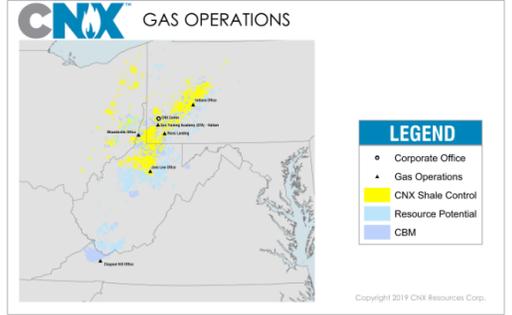




	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	
91		1936		9.13			8.6	interpolated		8.6	8									
92		1937		10.71			9.7	interpolated		9.7	9									
93		1938		12.30			10.8	interpolated		10.8	10									
94		1939		13.88			11.9	interpolated		11.9	11									
95		1940		15.47			13.0	interpolated		13.0	12									
96		1941		17.06			14.1	interpolated		14.1	13									
97		1942		18.64			15.1	interpolated		15.1	14									
98		1943		20.23			16.2	interpolated		16.2	15									
99		1944		21.81			17.3	interpolated		17.3	16									
100		1945		23.40			18.4	interpolated		18.4	17									
101		1946		24.99			19.5	interpolated		19.5	18									
102		1947		26.57			20.6	interpolated		20.6	19									
103		1948		28.16			21.7	interpolated		21.7	20									
104		1949		29.75			22.7	interpolated		22.7	21									
105		1950		31.33			23.8	interpolated		23.8	22									
106		1951		32.92			24.9	interpolated		24.9	23									
107		1952		34.50			26.0			26.0	24									
108		1953		36.09			28.1	interpolated		28.1	26									
109		1954		37.68			30.2	interpolated		30.2	27									
110		1955		39.26			32.4	interpolated		32.4	29									
111		1956		40.85			34.5	interpolated		34.5	31									
112		1957		42.43			36.6	interpolated		36.6	33									
113		1958		44.02			38.7	interpolated		38.7	35									
114		1959		45.61			40.8	interpolated		40.8	37									
115		1960		47.19			42.9	interpolated		42.9	39									
116		1961		48.78			45.1	interpolated		45.1	41									
117		1962		50.37			47.2	interpolated		47.2	43									
118		1963		51.95			49.3	interpolated		49.3	45									
119		1964		53.54			51.4	interpolated		51.4	47									
120		1965		55.12			53.5	interpolated		53.5	49									
121		1966		56.71			55.6	interpolated		55.6	50									
122		1967		58.30			57.8	interpolated		57.8	52									
123		1968		59.88			59.9			59.9	54									
124		1969					60.9			60.9	55									
125		1970					64.1			64.1	58									
126		1971	Conoco purchased Consolidation Coal in 1966				54.8			54.8	50									
127		1972					64.9			64.9	59									
128		1973					60.5			60.5	55									
129		1974					51.8			51.8	47									
130		1975					54.9			54.9	50									
131		1976					55.9			55.9	51									
132		1977					48.0			48.0	44									
133		1978					41.8			41.8	38									
134		1979					50.1			50.1	45									
135		1980					49.0			49.0	44									
136		1981	DuPont purchased Conoco in 1981				42.1			42.1	38									
137		1982					47.0			47.0	43									
138		1983					42.2			42.2	38									
139		1984					46.7			46.7	42									
140		1985					42.7			42.7	39									
141		1986					41.5			41.5	38									
142		1987					52.5			52.5	48									
143		1988					54.9			54.9	50									
144		1989					53.5			53.5	49									
145		1990					54.6			54.6	50									
146		1991					55.2			55.2	50									
147		1992					56.3			56.3	51									
148		1993					45.6			45.6	41									
149		1994					70.5			70.5	64									
150		1995					69.1			69.1	63									
151		1996	Rheinbraun acq Consolidated from DuPont in 1999				70.1			70.1	64									
152		1997	Renamed CONSOL Energy in 1999				72.8			72.8	66									
153		1998					73.2			73.2	66									
154		1999					69.9			69.9	63									
155		2000					69.4			69.4	63									
156		2001					73.7			73.7	67									
157		2002					66.2			66.2	60									
158		2003					60.4			60.4	55									
159		2004	CONSOL AnnRpt 2005 p.				67.7			67.7	61									
160		2005					69.1			69.1	63									
161		2006					67.4			67.4	61									
162		2007					64.6	bituminous coal		64.6	59									
163		2008					65.1	2008 Form 10-K		65.1	59									
164		2009					55.1	2010 Form 10-K		57.4	52									
165		2010					55.8			62.8	57									
166		2011					22.3	2013 10-K		32.1	29									
167		2012					20.8	55.8 EIA		27.7	25									
168		2013					21.9			29.2	26									
169		2014					32.4	2015 Form 10-K		32.4	29									
170		2015					29.2	2015 Form 10-K		29.2	26									
171		2016					24.7	2017 Form 10-K		24.7	22									
172		2017					26.1	2017 Form 10-K		26.1	24									
173		2018					6.9	2018 Form 10-K		6.9	6									
174																				
175		<b>Total</b>		<b>33</b>	<b>-</b>		<b>3,982</b>	<b>4</b>		<b>4,015</b>	<b>3,643</b>									
176																				
177		2009-2013		33		176	2009-2013 total:			209										
178		<b>Coal Types:</b>		Lignite: <b>0.00%</b>		Bituminous <b>84.1%</b>		Metallurgical <b>15.9%</b>		<b>100.00%</b>										
179																				



CNX Form 10-K for 2018, page 7

**CONSOL est. prodn 1864-2010 exceeds actual production by ~6 percent**

CONSOL Energy Our History in film clips: "Innovation"  
 cumulative coal production 1864-1964: "close to 1 billion tons"  
 estimate above, cumulative production, including interpolated production:  
 1,192.8 tons  
 Note: the interpolated data exceeds CONSOL's estimate, and the production history will be corrected with actual CONSOL production 1864-1964.

**CONSOL gas production**

Gas Production

The following table sets forth net sales volumes produced for the periods indicated:

	For the Year Ended December 31,		
	2013	2012	2011
<b>GAS</b>			
Marcellus Sales Volumes (MMcf)	55,048	35,853	26,863
CBM Sales Volumes (MMcf)	82,867	88,149	92,368
Shallow Oil and Gas Sales Volumes (MMcf)	27,457	28,684	31,731
Other Sales Volumes (MMcf)	3,365	2,366	1,987
<b>LIQUIDS*</b>			
NGL Sales Volumes (MMcf)	2,628	610	—
Oil Sales Volumes (MMcf)	634	600	563
Condensate Sales Volumes (MMcf)	391	63	—
<b>TOTAL (MMcf)</b>	<b>172,300</b>	<b>156,325</b>	<b>153,504</b>

\*Oil, NGLs, and Condensate are converted to Mcf at the rate of one barrel equals six Mcf based upon the approximate relative energy content of oil and natural gas.

CONSOL 2013 Form 10-K, page 13.

Consol natural gas		Billion cf	
		24.9	
		33.9	
		41.3	
		44.5	
		54.6	2005 Ann Rpt, p. 55.
		54.4	2005 Ann Rpt
		56.1	
		58.3	
		89.8	2008 Form 10-K
		93.6	2010 Form 10-K
		126.2	CONSOL liquids
		153.5	million bbl
		156.3	
		172.4	2013 10-K
		235.7	2.14
		328.7	6.90
		394.4	7.61
		407.2	7.05
		468.2	6.48

Note: liquids prodn ignored

	Years Ended December 31,				
	2013	2012	2011	2010	2009
<b>Gas:</b>					
Net sales volumes produced (in billion cubic feet)	172.4	156.3	153.5	127.9	94.4
Average sales price (\$ per Mcfe)(A)	\$ 4.30	\$ 4.22	\$ 4.90	\$ 5.83	\$ 6.68
Average cost (\$ per Mcfe)	\$ 3.51	\$ 3.37	\$ 3.53	\$ 3.54	\$ 3.15
Proved reserves (in Bcf) (B)	5,731	3,993	3,480	3,732	1,911
<b>Coal:</b>					
Tons sold from continuing operations (in thousands)(C)	28,776	27,612	32,090	32,280	32,185
Tons produced from continuing operations (in thousands)	28,476	27,178	31,721	31,895	32,987
Average sales price of tons produced (\$ per ton produced)	\$ 69.34	\$ 77.75	\$ 90.10	\$ 73.31	\$ 66.71
Average Cost of Goods Sold (\$ per ton produced)	\$ 50.78	\$ 53.98	\$ 51.88	\$ 44.37	\$ 41.76
Recoverable coal reserves (tons in millions)(D)	3,032	4,229	4,314	4,229	4,350
Number of active mining complexes (at end of period)	4	5	7	7	6

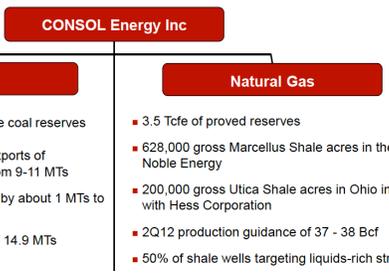
- (A) Represents average net sales price including the effect of derivative transactions.
- (B) Represents proved developed and undeveloped gas reserves at period end.
- (C) Includes sales of coal produced by CONSOL Energy and purchased from third parties. Of the tons sold, CONSOL Energy purchased the following amount from third parties: 0.6 million tons, 0.5 million tons, 0.6 million tons, 0.2 million tons, and 0.3 million tons for the years ended December 31, 2013, 2012, 2011, 2010 and 2009, respectively.
- (D) Represents proven and probable coal reserves at period end, excluding equity affiliates.

CONSOL 2013 Form 10-K, page 48.

Mine	Location	Mine Type	Mining Equipment	Transportation	Tons Produced (in millions)			Year Established or Acquired
					2013	2012	2011	
<b>Thermal</b>								
Bailey (3)	Enon, PA	U	LW/CM	R R/B	10.1	8.6	8.6	1984
Enlow Fork (3)	Enon, PA	U	LW/CM	R R/B	8.9	8.0	8.3	1990
Miller Creek Complex(2)	Delbarton, WV	U/S	CM/S/L	R T	2.2	2.9	2.8	2004
AMVEST-Fola Complex(1)(2)	Bickmore, WV	U/S	A/S/L/CM	R T	—	0.8	2.1	2007
<b>High Volatile Metallurgical</b>								
Bailey-Met (3)	Enon, PA	U	LW/CM	R R/B	1.3	1.5	2.1	1984
Enlow Fork-Met (3)	Enon, PA	U	LW/CM	R R/B	1.2	1.5	1.8	1990
AMVEST-Fola Complex(1)(2)-Met	Bickmore, WV	U/S	A/S/L/CM	R T	—	0.3	0.1	2007
AMVEST-Terry Eagle Complex(1)(2)-Met	Jodie, WV	U/S	CM/A/S/L	R T	—	—	0.1	2007
<b>Low Volatile Metallurgical</b>								
Buchanan(1)	Mavisdale, VA	U	LW/CM	R T	4.8	3.5	5.7	1983
Amonate (1)(2)	Amonate, VA	U/S	A/S/CM	R T	—	0.1	—	2012
<b>Total</b>					<b>28.5</b>	<b>27.2</b>	<b>31.6</b>	
<b>CONSOL Energy Portion of Equity Affiliates</b>								
Harrison Resources(2)(4)	Cadiz, OH	S	S/L	R T	0.4	0.4	0.4	2007
Western Allegheny-Knob Creek(2)(4)	Young Township, PA	U	CM	R T	0.3	0.1	0.1	2010
<b>Total CONSOL Energy Portion of Equity Affiliates</b>					<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	

CONSOL 2013 Form 10-K, page 20.

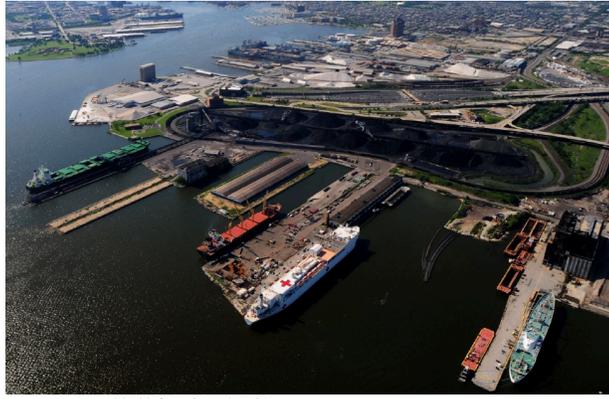
Underground	94%
Surface	6%



CONSOL guidance for 2012 ~2x higher than actual;  
 Consol Energy Raymond James 4th Annual Coal Investors Conference June 19, 2012



Longwall mining.  
 Consol Energy Raymond James 4th Annual Coal Investors Conference June 19, 2012



CONSOL's coal port in Baltimore  
 Consol Energy Raymond James 4th Annual Coal Investors Conference June 19, 2012



CON SOL trade routes  
 Consol Energy Raymond James 4th Annual Coal Investors Conference June 19, 2012

CONSOL Form 10-K for 2015, page 53-fwd.  
 CONSOL Energy consists of two principal business divisions: Exploration and Production (E&P) and Coal.  
 The total E&P division includes four segments: Marcellus, Utica, Coalbed Methane (CBM) and Other Gas. The Coal division includes three segments: Pennsylvania (PA) operations, Virginia (VA) operations and Other Coal.  
 Page 55: "The total Coal division contributed \$500 million of earnings before income tax for the year ended December 31, 2015 compared to \$409 million for the year ended December 31, 2014. The total Coal division sold 29.2 million tons of coal produced from CONSOL Energy mines for the year ended December 31, 2015, compared to 32.4 million tons for the year ended December 31, 2014. Our 2016 coal production is expected to be between 27.0 - 32.0 million tons.

**Cell:** G9

**Comment:** Rick Heede:

CONSOL Energy website: CEIX is a Canonsburg-based producer and exporter of high-Btu bituminous thermal and crossover metallurgical coal. It owns and operates some of the most productive longwall mining operations in the Northern Appalachian Basin. Our flagship operation is the Pennsylvania Mining Complex, which has the capacity to produce approximately 28.5 million tons of coal per year and is comprised of 3 large-scale underground mines: Bailey, Enlow Fork, and Harvey. The company also owns and operates the CONSOL Marine Terminal, which is located in the port of Baltimore and has a throughput capacity of approximately 15 million tons per year. In addition to the ~767 million reserve tons associated with the Pennsylvania Mining Complex, the company also controls approximately 1.6 billion tons of greenfield thermal and metallurgical coal reserves located in the major coal-producing basins of the eastern United States.

CONSOL energy Form 10-K for 2017, page 1: "Our business originated as part of the operations of our former parent company, CNX, formerly known as CONSOL Energy Inc., which was an integrated energy company operating two primary divisions - a Pennsylvania mining division and an oil and natural gas exploration and production division. CNX and its predecessors had been mining coal, primarily in the Appalachian Basin, since 1864. CNX entered the natural gas business in the 1980s and since that time continued to expand its oil and natural gas exploration and production operations as well as continuing to operate its coal mining assets. On November 28, 2017, CNX split into two, independently traded public companies, a natural gas company, now known as CNX Resources Corporation, and CONSOL Energy Inc. As part of the separation, CNX transferred to the Company substantially all of its coal-related assets, including its Pennsylvania Mining Complex (including all of its interest in CONSOL Coal Resources LP), the CONSOL Marine Terminal and approximately 1.6 billion tons of Greenfield Reserves located in the Northern Appalachian ("NAPP"), the Central Appalachian ("CAPP") and the Illinois Basins ("ILB"). The Company was incorporated in Delaware on June 21, 2017."

**Cell:** H9

**Comment:** Rick Heede:

CONSOL Energy SEC Form 10-K for 2017, page 2: Our Business.

CNX Resources Corporation, (CNX or the Company) is one of the largest independent oil and natural gas companies in the United States and is focused on the exploration, development, production, gathering, processing and acquisition of natural gas properties in the Appalachian Basin. Our operations are centered on unconventional shale formations, primarily the Marcellus Shale and Utica Shale.

CNX was incorporated in Delaware in 1991 under the name CONSOL Energy Inc. (CONSOL Energy), but its predecessors had been mining coal, primarily in the Appalachian Basin, since 1864. CNX entered the natural gas business in the 1980s initially to increase the safety and efficiency of its Virginia coal mines by capturing methane from coal seams prior to mining, which makes the mining process safer and more efficient. The natural gas business grew from the coalbed methane production in Virginia into other unconventional production, including hydraulic fracturing in the Marcellus Shale and Utica Shale in the Appalachian Basin. This growth was accelerated with the 2010 asset acquisition of the Appalachian Exploration & Production business of Dominion Resources, Inc.

On November 28, 2017, CNX completed the tax-free spin-off of its coal business resulting in two independent, publicly traded companies: CONSOL Energy, a coal company, formerly known as CONSOL Mining Corporation; and CNX, a natural gas exploration and production company. As a result of the separation of the two companies, CONSOL Energy and its subsidiaries now hold the coal assets previously held by CNX, including its Pennsylvania Mining Complex, Baltimore Marine Terminal, its direct and indirect ownership interest in CONSOL Coal Resources LP, formerly known as CNXC Coal Resources LP, and other related coal assets previously held by CNX. To effect the separation, CNX's shareholders received one share of CONSOL Energy common stock for every eight shares of CNX's common stock held as of the close of business on November 15, 2017, the record date for the separation and distribution. The coal company, previously reported as the Company's Pennsylvania Mining Operations division, has been reclassified in the Audited Consolidated Financial Statements in Item 8 of this Annual Report on Form 10-K (the Form 10-K) to discontinued operations for all periods presented.

CNX operates, develops and explores for natural gas primarily in Appalachia (Pennsylvania, West Virginia, Ohio, and Virginia). Our primary focus is the continued development of our Marcellus Shale acreage and delineation and development of our unique Utica Shale acreage and stacked pay opportunity set. We believe that our concentrated operating area, our legacy surface acreage position, our regional operating expertise, our extensive data set from development, as well as from non-operated participation wells and our held-by-production acreage position provides us a significant operating advantage over our competitors. Over the past ten years, CNX's natural gas business has grown by approximately 625% to produce a total of 407.2 net Bcfe in 2017.

**Cell:** D11

**Comment:** Rick Heede:

Coal production by coal mining companies and state-owned enterprises, including subsidiaries of oil and gas companies.

Coal types produced are not ordinarily reported by coal operators (except for metallurgical coal). We distinguish, where possible and reasonably well known, between hard (bituminous and subbituminous) and soft (lignite or peat) coals, especially for the larger companies operating in regions such as Australia and India where soft coals are predominant. Soft coals have lower carbon content per tonne than do hard coals.

**Cell:** G20

**Comment:** Rick Heede:

Wikipedia: "The Consolidation Coal Company was established in 1864 and headquartered in the city of Cumberland, Maryland for the first 85 years (1864-1945) where the company became the largest bituminous coal company in the eastern United States.

Western Maryland's coal production rose about 1 million short tons in 1865, exceeded 4 million short tons by the turn of the century, and reached an all time high of about 6 million short tons in 1907. A small amount of the coal production in the early 1900s was premium smithing coal (as in blacksmith) that was specially processed and delivered in boxcars to customers throughout the United States and Canada.

Sharp declines in coal demand after 1920, reflecting downturns in the economy, recurrent labor problems and the extensive replacement of coal by petroleum, led to further consolidations and mergers in the coal industry. In 1945, Consolidated Coal Company merged with the Pittsburgh Coal Company, and the corporate headquarters was moved from Cumberland to Pittsburgh. In 1966 the Continental Oil Company (Conoco) purchased the assets of Consolidation Coal Company, and in 1981 DuPont purchased Conoco. The Consolidation Coal Company continued to exist as a subsidiary of Dupont until 1998 when the subsidiary was purchased from Dupont by Rheinbraun. As of 1999 the company has renamed itself to Consol Energy, reflecting the diversification of the business into other forms of energy."

1860 Consolidation Coal Company is formed with the merger of several smaller coal mining firms in the Georges Creek Valley.

1864 Consolidation Coal Company is formally incorporated in Cumberland, Maryland.

1878 Offices moved from New York to Baltimore.

1921 Moved offices back to New York.

1925 Consolidation Coal Company becomes largest bituminous coal producer in the United States, a distinction it retains today.

1945 Consolidation Coal merges with Pittsburgh Coal Company.

1958 Renamed Consolidation Coal Company.

1964 One hundred year anniversary.

1966 Continental Oil Company (Conoco) acquires Consolidation Coal Company.

1981 Conoco, along with subsidiary Consolidation Coal Company, is acquired by DuPont.

1991 RWE A.G, through its direct and indirect wholly owned subsidiaries Rheinbraun A.G. and Rheinbraun U.S.A. GmbH, purchases 50 percent of Consolidation Coal. CONSOL Energy Inc. is formed as a subsidiary of DuPont Energy Company and Rheinbraun affiliates.

1998 CONSOL Energy purchases shares of its common stock from DuPont Energy. After this transaction, Rheinbraun A.G. and Rheinbraun U.S. GmbH together own about 94 percent and DuPont Energy 6 percent of outstanding shares of common stock.

1999 CONSOL Energy stock begins trading on NYSE under the symbol "CNX," with the public offering of 20.6 million shares of its total 80.3 million shares.

2000 CONSOL Energy purchases extensive coalbed methane reserves and facilities in southwestern Virginia from MCN Energy Group Inc.

2001 CNX Ventures announces agreement on joint venture with Allegheny Energy to construct 88-megawatt, coalbed-methane-fueled electricity generating facility in southwestern Virginia, which begins operating in 2002.

Acquires coalbed methane gas production and gathering pipeline facilities in southwest Virginia from Conoco.

2002 Through subsidiary CNX Marine Terminal Inc., begins operation as a break bulk and general cargo and warehouse provider at facilities in Baltimore.

2003 Completes sale of Canadian coal assets and port facilities to Fording Inc.

**Cell:** H55

**Comment:** Rick Heede:

CONSOL website: Our History in video clips: "Expansion."  
Source: [www.consolenenergy.com/AboutUs/History.aspx](http://www.consolenenergy.com/AboutUs/History.aspx)

**Cell:** H82

**Comment:** Rick Heede:

CONSOL website: Our History in video clips: "Expansion." Consolidation Coal Company had become the largest coal producer in the United States by 1927, and produced 27 million tons.

**Cell:** G88

**Comment:** Rick Heede:

CONSOLIDATION COAL COMPANY

1st annual report, 1935

"Consolidation Coal Company was incorporated in Delaware on November 1, 1935 and as of that date it succeeded to the business and acquired substantially all of the properties and assets of The Consolidation Coal Company, a Maryland corporation, pursuant to the Plan of Reorganization of the latter Company confirmed in proceedings for its reorganization by the United States District Court for the District of Maryland. The predecessor Company was incorporated in 1860 and its business has been in active operation for the past seventy-five years...."

"Production of coal for the past three years from properties now owned by this Company" has been as listed here for 1933-1935. CMS enters only the quantities for "Net tons mined by the Company and its predecessor Company," and excludes "Net tons mined by lessees" (although these tonnages are listed in column H), but not included.

**Cell:** G122

**Comment:** Rick Heede:

Keystone Coal Industry Manual does not list coal production by major producers prior to 1969. Instead, a list of the "50 Biggest Bituminous Mines" is included, p. 186. The ten mines listed and owned by Consolidation Coal Company produced 24.38 million tons in 1967, or roughly half of the total tonnage in 1968. Clearly, Consolidated's many other mines are not accounted for.

**Cell:** G123

**Comment:** Rick Heede:

Keystone Coal Industry Manuals prior to 1969 do not list coal production by the largest coal producers. The 1969 edition, however, does list Consolidation Group production in 1969 as 1.7 percent higher than 1968, which we calculate here.

**Cell:** G124

**Comment:** Rick Heede:

Data from 1969-1993 from Keystone Coal Industry Manual (various years).

**Cell:** G155

**Comment:** Rick Heede:

Coal production 2000-2004 from CONSOL (2005) Annual Report 2004, p. 8 and 16.

**Cell:** P155

**Comment:** Rick Heede:

"Gas sales (net)" 2000-2004 from CONSOL (2005) Annual Report 2004, p. 11. This gas is derived from coal bed methane production systems at several of CONSOL's mines. Gross production is ~10 percent higher. Royalty holders' one-eighth interest is also deducted. 1,801 producing wells are located chiefly in Virginia; small amounts of conventional gas is also produced in PA and TN.

Annual Report (2005), p. 10: "CONSOL Energy produces gas entirely in Appalachia. Our primary producing property is our 178,000-acre tract in southwestern Virginia. We produce gas from this tract in four different ways. First, we drill wells from the surface into the coal seam. These wells, called "frac" wells, liberate the gas from the coal seam before we mine the coal. Second, from inside our Buchanan Mine, we drill horizontally into the coal seam to liberate more gas immediately prior to mining. Third, after we have mined the coal, we drill additional wells from the surface into the rubble, called "gob," left by mining, preventing the gas released in this process from seeping back into the active mining area. Fourth, we have begun drilling long holes horizontally into the coal seam from the mine's perimeter. All of these efforts have the additional benefit of enhancing mine safety."

**Cell:** D163

**Comment:** Rick Heede:

CONSOL has been a coking coal producer since the 1956 acquisition of Pocahantas Coal Company, although CONSOL's coking coal production levels are difficult to find. These results are from the 2010 Form-K field with SEC.

**Cell:** G163

**Comment:** Rick Heede:

CONSOL Energy (2009) SEC Form 10-K for 2008, page 5. Proved reserves of coal 1.683 billion tons.

**Cell:** P163

**Comment:** Rick Heede:

CONSOL Energy (2009) SEC Form 10-K, page 5: Approx 246 million cf per day in Dec08 (= 89.8 Bcf if annualized); CONSOL does not provide annual production data. 1.4 Tcf of proved reserves (97 percent CBM).

**Cell:** G164

**Comment:** Rick Heede:

CONSOL Energy AR 2010 html, pgs 71-75; produced steam tons sold+produced high vol met tons sold+produced low vol met tons sold

**Cell:** P164

**Comment:** Rick Heede:

CONSOL 2010 10K pg 78, coalbed methane, produced gas CBM sales volumes bcf, 2009-2010, data for 2009 and 2010 include CBM+conventional gas+marcellus gas, in that order

**Cell:** D166

**Comment:** Rick Heede:

CONSOL 10-K, page 20: sums high-volatile and low-volatile metallurgical coal production at six mines (eg Bailey).

**Cell:** G166

**Comment:** Rick Heede:

CONSOL Form 10-K page 20. Thermal coal production at four mines (eg Bailey and Enlow). Reason for discontinuity is unknown.

**Cell:** P166

**Comment:** Rick Heede:

CONSOL AnnRpt and 10-K, page 13. Includes Marcellus, CBM, shallow gas, and minor liquids production (converted to Bcfe). Project 215 to 235 Bcfe in 2014.

**Cell:** H167

**Comment:** Rick Heede:

EIA Annual Coal Report 2012, Table 10. Major U.S. Coal Producers, 2012.

**Cell:** G169

**Comment:** Rick Heede:

CONSOL Form 10-K for 2015, page 53-fwd.  
CONSOL Energy consists of two principal business divisions: Exploration and Production (E&P) and Coal.  
The total E&P division includes four segments: Marcellus, Utica, Coalbed Methane (CBM) and Other Gas. The Coal division includes three segments: Pennsylvania (PA) operations, Virginia (VA) operations and Other Coal.  
Page 55: "The total Coal division contributed \$500 million of earnings before income tax for the year ended December 31, 2015 compared to \$409 million for the year ended December 31, 2014. The total Coal division sold 29.2 million tons of coal produced from CONSOL Energy mines for the year ended December 31, 2015, compared to 32.4 million tons for the year ended December 31, 2014. Our 2016 coal production is expected to be between 27.0 - 32.0 million tons.

**Cell:** P169

**Comment:** Rick Heede:

CNX "net sales volumes produced, in Bcf per year, for 2013-2017, page 38. Note that actual sales are typically lower (365 Bcf in 2017).

**Cell:** G171

**Comment:** Rick Heede:

CONSOL energy EC Form 10-K for 2017, Operating data, tons produced (varies slightly from tons sold). CAI shows 2016 and 2017 production. Also shows 2013-2015 production data, not listed here, in favor of company's own declared production in prior years -- presumable from divested assets, eg., Utah mines.

**Cell:** D172

**Comment:** Rick Heede:

CONSOL energy Form 10-K for 2018, page 1: "CNX Resources Corporation (CNX or the Company) is a premiere independent oil and gas company that is focused on the exploration, development, production, gathering, processing and acquisition of natural gas properties primarily in the Appalachian Basin. Our operations are centered on unconventional shale formations, primarily the Marcellus Shale and Utica Shale. CNX was incorporated in Delaware in 1991 under the name CONSOL Energy Inc. (CONSOL Energy), but its predecessors had been mining coal, primarily in the Appalachian Basin, since 1864. CNX entered the natural gas business in the 1980s initially to increase the safety and efficiency of its Virginia coal mines by capturing methane from coal seams prior to mining, which makes the mining process safer and more efficient. The natural gas business grew from the coalbed methane production in Virginia into other unconventional production, including hydraulic fracturing in the Marcellus Shale and Utica Shale in the Appalachian Basin. This growth was accelerated with the 2010 asset acquisition of the Appalachian Exploration & Production business of Dominion Resources, Inc. On November 28, 2017, CNX completed the tax-free spin-off of its coal business resulting in two independent, publicly traded companies: CONSOL Energy, a coal company, formerly known as CONSOL Mining Corporation; and CNX, a natural gas exploration and production company. As a result of the separation of the two companies, CONSOL Energy and its subsidiaries now hold the coal assets previously held by CNX, including its Pennsylvania Mining Complex, Baltimore Marine Terminal, its direct and indirect ownership interest in CONSOL Coal Resources LP, formerly known as CNXC Coal Resources LP, and other related coal assets previously held by CNX."

**Cell:** G173

**Comment:** Rick Heede:

CONSOL Coal Resources LP (2019) CCR Form 10-K for 2018, page 51.  
Note: CCR has presumably sold coal mining operations post-Nov2017 spin-off from CNX. Companies share HQ in Canonsburg, PA.

**Cell:** P173

**Comment:** Rick Heede:

CNX Resources (2019) Form 10-K for 2018, page 41; Natural Gas sales volume of 468.226 Bcf; NGLs (6.08 Mb) plus Oil plus Condensate.

**Cell:** D236

**Comment:** Rick Heede:

CONSOL 2013 Form 10-K, page 20: "In the year ended December 31, 2013, 94% of CONSOL Energy's production from continuing operations came from underground mines and 6% from surface mines. Where the geology is favorable and reserves are sufficient, CONSOL Energy employs longwall mining systems in our underground mines. For the year ended December 31, 2013, 90% of our production came from mines equipped with longwall mining systems.

**Cell:** Q277

**Comment:** Rick Heede:

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**Cell:** Q281

**Comment:** Rick Heede:

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