes in the regulations in respect to the use, mining and processing of coal; changes in regulations on refuse disposal; the effects of competition and pricing pressures in the coal market; the oversupply of, or lack of demand for, coal; inability of management to secure coal sales or third party purchase contracts; currency and interest rate fluctuations; various events which could disrupt operations and/or the transportation of coal products, including labor stoppages and severe weather conditions; the demand for and availability of rail, port and other transportation services; the ability to purchase third party coal for processing and delivery under purchase agreements; the ability to resolve litigation and similar matters involving the Company and/or its assets; and management’s ability to anticipate and manage the foregoing factors and risks. The forward-looking statements and information contained in this Presentation are based on certain assumptions regarding, among other things, coal sales being consistent with expectations; future prices for coal; future currency and exchange rates; Corsa’s ability to generate sufficient cash flow from operations and access capital markets to meet its future obligations; the regulatory framework representing royalties, taxes and environmental matters in the countries in which Corsa conducts business; coal production levels; Corsa’s ability to retain qualified staff and equipment in a cost-efficient manner to meet its demand; and Corsa being able to execute its program of operational improvement and initiatives. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. The reader is cautioned not to place undue reliance on forward-looking statements. Corsa does not undertake to update any of the forward-looking statements contained in this Presentation unless required by law. The statements as to Corsa’s capacity to produce coal are no assurance that it will achieve these levels of production or that it will be able to achieve these sales levels.

Additional Information



TSX-V: CSO | OTCQX: CRSXF

Non-GAAP Measures

Management uses realized price per ton sold, cash production cost per ton sold, cash cost per ton sold, cash margin per ton sold, EBITDA and adjusted EBITDA as internal measurements of financial performance for Corsa's mining and processing operations. These measures are not recognized under International Financial Reporting Standards ("GAAP"). Corsa believes that, in addition to the conventional measures prepared in accordance with GAAP, certain investors and other stakeholders also use these non-GAAP financial measures to evaluate Corsa's operating and financial performance; however, these non-GAAP financial measures do not have any standardized meaning and therefore may not be comparable to similar measures presented by other issuers. Accordingly, these non-GAAP financial measures are intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with GAAP. Reference is made to the management's discussion and analysis for the three and six months ended June 30, 2019 for a reconciliation and definitions of non-GAAP financial measures to GAAP measures.

Corsa defines adjusted EBITDA as EBITDA (earnings before deductions for interest, taxes, depreciation and amortization) adjusted for change in estimate of reclamation provision for non-operating properties, impairment and write-off of mineral properties and advance royalties, gain (loss) on sale of assets and other costs, stock-based compensation, non-cash finance expenses and other non-cash adjustments. Adjusted EBITDA is used as a supplemental financial measure by management and by external users of our financial statements to assess our performance as compared to the performance of other companies in the coal industry, without regard to financing methods, historical cost basis or capital structure; the ability of our assets to generate sufficient cash flow; and our ability to incur and service debt and fund capital expenditures.

Other Matters

Unless otherwise noted, all dollar amounts in this presentation are expressed in United States dollars and all ton amounts are short tons (2,000 pounds per ton). Pricing and cost per ton information is expressed on a free-on-board, or FOB, mine site basis, unless otherwise noted.

Guidance projections ("Guidance") are considered "forward-looking statements" and "forward looking information" and represent management's good faith estimates or expectations of future production and sales results as of the date hereof. Guidance is based upon certain assumptions, including, but not limited to, future cash production costs, future sales and production and the availability of coal from other suppliers that the Company may purchase. Such assumptions may prove to be incorrect and actual results may differ materially from those anticipated. Consequently, Guidance cannot be guaranteed. As such, investors are cautioned not to place undue reliance upon Guidance, forward-looking statements and forward-looking information as there can be no assurance that the plans, assumptions or expectations upon which they are placed will occur.

Other than as otherwise described on slide 23, all scientific and technical information contained in this news release has been reviewed and approved by Peter V. Merritts, Professional Engineer and the Company's CEO, who is a qualified person within the meaning of National Instrument 43-101 - *Standards of Disclosure for Mineral Projects*.

Corsa Coal Overview



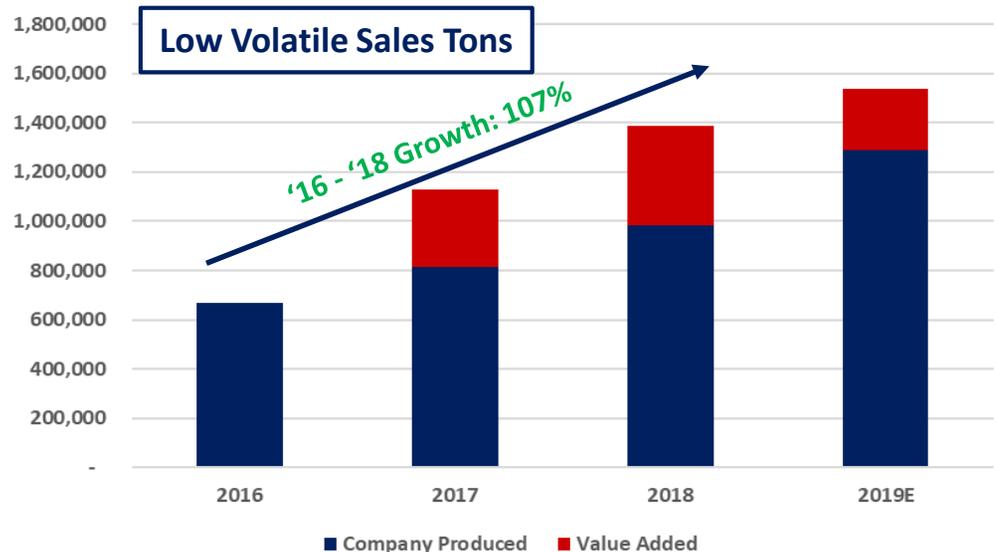
TSX-V: CSO | OTCQX: CRSXF

- **Pure play metallurgical coal producer (no thermal coal) with significant leverage to metallurgical coal prices**
 - **2016-2018: 180% growth in metallurgical coal sales**
- **Active Operations: 3 deep mines, 2 surface mines, located in PA and MD**
- **2019E Sales Guidance⁽¹⁾: Total Metallurgical Coal: 1.750 – 1.875 million tons**
 - **Low Vol Sales Tons: 1.500 – 1.575 million (margin generating)**
 - **High Vol Sales Tons: 0.250 – 0.300 million (pass-through)**
 - **Customers: Steel and coke producers; 70% export; 30% domestic**
- **2019E Adjusted EBITDA Guidance: \$30.3 - \$31.3 million (USD)**



Currently trading at a 1.4x multiple of 2019E Adjusted EBITDA⁽²⁾

Strong Record of Growth, Shifting to Harvest Phase



High Quality Ownership

- **Quintana Capital Group (45% fully diluted ownership)**
 - **Quintana affiliates are the largest owners of coal reserves in the United States**
- **Sprott Resource Coal Holdings (16%)**
- **Family of Lukas Lundin (15%)**
 - **Highly successful mining and oil & gas investor**

Market Cap: \$26 million ⁽²⁾
Enterprise Value: \$44 million ⁽²⁾

(1) See "Guidance" on slide 22.
 (2) As of October 31, 2019

Investment Thesis



TSX-V: CSO | OTCQX: CRSXF

Valuation

Compelling valuation due to unloved sector: 1.4x 2019E EV/EBITDA

Free Cash Flow

Free cash flow yield set to increase after new mine openings and investment in capital expenditures; future benefits of economies of scale

Leverage to Met Coal Pricing

Favorable fundamentals for steel demand and impediments to future metallurgical coal supply growth globally

Growth

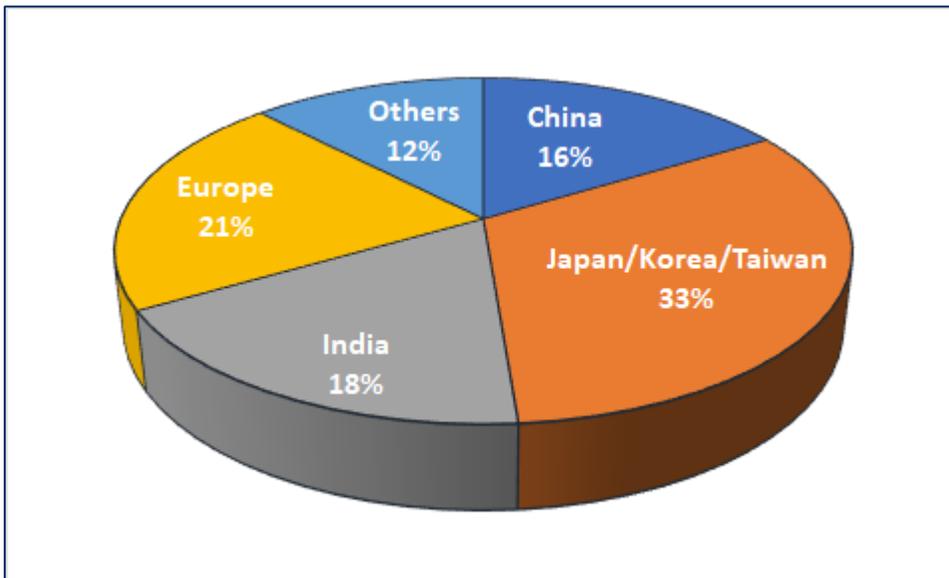
Track record of solid growth, investments in growth now starting to pay dividends. Opportunities to grow are available (organic + acquisitions)

Metallurgical Coal Overview

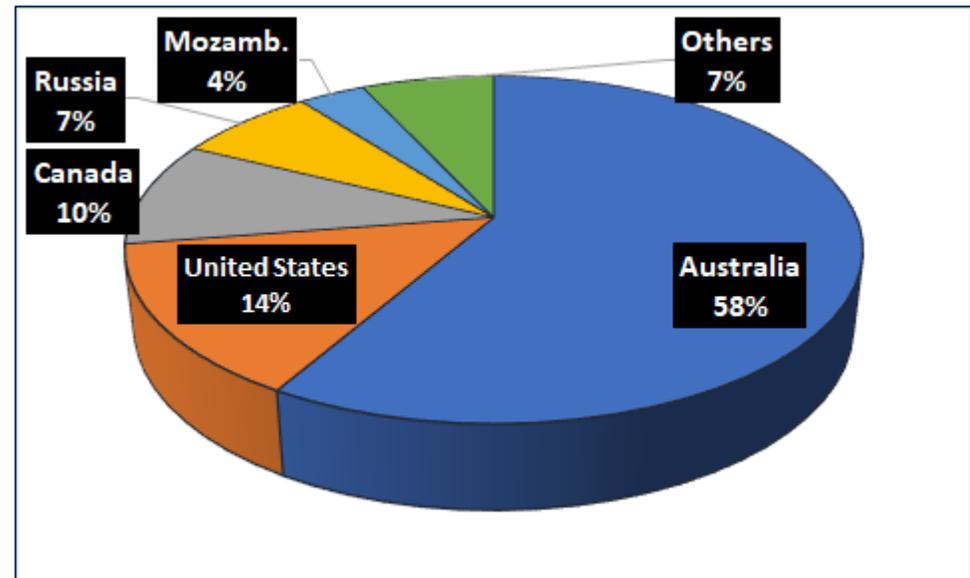
Metallurgical Coal (Corsa)	Thermal Coal
Used in the steelmaking process	Used to generate electricity
No substitute in the blast furnace	Substitutes: natural gas & renewables
Premium qualities are scarce globally	Supply abundant

Seaborne Metallurgical Coal Overview

Import Demand

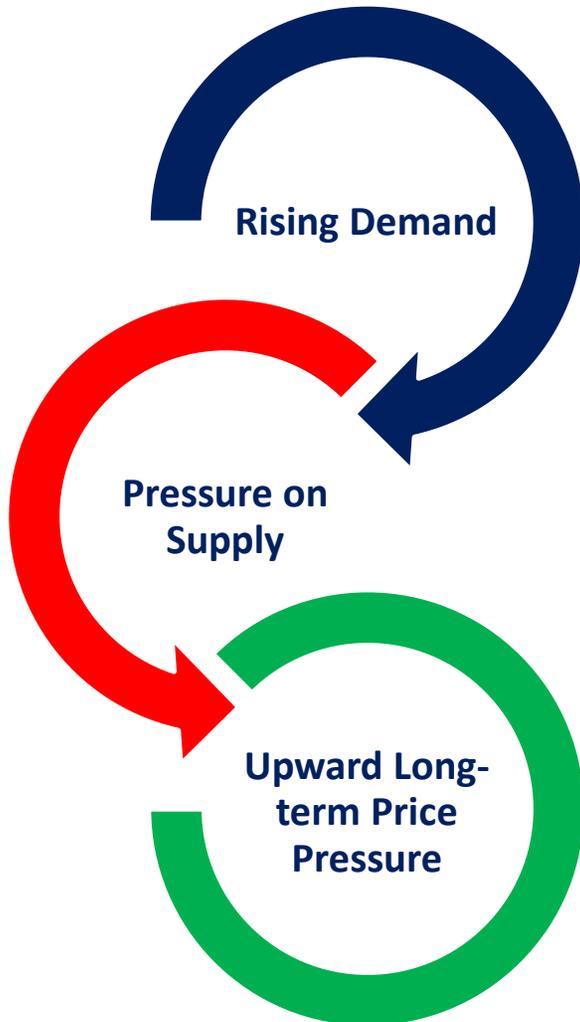


Export Supply



Fundamental Thesis for Metallurgical Coal

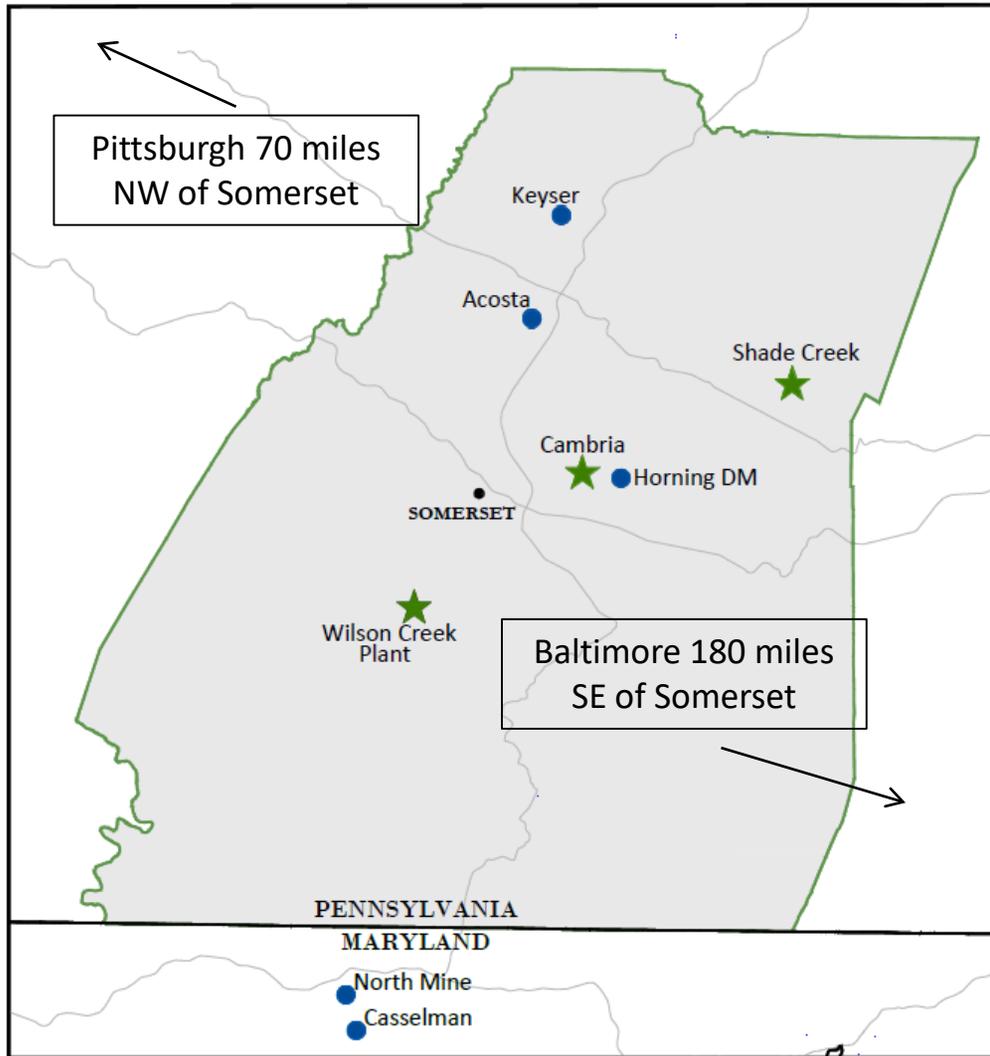
Demand growth coupled with a lack of supply response could lead to **supply deficits for metallurgical coal** going forward.



Demand Drivers	Supply Impediments
Long term urbanization trend	Environmental, Social, Governance movement pressure
Construction in developing nations	High cost of capital for coal producers
Rising demand for vehicles	Supplier production discipline
Transportation infrastructure	Mine depletion / Cost Inflation
Infrastructure spending bill (USA)	Capital expenditure deferrals / Underinvestment

NAPP Division Overview

NAPP Division Operating Locations



● Corsa Properties ● Preparation Plants 0 Miles 9

2019E Operations / Producer-Trader Model

- Corsa forecasts 2019 sales of 1.8 million tons at the midpoint



Infrastructure

- Up to 4 million clean tons per year of processing plant capability
- Three preparation plants with refuse disposal sites and rail loadouts
 - Cambria Preparation Plant (CSX)
 - Shade Creek Preparation Plant (NS)
 - Rockwood Preparation Plant (CSX) (Plant currently idle)

Corsa Coal Revenue Streams



TSX-V: CSO | OTCQX: CRSXF

	Low Vol Met Coal	Margin Generating	Passes through Prep Plants
1.	Company Produced Tons		
	Definition: Coal that we mine from our operational sites and sell to customers.		% of 2019E Tons Sold: 71% % of 2018 Corsa Gross Margin: 73%
2.	Value Added Services Tons		
	Definition: Coal that we purchase locally on a raw basis and wash, store, blend and load. Placed on existing Corsa sales orders.		% of 2019E Tons Sold: 14% % of 2018 Corsa Gross Margin: 26%

	High Vol Met Coal	Pass-through Profitability	Purchased from 3 rd Parties
3.	Sales & Trading Tons		
	Definition: Coal purchased typically from the Central Appalachia region on a finished basis and blended at the port for export customers. Coal blends create customized products to meet customer needs.		% of 2019E Tons Sold: 15% % of 2018 Corsa Gross Margin: 1%

Source: Company filings

Revenue Stream 1: Company Produced Tons

Corsa's mines are projected to produce 1.28 – 1.35 million tons in 2019



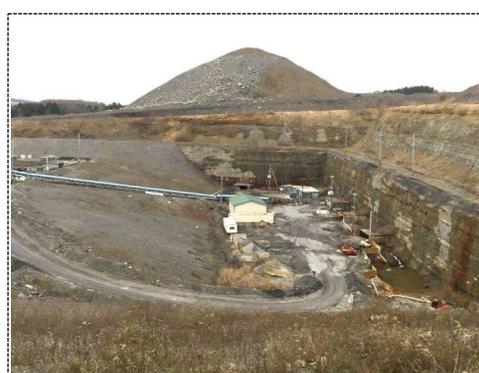
Casselman

2019E: 600,000 – 625,000 tons
Reserves: 6.5 million tons⁽¹⁾



Acosta

2019E: 370,000 – 390,000 tons
Reserves: 20.4 million tons⁽¹⁾



Horning

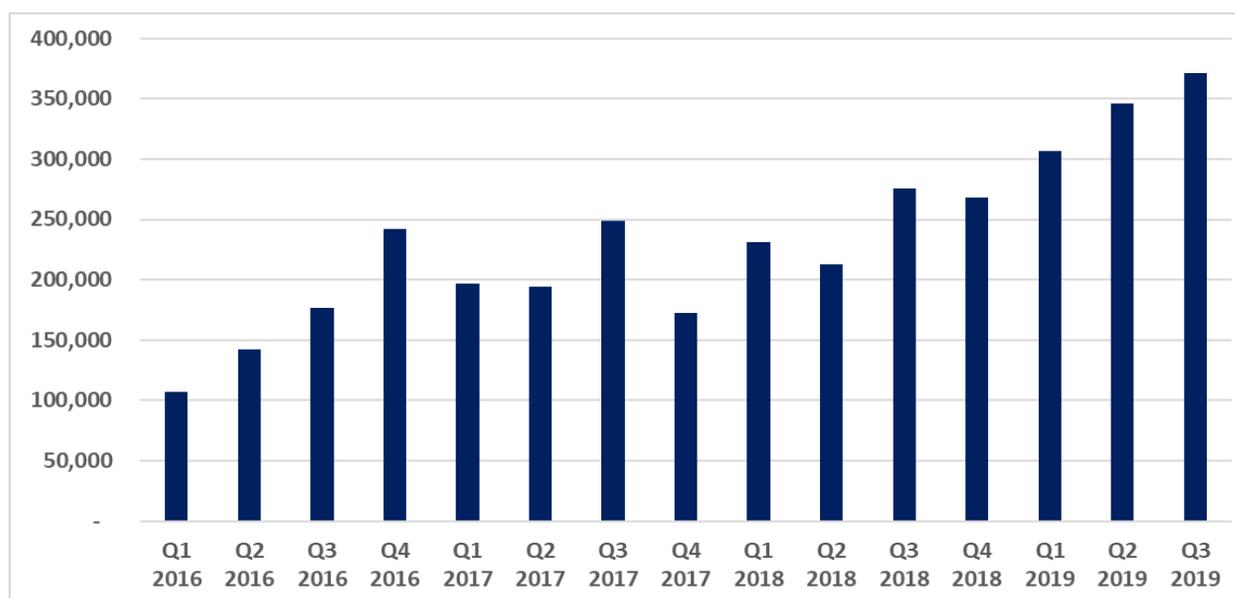
2019E: 165,000 – 175,000 tons
Reserves: 2.2 million tons⁽¹⁾



Surface Mines

2019E: 140,000 – 155,000 tons
Reserves: 1.5 million tons⁽¹⁾

Company Produced Tons: Quarterly Production History (2016 –2019)



Source: Company filings

(1) Reserves are based on the Technical Report dated December 31, 2018. See slide 24.

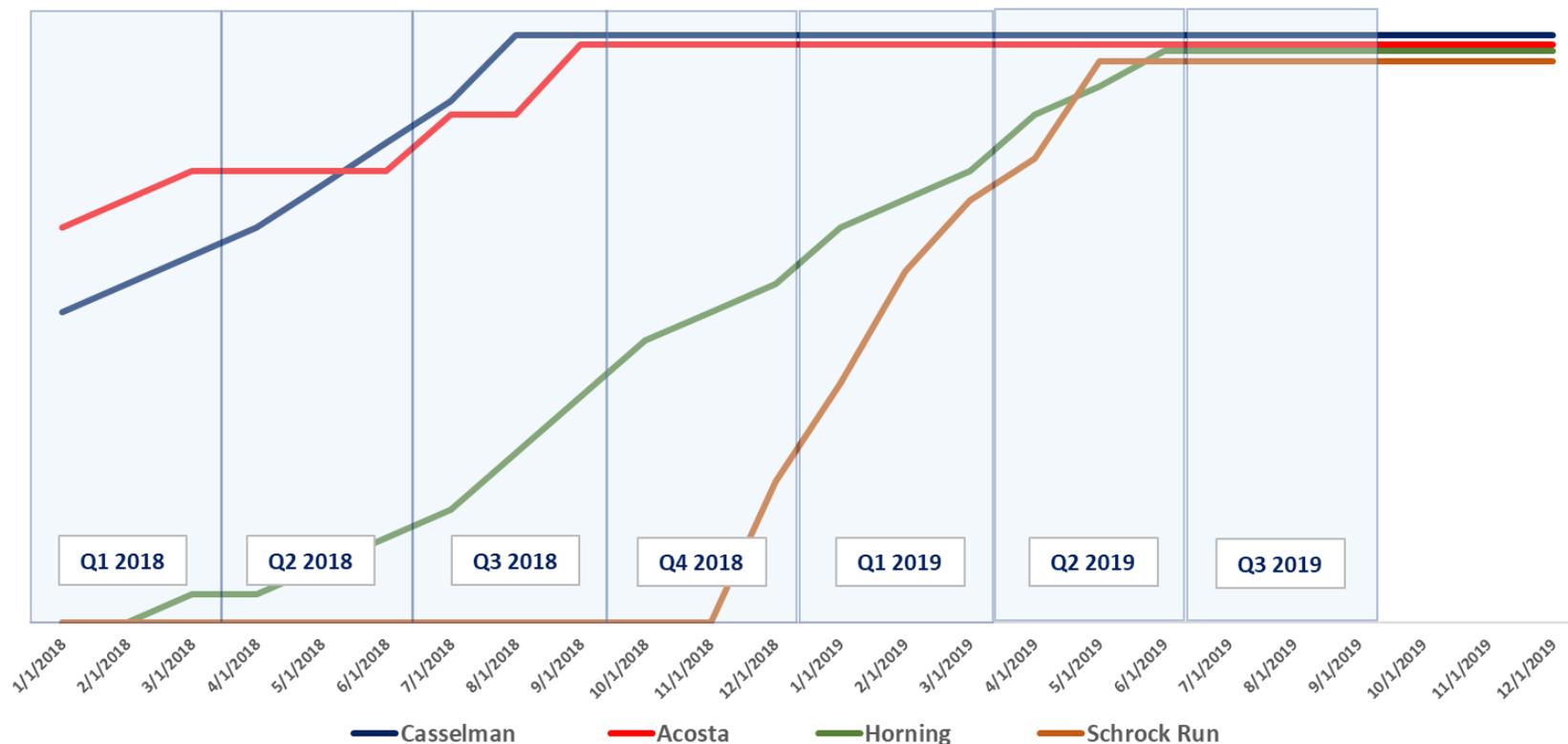
Revenue Stream 1: Company Produced Tons



TSX-V: CSO | OTCQX: CRSXF

- Starting in Q2 2019 Corsa’s four largest active mine sites are all producing at run-rate levels
- Significant investments have been made to develop these four mines as well as refresh the mining equipment used at each site
- The free cash flow profile of the mines is expected to improve as production achieves run-rate levels

Active Mine Sites: % Developed Over Time



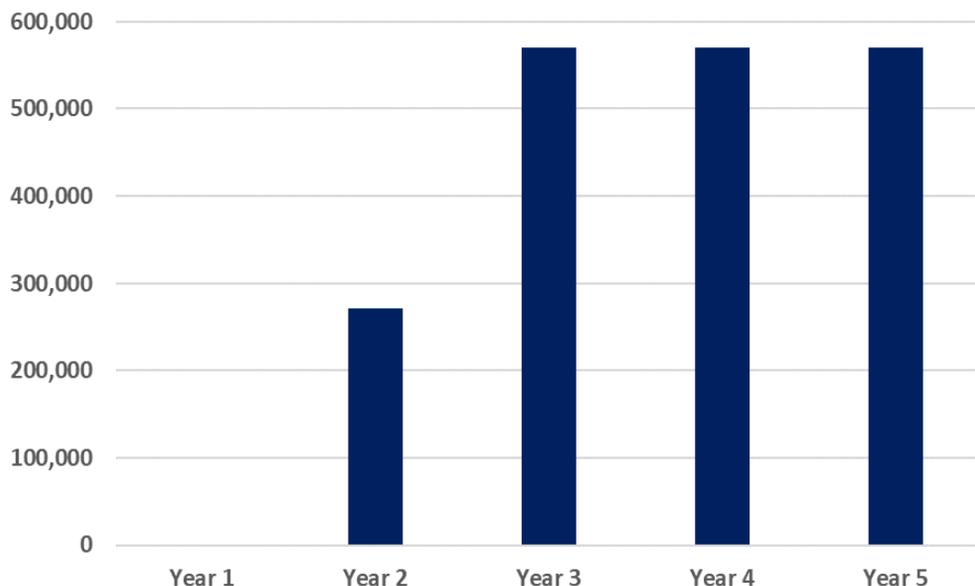
Casselman development timeline based 50% upon opening up the Northeastern reserve base from January through August 2018.

Growth Project: Keyser Deep Mine Profile

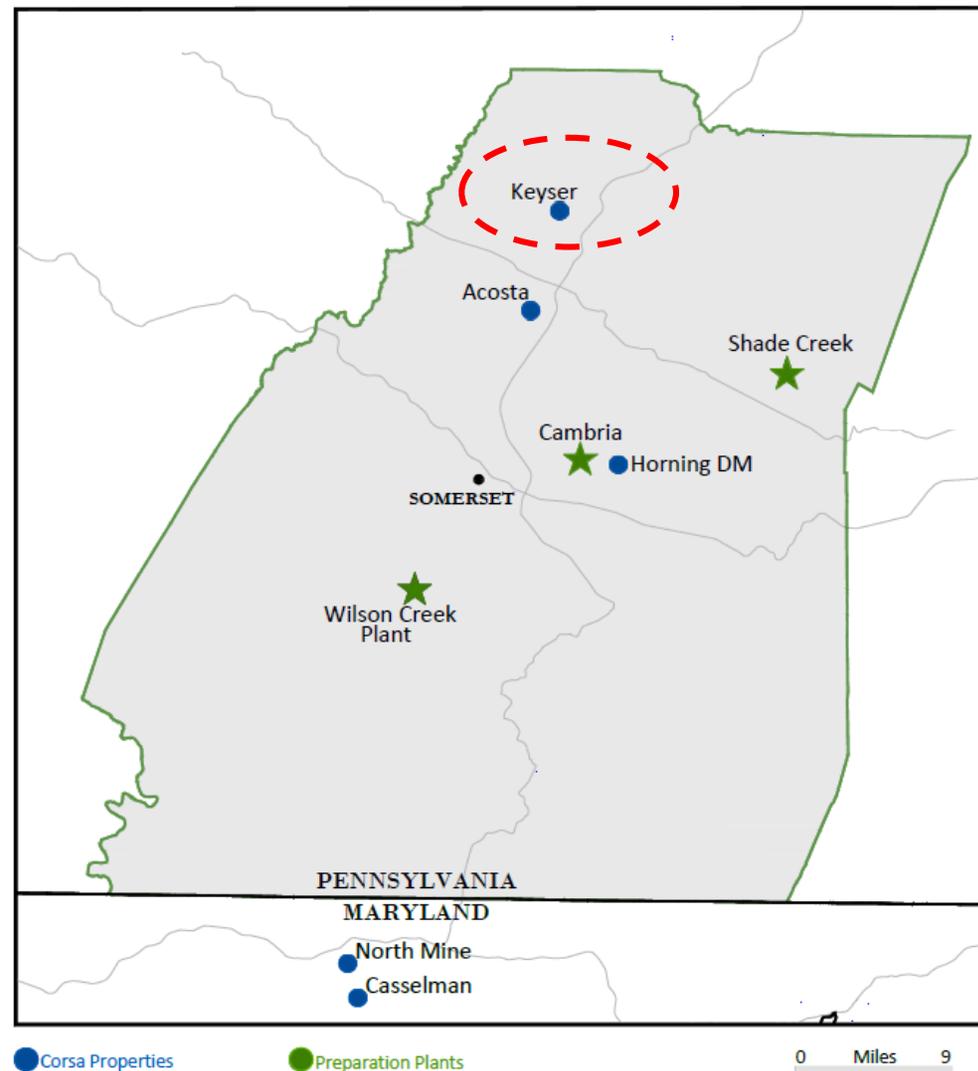
Mine Summary Information

- **Location:** Close proximity to Corsa’s PA operations
- **Project development timeline:**
 - 14 months to first coal once project begins
 - Mining permit expected in the coming months
- **Permitted Mine Life:** Approximately 15 years
- **Annual Run-Rate Production:** ~570,000 tons
 - Expected to be Corsa’s largest and lowest cost mine
- **Capital Expenditures:** \$20 - \$24 million
- **Coal Quality:** Low volatile metallurgical coal

Expected Production Tonnage Profile: First Five Years

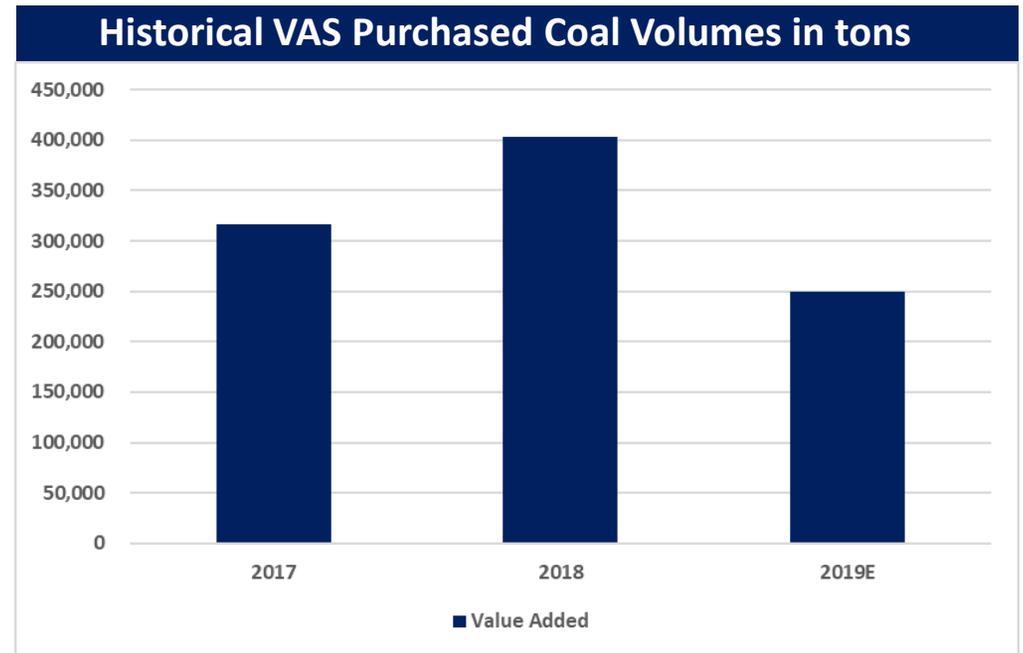


Keyser Location



Revenue Stream 2: Value Added Services Tons

- Value Added Services (VAS) initiative was launched in October 2016.
- VAS tons are comprised of local, third-party tons purchased on a raw basis and trucked to Corsa's preparation plants.
- Corsa takes title to the coal and ships the coal on Corsa sales orders.
- VAS tons can be purchased for both financial and quality reasons. Provides exposure to the export market for Corsa's suppliers.
- Increased volume through the preparation plants absorbs fixed costs and lowers per unit costs.



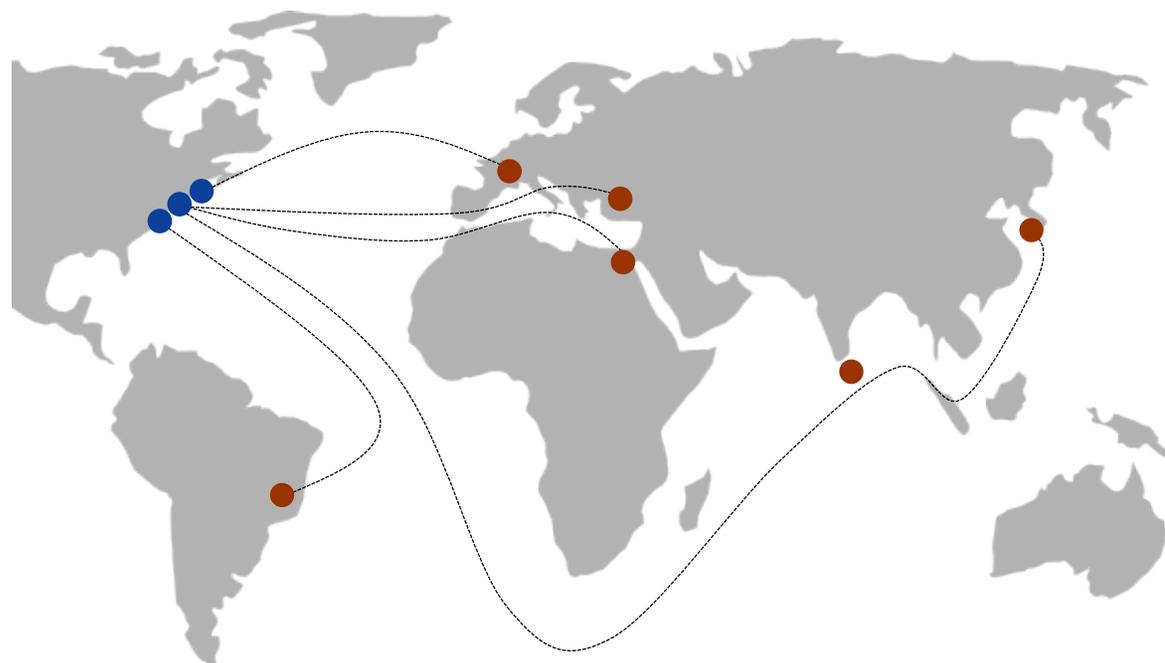
Source: Company filings.

Corsa's Value Added Services for Local Purchased Coal



Revenue Stream 3: Sales & Trading Tons

- Expanding customers in more countries
- Mix of spot pricing and index pricing
- Gaining access to additional purchased coal suppliers
- Delivering more customized products adjusted to customer needs
- Ability to sell on a delivered basis or FOB US East Coast



Share of Total Metallurgical Coal Sales Tons

% Domestic at the mid-point	30%
% Export at the mid-point	70%

Metallurgical Coal Sales Tons Commitments

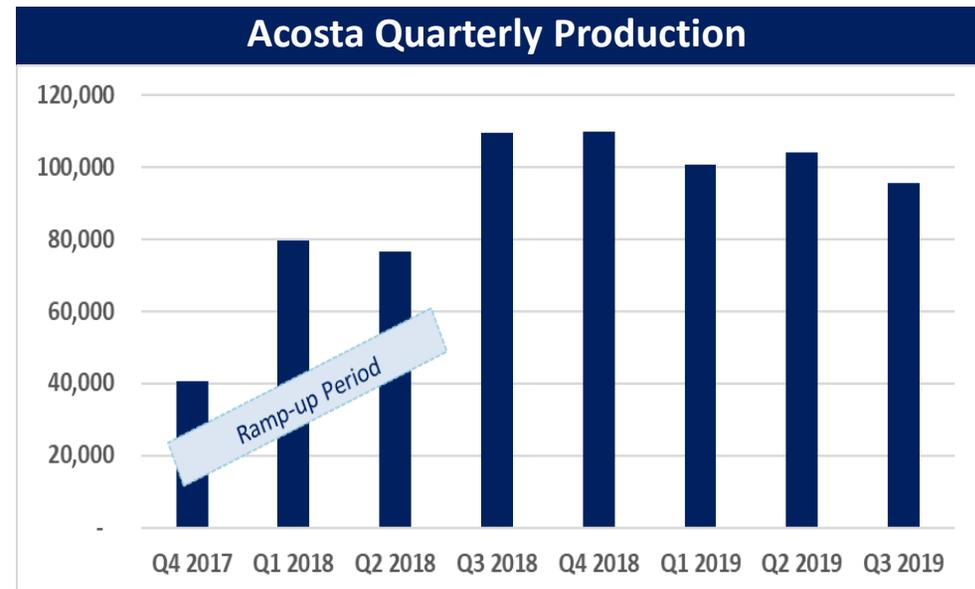
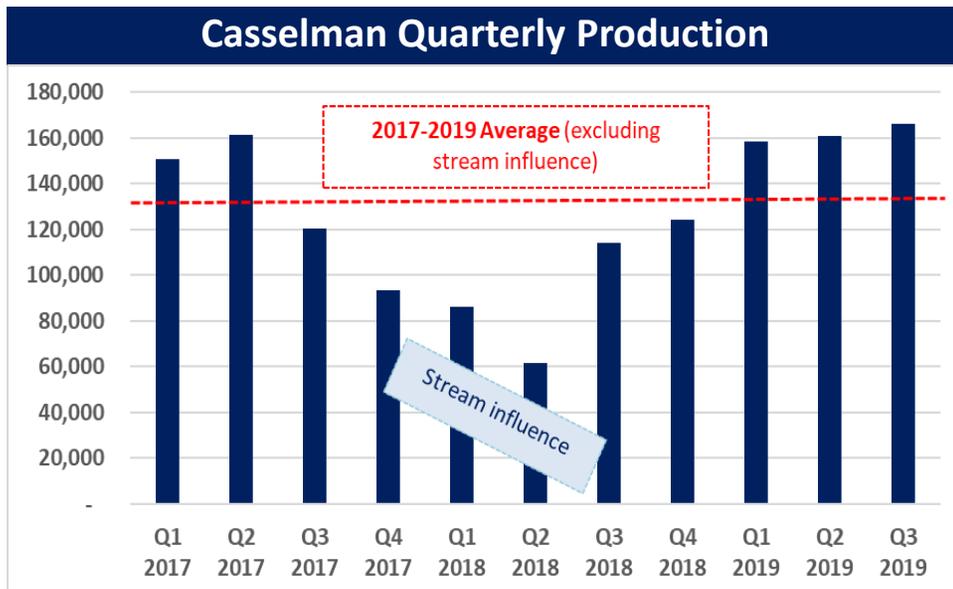
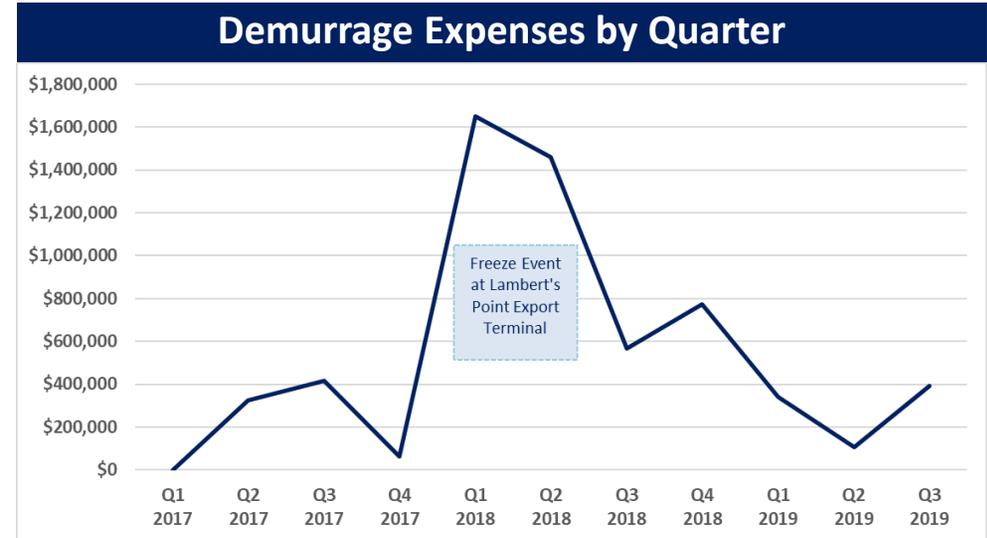
% Committed at the mid-point	100%
% Committed and Priced at the mid-point	89%

Source: Company filings.

3Q YTD 2019: YoY Improved Trends

The three primary reasons for a reduced profitability in the first half of 2018 have been resolved in the last year.

- The Casselman mine is past the stream influence and performing well
- The Acosta mine is fully ramped up
- The export terminals have become less congested, leading to lower demurrage



Organic Growth Plan and Historical Margin Profile

Corsa's Organic Growth

- Casselman and Acosta achieve their full run-rate production levels in 2019
- Horning and Schrock Run Surface Mines first full year of run-rate production is 2020
- Free cash flow (FCF)⁽¹⁾ yield increases with scale and reduction in capital expenditures
- Keyser mine presents next organic growth opportunity
- Additional projects are being explored and considered for further growth

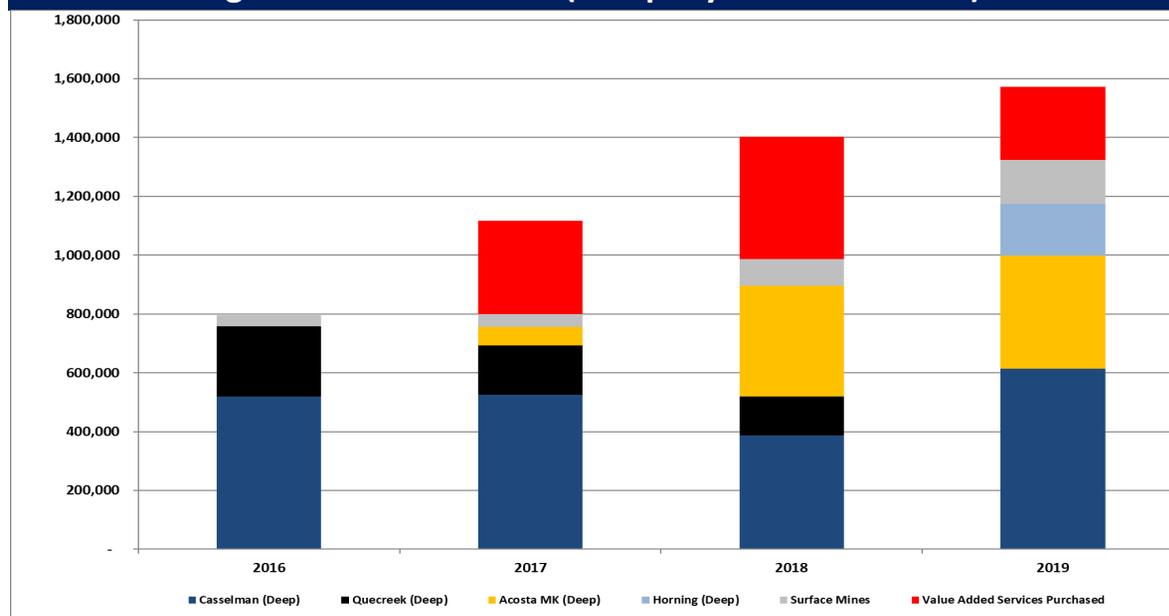
(1) This is a non-GAAP measure. See slide 2.

Catalysts for Future Margin Expansion

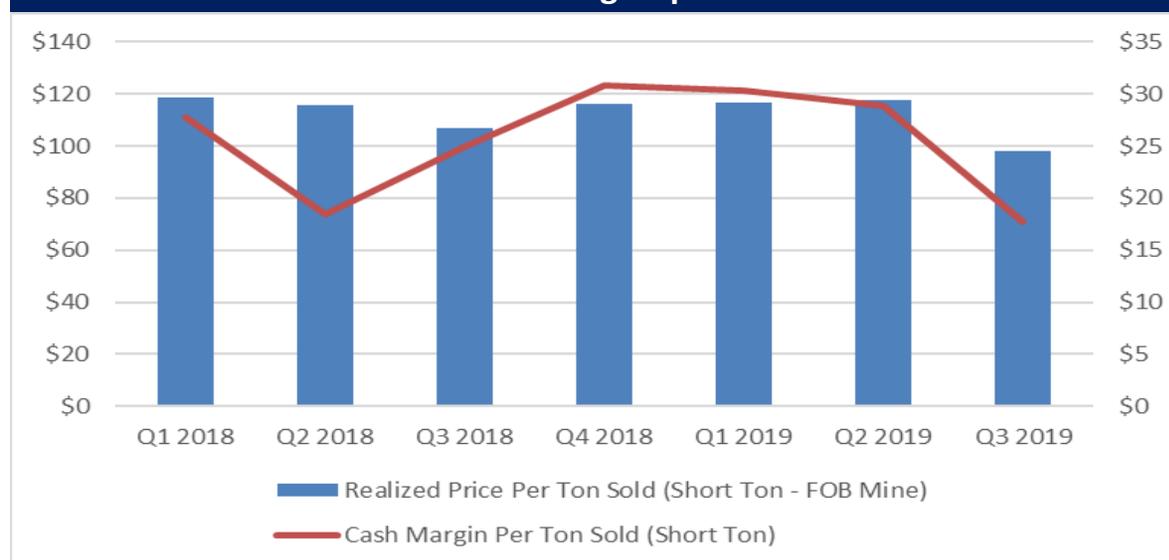
- Mix: Growth in Company Produced tons as active mines are fully ramped up
- Cash Mining Cost⁽¹⁾ reductions as Horning and Schrock Run move past the development into full run-rate production
- Potential for higher coal washing recoveries from addition of high quality tons from Horning and Schrock Run
- Reduced demurrage expenses as the US east coast ports are less congested

Source: Company filings

Organic Growth Success (Company Produced + VAS)

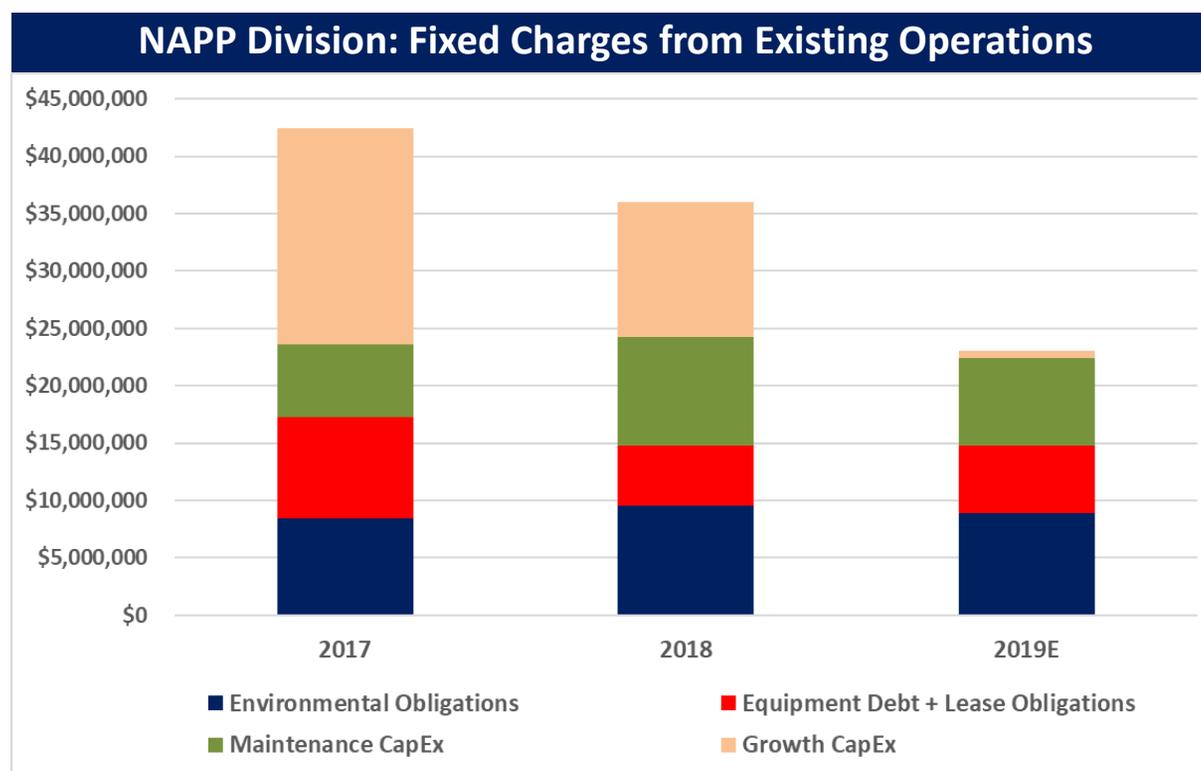


Price and Margins per Ton



Fixed Charges: NAPP Division Existing Mining Operations

- Corsa's fixed charges are forecasted to decline going forward after significant investment over the past three years
- Corsa has worked down its fixed charges by reclaiming mine sites, funding environmental trusts, servicing debt, and catching up on deferred maintenance capital expenditures
- Historical free cash flow has been reinvested in growth and mining equipment; **Going forward we will focus free cash flow on deleveraging**



Balance Sheet Summary

Balance Sheet Key Points

\$mm As of:	12/31/18	9/30/19	Change
Cash	\$10.1	\$3.7	(\$6.4)
Net Working Capital	\$4.2	\$10.4	\$6.2
Total Assets	\$283.3	\$275.9	(\$7.4)
Revolver	-	\$9.0	\$9.0
Loan Payable	\$30.5	\$11.5	(\$19.0)
Lease Liabilities	\$4.5	\$5.1	\$0.6
Notes Payable	\$0.4	-	(\$0.4)
Total Debt	\$35.4	\$25.6	(\$9.8)
Total Equity	\$151.0	\$159.6	\$8.6

Capital Expenditures

- Started three new mines in the last two years
- Refreshed mining equipment fleet

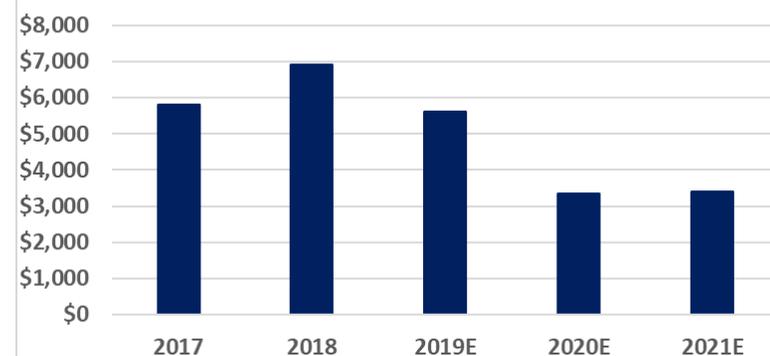
\$mm	2017	2018	2019E
Growth	\$18.8	\$11.8	(\$0.2)
Maintenance	\$6.4	\$9.5	\$8.6
Total CapEx	\$25.2	\$21.3	\$8.4

Source: Company filings.

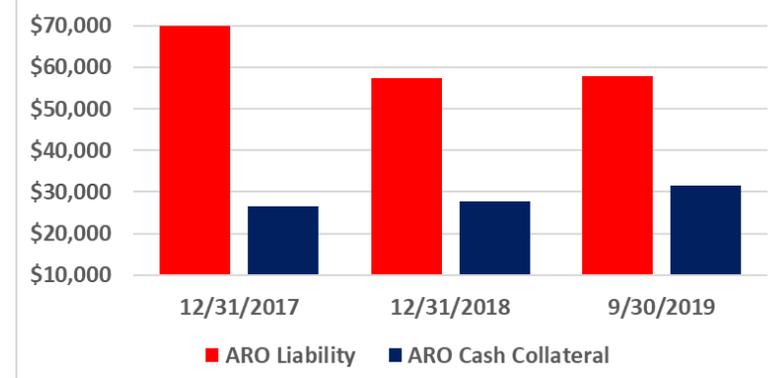
Asset Retirement Obligations (ARO)

- Environmental liabilities being reduced

ARO Cash Expenditures

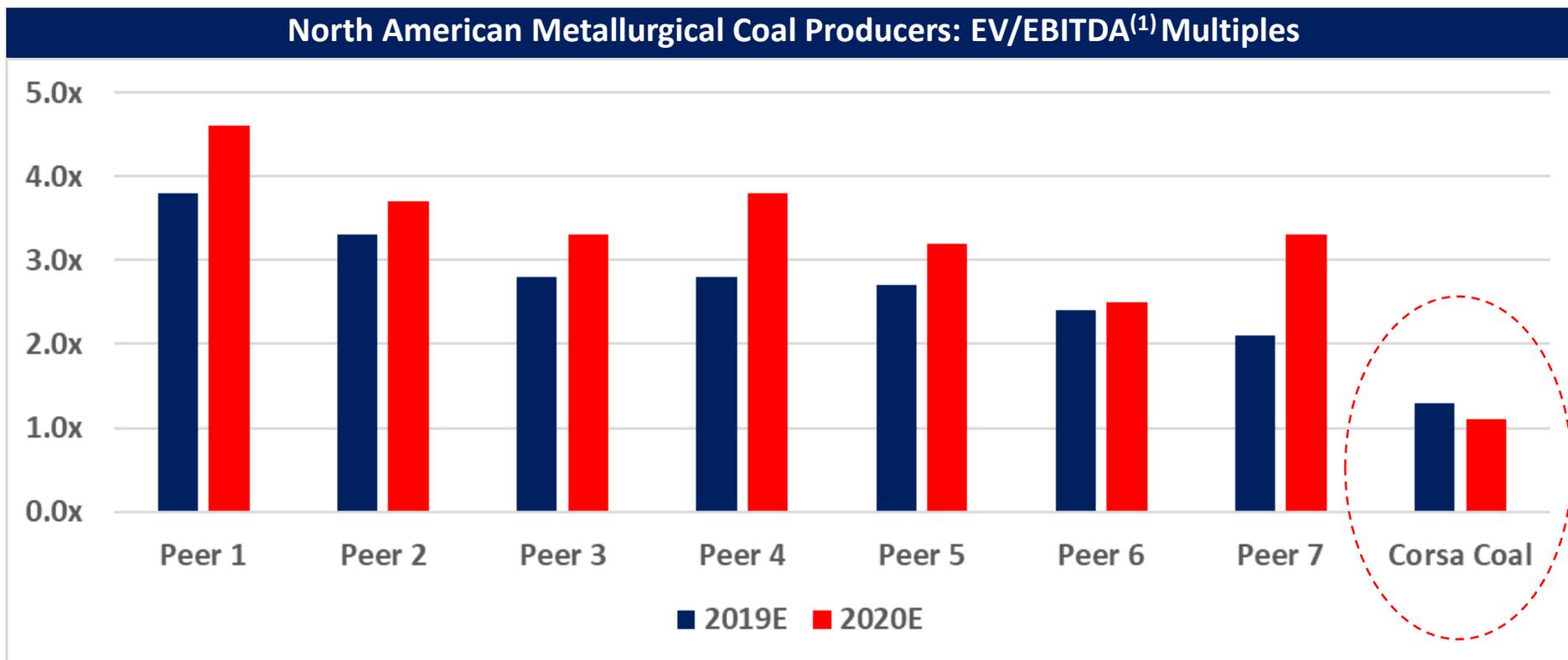


Net ARO Liabilities



Note: Assumes discount rates of 1.76%-2.87%

Comparable Companies Analysis



Source: Jefferies Investment Banking Coal Weekly Update 10/25/19

(1) This is a non-GAAP measure. See slide 2.

Positive Supply and Demand Fundamentals for Steel Raw Materials
Leverage to metallurgical coal prices and growth potential
Track record of growth, FCF positive producer trading at 1.4x 2019E EBITDA



CORSA
Acosta Mine Grand Opening
June 8th, 2017



TSX-V: CSO | OTCQX: CRSXF

Appendix

Financial Highlights



TSX-V: CSO | OTCQX: CRSXF

	Total Year 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Total Year 2018	Q1 2019	Q2 2019	Q3 2019	YTD 2019
Revenues (\$ million)	\$217.4	\$80.4	\$57.3	\$61.6	\$66.5	\$265.8	\$57.3	\$63.0	\$58.1	\$178.4
Adjusted EBITDA ⁽¹⁾ (\$ million)	\$47.8	\$10.9	\$4.3	\$8.5	\$11.3	\$35.0	\$9.2	\$10.1	\$6.1	\$25.4
Capital Expenditures - Maintenance (\$ million)	\$6.4	\$2.6	\$3.0	\$3.5	\$0.5	\$9.6	\$1.8	\$2.0	\$2.4	\$6.2
Capital Expenditures - Growth (\$ million)	\$18.8	\$4.4	\$4.1	\$0.8	\$2.6	\$11.9	-\$0.8	\$0.4	\$0.2	-\$0.2
Metallurgical Coal Sales										
Average Realized Price / Metallurgical Ton Sold ⁽¹⁾	\$125.56	\$118.46	\$115.52	\$106.99	\$116.27	\$114.50	\$116.47	\$117.48	\$97.98	\$110.32
Sales Volumes (short tons)										
Company Produced Tons	811,905	242,511	194,051	263,266	281,841	981,669	280,657	319,202	282,591	882,450
Corsa Value Added Services Tons	316,835	145,856	88,393	78,839	90,472	403,560	78,197	94,903	56,246	229,346
Sales & Trading Tons	346,158	169,354	109,890	113,420	94,212	486,876	49,982	36,306	126,304	212,592
Total Metallurgical Coal Tons Sold	1,474,898	557,721	392,334	455,525	466,525	1,872,105	408,836	450,411	465,141	1,324,388
Cash Cost / Metallurgical Ton Sold ⁽¹⁾										
Cash Production Cost Per Ton Sold ⁽²⁾	\$74.18	\$91.46	\$92.20	\$77.37	\$76.77	\$83.61	\$83.21	\$84.55	\$77.91	\$82.00
Cash Costs per Tons Sold	\$84.45	\$90.65	\$97.02	\$82.09	\$85.39	\$88.59	\$86.18	\$88.66	\$80.28	\$84.95
Cash Margin per Metallurgical Ton Sold ⁽¹⁾	\$41.11	\$27.81	\$18.50	\$24.90	\$30.88	\$25.91	\$30.29	\$28.82	\$17.70	\$25.37

⁽¹⁾ This is a non-GAAP measure. See slide 2.

⁽²⁾ Excludes Purchased Coal

Source: Company filing.

2019 Sales and Operational Guidance (a)(b)



TSX-V: CSO | OTCQX: CRSXF

<i>(all dollar amounts ins U.S. dollars and tonnage in short tons)</i>	Updated Guidance Full Year 2019	Previous Guidance Full Year 2019	Change to Previous Guidance
<u>Metallurgical Coal Sales Tons</u>			
Company Produced	1.250 to 1.325 million	1.250 to 1.400 million	0.000 to (0.075) million
Purchased - Value Added Services	0.250 million	0.300 to 0.350 million	(0.050) to (0.100) million
Purchased - Sales and Trading	0.250 to 0.300 million	0.300 to 0.400 million	(0.050) to (0.100) million
Total Metallurgical Coal Sales Tons	1.750 to 1.875 million	1.850 to 2.150 million	(0.100) to (0.275) million
<u>Share of Total Metallurgical Coal Sales Tons</u>			
% Domestic at the mid-point	30%	27%	3%
% Export at the mid-point	70%	73%	-3%
<u>Metallurgical Coal Sales Tons Commitments</u>			
Committed at the mid-point	100%	89%	11%
Committed and Priced at the mid-point	89%	74%	15%
<u>Cash Production Cost per ton sold (FOB Mine)</u>			
NAPP Division Metallurgical Coal	\$78 - \$82	\$78 - \$82	-
<u>General and Administrative Expenses</u>			
NAPP Division	\$7.5 - \$8.0 million	\$7.5 - \$8.0 million	\$0 million to \$0 million
Corporate Division	\$3.7 - \$3.9 million	\$3.9 - \$4.4 million	\$0.2 million to \$0.5 million
Total Corsa	\$11.2 - \$11.9 million	\$11.4 - \$12.4 million	\$0.2 million to \$0.5 million
<u>Net and comprehensive income</u>	\$6.3 to \$7.1 million	\$7.0 to \$10.0 million	(\$0.7) million to (\$2.9) million
<u>Adjusted EBITDA</u>	\$30.3 - \$31.3 million	\$33 - \$37 million	(\$2.7) million to (\$5.7) million
<u>Capital Expenditures per ton sold</u>			
Maintenance capital expenditures	\$6	\$5	\$1
Total capital expenditures	\$5	\$5	\$0

(a) Guidance includes Forward Looking Information and Statements. Please see slide 1 for more information regarding forward looking information and statements.

(b) Guidance includes Non-GAAP Measures. Please see slide 2 for more information regarding non-GAAP measures.

Technical Report



TSX-V: CSO | OTCQX: CRSXF

The mineral reserve and resource estimates relating to Corsa’s properties, which are effective as of December 31, 2018, have been prepared by Marshall Miller & Associates, Inc. (“MM&A”) under the supervision of Justin S. Douthat, P.E., MBA., Michael G. McClure, CPG., and John W. Eckman, CPG, each a qualified person, as such term is defined in National Instrument 43-101 – Standards of Disclosure for Mineral Projects (“NI 43-101”). MM&A is independent of Corsa and its subsidiaries. For a complete description of the mines and projects, see the report prepared pursuant to NI 43-101 by MM&A under Corsa’s profile at www.sedar.com titled “Technical Report on the Coal Resource and Coal Reserve Controlled by Corsa Coal Corp., Pennsylvania, and Maryland, USA - Prepared in Accordance with National Instrument 43-101 Standards for Disclosure for Mineral Projects Effective December 31, 2018.” (the “Technical Report”).

Reserves are clean recoverable tons.

Cautionary Statement Regarding Estimates of Mineral Reserves

This document sets forth certain estimates of “reserves” and “resources”. While Corsa believes that the estimates were based on methodologies acceptable in Canada pursuant to NI 43-101 such estimates are not compliant with the United States Securities and Exchange Commission (“SEC”) Industry Guide 7 as discussed below.

NI 43-101 is a rule developed by the Canadian Securities Administrators that establishes standards for all public disclosure an issuer makes in Canada of scientific and technical information concerning mineral projects. Of note to U.S. investors, these standards differ significantly from the requirements of the SEC (including under its Industry Guide 7).

Under U.S. standards, mineralization may not be classified as a “reserve” unless the determination has been made that the mineralization could be economically and legally produced or extracted at the time the reserve determination is made. U.S. investors are cautioned not to assume that all or any part of historical estimates of “reserves” in this document will ever be converted into reserves, or if converted, what actual poundage and grade they may have. Accordingly, information concerning descriptions or mineralization, “resources” and “reserves” contained in this presentation are not comparable to information made public by U.S. companies subject to the reporting and disclosure requirements of the SEC.

Coal Reserves



TSX-V: CSO | OTCQX: CRSXF

43-101 Properties as of 12/31/2018

<u>mnt</u>	<u>Proven</u>	<u>Probable</u>	<u>Total</u>	<u>Permitted</u>	<u>Not Permitted</u>
Surface-mineable	3,642	-	3,642	3,642	-
Highwall-mineable	437	-	437	437	-
Auger-mineable	-	-	-	-	-
<u>Underground-mineable</u>	<u>34,423</u>	<u>8,550</u>	<u>42,973</u>	<u>15,570</u>	<u>27,403</u>
Total	38,502	8,550	47,052	19,649	27,403
Casselman (UG)	5,162	1,371	6,533	3,614	2,919
Acosta (UG)			-		-
Upper Kittanning	7,248	1,469	8,717	-	8,717
Middle Kittanning	4,651	1,081	5,732	3,781	1,951
Lower Kittanning	4,416	1,059	5,475	-	5,475
Total Acosta (UG)	16,315	3,609	19,924	3,781	16,143
Keyser (UG)	4,764	3,545	8,309	-	8,309
Horning (UG)	1,736	7	1,743	1,743	-
A-Seam (UG)	6,446	17	6,463	6,431	32
<u>All Other</u>	<u>4,079</u>	<u>1</u>	<u>4,080</u>	<u>4,080</u>	<u>-</u>
Total	38,502	8,550	47,052	19,649	27,403

43-101 Properties as of 12/31/2018

Weighted Composite (Moist Basis)						
Reserve Area	Seam	Wash Recovery (%)	Ash (%)	Sulfur (%)	Btu/lb.	Volatile Matter (%)
Surface-Mineable						
GAZ	Upper Kittanning	89.35%	15.00%	1.72%	10,971	-
Downey	Upper Freeport	84.29%	23.27%	5.65%	10,880	17.00%
Downey	Lower Freeport	87.10%	15.72%	2.53%	12,144	17.00%
Downey	Upper Kittanning	88.19%	16.61%	2.48%	12,173	17.00%
Downey	Middle Kittanning	84.55%	19.82%	2.68%	11,366	17.00%
Hart	Lower Freeport	87.18%	13.95%	1.45%	11,677	-
Hart	Upper Kittanning	85.14%	18.49%	1.46%	11,650	-
Rhoades	Upper Kittanning	93.95%	8.18%	0.53%	12,420	-
Rhoades	Middle Kittanning	85.47%	17.94%	2.08%	11,752	-
Rhoades	Lower Kittanning	87.81%	14.15%	2.62%	12,416	-
Schrock Run	Lower Freeport	95.00%	7.35%	0.69%	13,336	-
Schrock Run	Upper Kittanning	92.34%	11.26%	1.82%	12,801	-
Hamer	Upper Freeport	58.43%	6.92%	0.68%	13,466	16.30%
Hamer	Upper Kittanning	94.77%	19.48%	3.36%	-	15.10%
Hamer	Middle Kittanning	61.81%	8.55%	1.06%	11,004	15.50%
Blue Lick	Redstone	91.37%	14.75%	2.11%	12,252	-
Highwall-Minable						
GAZ	Upper Kittanning	89.35%	15.00%	1.72%	10,971	-
Rhoades	Upper Kittanning	93.95%	8.18%	0.53%	12,420	-
Rhoades	Middle Kittanning	85.47%	17.94%	2.08%	11,752	-
Rhoades	Lower Kittanning	87.81%	14.15%	2.62%	12,416	-
Schrock Run	Lower Freeport	95.00%	7.35%	0.69%	13,336	-
Schrock Run	Upper Kittanning	92.34%	11.26%	1.82%	12,801	-
Hamer	Middle Kittanning	61.51%	7.93%	0.90%	12,466	16.20%
Underground-Mineable						
Casselman	Upper Freeport	81.17%	6.98%	1.01%	13,450	16.20%
Horning	Lower Freeport	90.49%	5.51%	0.93%	13,533	16.20%
Acosta	Upper Kittanning	78.63%	9.03%	1.61%	13,002	19.70%
Acosta	Middle Kittanning	63.20%	11.28%	1.17%	12,601	15.40%
Acosta	Lower Kittanning	65.67%	10.18%	1.79%	12,812	17.40%
Keyser	Lower Kittanning	74.06%	6.68%	1.37%	13,402	18.90%
A Seam	Brookville	56.03%	10.07%	0.79%	12,698	17.90%