




Year	Lignite Gross production Million tons/yr	Lignite Gross production Million tonnes/yr	Bituminous Gross production Million tons/yr	Bituminous Gross production Million tonnes/yr	Total Coal Gross production Million tons/yr	Total Coal Gross production Million tonnes/yr
Coal extraction data						
Richard Heede Climate Accountability Institute File started: 11 January 2005 Last modified: January 2020			WESTMORELAND COAL COMPANY A Trusted Name in Coal Since 1854			
Westmoreland Coal Company www.westmoreland.com Colorado Springs, Colorado USA			yellow column indicates original reported units		Investor-owned	
Production / Extraction data						
Westmoreland Coal founded in 1854						
1854			0.06	company history	0.1	0.1
1855			0.07	interpolated	0.1	0.1
1856			0.09	company history	0.1	0.1
1857			0.10	interpolated	0.1	0.1
1858			0.12	interpolated	0.1	0.1
1859			0.13	interpolated	0.1	0.1
1860			0.15	interpolated	0.1	0.1
1861			0.16	interpolated	0.2	0.1
1862			0.18	interpolated	0.2	0.2
1863			0.19	interpolated	0.2	0.2
1864			0.21	interpolated	0.2	0.2
1865			0.22	interpolated	0.2	0.2
1866			0.24	interpolated	0.2	0.2
1867			0.25	interpolated	0.3	0.2
1868			0.27	interpolated	0.3	0.2
1869			0.28	company history	0.3	0.3
1870			0.38	interpolated	0.4	0.3
1871			0.49	interpolated	0.5	0.4
1872			0.59	interpolated	0.6	0.5
1873			0.69	interpolated	0.7	1
1874			0.79	interpolated	0.8	1
1875			0.90	interpolated	0.9	1
1876			1.00	interpolated	1.0	1
1877			1.10	interpolated	1.1	1
1878			1.20	interpolated	1.2	1
1879			1.31	interpolated	1.3	1
1880			1.41	interpolated	1.4	1
1881			1.51	interpolated	1.5	1
1882			1.62	interpolated	1.6	1
1883			1.72	interpolated	1.7	2
1884			1.82	interpolated	1.8	2
1885			1.92	interpolated	1.9	2
1886			2.03	interpolated	2.0	2
1887			2.13	interpolated	2.1	2
1888			2.23	interpolated	2.2	2
1889			2.33	interpolated	2.3	2
1890			2.44	interpolated	2.4	2
1891			2.54	interpolated	2.5	2
1892			2.64	interpolated	2.6	2
1893			2.75	interpolated	2.7	2
1894			2.85	interpolated	2.8	3
1895			2.95	interpolated	3.0	3
1896			3.05	interpolated	3.1	3
1897			3.16	interpolated	3.2	3
1898			3.26	interpolated	3.3	3
1899			3.36	interpolated	3.4	3
1900			3.46	interpolated	3.5	3
1901			3.57	interpolated	3.6	3
1902			3.67	interpolated	3.7	3
1903			3.77	interpolated	3.8	3
1904			3.88	interpolated	3.9	4
1905			3.98	interpolated	4.0	4
1906			4.08	interpolated	4.1	4
1907			4.18	interpolated	4.2	4
1908			4.29	interpolated	4.3	4
1909			4.39	interpolated	4.4	4
1910			4.49	interpolated	4.5	4
1911			4.59	interpolated	4.6	4
1912			4.70	interpolated	4.7	4
1913			4.80	company history	4.8	4
1914			4.70	interpolated	4.7	4
1915			4.60	interpolated	4.6	4
1916			4.50	interpolated	4.5	4
1917			4.40	interpolated	4.4	4
1918			4.30	interpolated	4.3	4
1919			4.20	interpolated	4.2	4
1920			4.10	interpolated	4.1	4
1921			4.00	interpolated	4.0	4
1922			3.90	interpolated	3.9	4
1923			3.80	interpolated	3.8	3



Westmoreland.com (Nov14)



Westmoreland AnnRpt images

	Absaroka Mine	Rosebud Mine	Jewett Mine	Beulah Mine	Savage Mine
Subsidiary	Westmoreland Resources, Inc.	Westmoreland Energy Company	Texas Westmoreland Coal Co.	Dakota Westmoreland Corporation	Westmoreland Savage Corporation
Location	Hardin, MT	Colstrip, MT	Jewett, TX	Beulah, ND	Sidney, MT
Coal Reserves and Deposits (million tons)	81	205	55	47	7
2008 Annual Production (million tons)	6.4	13.1	6.5	3	0.36
Disturbed Acres	4,513	16,800	16,118	5,125	556
Reclaimed Acres	2,760	7,583	11,921	3,605	209
Number of Draglines	1	4	4 plus bucketwheel	2	1
Major Customers	Coal Energy, Western Fuels Assoc., Mid-west Energy, Rocky Mountain Power	Colstrip 1&2 owner, Colstrip 3&4 owner, NRG Texas Power	NRG Texas Power LLC	Other Tail, MIDU, Minkota, Northwestern Public Service	MIDU, Sidney Sugars
Delivery	Truck/Rail	Truck/Rail/Conveyor	Conveyor	Conveyor/Rail	Truck
Approx. Heat Content (BTU/lb.)	8,887	8,529	6,587	7,002	6,563
Approx. Sulfur Content (%)	0.68	0.74	0.79	0.76	0.55
Year Opened	1974	1968	1995	1963	1958
Employees	150	404	337	157	11
Total Tons Mined Since Inception (million tons)	162	410	174	97	14

www.westmoreland.com production and legacy table

Westmoreland

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
87	1924					3.70	interpolated		3.7	3							
88	1925					3.60	interpolated		3.6	3							
89	1926					3.50	interpolated		3.5	3							
90	1927					3.40	interpolated		3.4	3							
91	1928					3.30	interpolated		3.3	3							
92	1929					3.20	interpolated		3.2	3							
93	1930					3.10	interpolated		3.1	3							
94	1931					3.00	assumed		3.0	3							
95	1932					3.15	interpolated		3.1	3							
96	1933					3.29	interpolated		3.3	3							
97	1934					3.44	interpolated		3.4	3							
98	1935					3.58	interpolated		3.6	3							
99	1936					3.73	interpolated		3.7	3							
100	1937					3.88	interpolated		3.9	4							
101	1938					4.02	interpolated		4.0	4							
102	1939					4.17	interpolated		4.2	4							
103	1940					4.31	interpolated		4.3	4							
104	1941					4.46	interpolated		4.5	4							
105	1942					4.61	interpolated		4.6	4							
106	1943					4.75	interpolated		4.8	4							
107	1944					4.90	interpolated		4.9	4							
108	1945					5.04	interpolated		5.0	5							
109	1946					5.19	interpolated		5.2	5							
110	1947					5.34	interpolated		5.3	5							
111	1948					5.48	interpolated		5.5	5							
112	1949					5.63	interpolated		5.6	5							
113	1950					5.77	interpolated		5.8	5							
114	1951					5.92	interpolated		5.9	5							
115	1952					6.06	interpolated		6.1	6							
116	1953					6.21	interpolated		6.2	6							
117	1954					6.36	interpolated		6.4	6							
118	1955					6.50	interpolated		6.5	6							
119	1956					6.65	interpolated		6.6	6							
120	1957					6.79	interpolated		6.8	6							
121	1958					6.94	interpolated		6.9	6							
122	1959					7.09	interpolated		7.1	6							
123	1960					7.23	interpolated		7.2	7							
124	1961					7.38	interpolated		7.4	7							
125	1962					7.52	interpolated		7.5	7							
126	1963					7.67	interpolated		7.7	7							
127	1964					7.82	interpolated		7.8	7							
128	1965					7.96	interpolated		8.0	7							
129	1966					8.11	interpolated		8.1	7							
130	1967					8.25	interpolated		8.3	7							
131	1968					8.40	assumed		8.4	8							
132	1969					11.94	Keystone Manual		11.9	11							
133	1970					11.3			11.3	10							
134	1971					8.4			8.4	8							
135	1972					9.1			9.1	8							
136	1973					8.8			8.8	8							
137	1974					7.6	Keystone Manual		7.6	7							
138	1975					7.9			7.9	7							
139	1976					7.8	interpolated		7.8	7							
140	1977					7.8	interpolated		7.8	7							
141	1978					7.7	interpolated		7.7	7							
142	1979					7.6	Keystone Manual		7.6	7							
143	1980					7.7	interpolated		7.7	7							
144	1981					7.8	interpolated		7.8	7							
145	1982					8.0	interpolated		8.0	7							
146	1983					8.1	interpolated		8.1	7							
147	1984					8.2	interpolated		8.2	7							
148	1985					8.3	interpolated		8.3	8							
149	1986					8.4	interpolated		8.4	8							
150	1987					8.6	Westmoreland AnnRpts		8.6	8							
151	1988					9.1			9.1	8							
152	1989					10.2			10.2	9							
153	1990					10.6			10.6	10							
154	1991					10.1			10.1	9							
155	1992					11.8			11.8	11							
156	1993					11.6			11.6	11							
157	1994					12.0			12.0	11							
158	1995					6.6			6.6	6							
159	1996					4.7			4.7	4							
160	1997					7.1			7.1	6							
161	1998					6.5			6.5	6							
162	1999					5.5			5.5	5							
163	2000					21.75	Westmoreland AnnRpt		26.57	24							
164	2001					16.53			20.20	18							
165	2002					21.03			25.70	23							
166	2003					22.67			27.70	25							
167	2004					23.88			29.18	26							
168	2005					24.54			29.99	27							
169	2006					24.01			29.34	27							
170	2007					24.56			30.01	27							
171	2008					19.22			29.12	26							
172	2009					16.24			24.25	22							
173	2010					19.44			29.34	27							
174	2011					14.69			21.82	20							
175	2012					15.28			21.75	20							
176	2013					17.39			41.50	38							
177	2014								44.90	41							
178	2015								53.30	48							
179	2016								54.70	50							
180	2017								39.86	36							
181	2018								33.60	30							
182																	
183	Total					103	948	na	1,279	1,161							
184																	
185	2012 production					Lignite: 18.2% Mt	Subbituminous 30.08 Mt	Bituminous 9.60 Mt	total 39.86 Mt								
186																	
187																	
188	Coal Types:					Lignite 22.01%	Sub-bituminous 67.1%	Bituminous 10.8%	Total 100.00%								
189	2017 production																
190																	



Sheerness Mine, Alberta

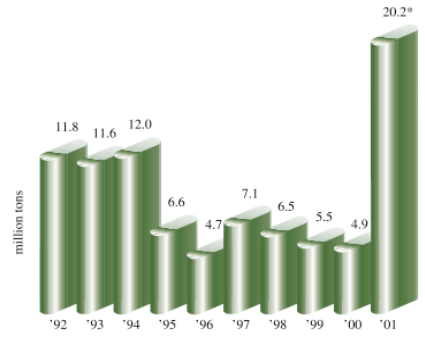
Westmoreland
lignite
million tons

53.9 CDP model v3.1 March 2018
 48.6 CDP model v3.1 March 2018
 47.5 CDP model v3.1 March 2018

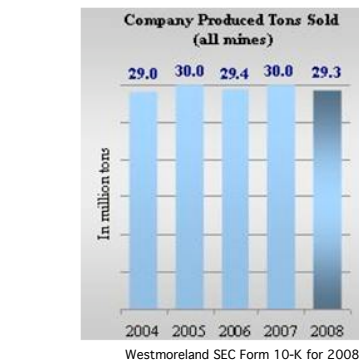
14.85 Westmoreland emerges from Chapter 11 (Mar19) Form 10-Q Oct18

Rosebud opened in 1924 (AnnRpt2000) and 300 Mt mined since 1924

CMS has data for Westmoreland coal production for only a few years starting in 1854 and noted in the production column at left ("company history"), and interpolated between known years. While the estimated production for individual years are likely not accurate, the total production 1854-2010 is reasonable, given that Westmoreland produced 957 million tons from the five mines detailed in the table above (which opened from 1958 through 1974); furthermore, Westmoreland states that its Rosebud Mine produced 300 million tons since 1924, and the company was producing 4.8 million tons as early as 1913. Westmoreland is encouraged to provide accurate annual production data for each year since 1854.



COMPANY PRODUCED TONS SOLD
 *includes only 8 months from newly acquired mines.



Westmoreland SEC Form 10-K for 2008

Westmoreland
Total 2000-04
million tons
11.80
11.60
12.00
6.60
4.70
7.10
6.50
5.50
26.57
20.20
25.70
27.70
29.18
29.99
29.34
30.01
29.39

Total 1854-2008
 million tons
 lignite & bituminous
 914.40

29.0	NMA
30.0	NMA
29.4	NMA

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
191																		
192		Calculated from Westmoreland production by coal rank, 2017 AnnRpt, p. 8-10.																
193				Lignite	Sub-bituminous		Bituminous		Total	(see production by mine and rank below)								
194	coal prodn 2017			10,540	32,162		5,195		47,897									
195	percent			22.0%	67.1%		10.8%		100.000%									

Westmoreland Coal Company Form 10-K for 2017, page 8-10:

Coal - U.S. Mines:	Colstrip	Absaloka	Savage	San Juan	Jewett ¹	Benlah	Buckingham	Haystack ²
Previously owned by	Entech, Inc., a subsidiary of Montana Power, purchased 2001	Washington Group International, Inc. as contract operator, ended contract in 2007	Knife River Corporation, a subsidiary of MDU Resources Group, Inc., purchased 2001	San Juan Coal Company, LLC, a subsidiary of BHP Billiton, purchased 2016	Entech, Inc., a subsidiary of Montana Power, purchased 2001	Knife River Corporation, a subsidiary of MDU Resources Group, Inc., purchased 2001	Clay & Bryan Group, purchased 2015	Kiewit Mining Group, Inc., purchased 2017
Currently owned by	Western Energy Company	Westmoreland Resources Inc.	Westmoreland Savage Corporation	San Juan Coal Company	Texas Westmoreland Coal Co.	Dakota Westmoreland Corporation	Buckingham Coal Company, LLC	Haystack Coal Company
County, State	Rosebud & Treasure, Montana	Big Horn, Montana	Richland, Montana	San Juan, New Mexico	Leon & Freestone & Limestone, Texas	McLean & Oliver, North Dakota	Perry, Ohio	Utah, Wyoming
Proven reserves	241,087	27,565	3,685	11,445	—	5,038	14,707	12,803
Probable reserves	—	—	—	—	—	—	1,562	—
Total reserves	241,087	27,565	3,685	11,445	—	5,038	16,269	12,803
Permitted reserves	89,014	27,565	3,685	11,445	—	1,065	16,269	12,803
2017 tons produced	8,636	3,566	273	5,327	—	432	609	N/A
2017 tons sold	13,300	7,500	400	9,000	N/A	2,500	1,000	N/A
2016 tons sold	8,630	3,573	273	6,110	—	437	944	N/A
2015 tons sold	8,812	4,157	309	5,417	3,690	948	729	N/A
2015 tons sold	9,626	5,844	271	N/A	3,357	2,136	1,246	N/A
Estimated mine life with current plan	2029	2022	2028	2022	N/A	2019	2040	2037

Lessor ³	Fed Gov., State of MT, Great Northern Properties	Crow Tribe, Private parties	Fed Gov., Private parties	Fed Gov., State of NM	Private parties	Private parties, State of ND, Fed Gov.	BCC ownership, AEP, Private parties, State of OH	Private parties
Lease term	Varies	Through exhaustion	Varies	Varies	Varies	Varies	Varies	Through exhaustion
Coal seam	Rosebud	Rosebud-McKay	Pust	Fruitland No. 3	N/A	Schoolhouse, Benlah-Zap	Middle Kittanning	Adaville series
Coal type	Sub-bituminous	Sub-bituminous	Lignite	Sub-bituminous	N/A	Lignite	Bituminous	Sub-bituminous
Approx. heat content of reserves (BTU/lb.)	8,500	8,580	6,505	10,275	N/A	6,974	13,203	9,600
Approx. sulfur content of reserves (%)	0.69	0.61	0.45	1.04	N/A	0.61	2.23	0.31

Coal - Canada Mines	Paintearth	Genesee	Sheerness	Coal Valley	Poplar River	Estevan
Previously owned by	Sherritt International Corporation, purchased 2014					
Currently owned by	Prairie Mines & Royalty ULC					
City, Province	Forestburg, Alberta	Warburg, Alberta	Hanna, Alberta	Edon, Alberta	Coronach, Saskatchewan	Estevan, Saskatchewan
Proven reserves	18,071	72,283	16,759	4,859	45,001	117,186
Probable reserves	—	2,205	3,021	5,809	—	8,450
Total reserves	18,071	74,488	19,780	10,758	45,001	125,636
Permitted reserves	18,071	74,488	19,780	4,859	45,001	79,767
2017 tons produced	1,350	5,560	3,409	2,168	3,587	6,298
Production capacity	3,300	6,600	4,000	2,500	3,850	6,800
2017 tons sold	1,337	5,560	3,923	2,224	3,458	6,248
2016 tons sold	1,450	5,627	3,525	2,431	3,898	5,849
2015 tons sold	1,972	5,745	3,078	2,160	3,595	6,370
Estimated mine life with current plan	2029	2030	2026	2019	2029	2030

Lessor ⁴	Crown, Freehold	Crown, Freehold	Crown	Crown	Crown, Freehold	SaskPower, Crown, Freehold, Manco, Private Owners
Lease term	Varies	Varies	Varies	Varies	Varies	Varies
Coal seam	Battle River, Paintearth	Ardley Coal Zone	Sumrinyok, Sheerness	Val D'Or, Arbour, Mylrose	Willow Bunch	Souris, Roche Perce, Estevan
Coal type	Sub-bituminous	Sub-bituminous	Sub-bituminous	Bituminous	Lignite	Lignite
Approx. heat content of reserves (BTU/lb.)	7,716	8,268	7,088	10,800	5,771	7,004
Approx. sulfur content of reserves (%)	0.44	0.22	0.54	0.30	<0.99	0.64

Coal - WMLP Mines	Cadiz	Tuscarawas	Belmont	New Lexington	Noble ⁵	Plainfield ²	Muhlenberg ³	Turkey ^{1,4}	Kemmerer
Previously owned by	These mines were previously owned by Oxford Resource Partners LP which is the predecessor entity to Westmoreland Resource Partners, LP								
Currently owned by	The Ohio mines are owned by Oxford Mining Company, LLC. The Muhlenberg mine located in Kentucky is owned by Oxford Mining Company - Kentucky, LLC.								

County, State	Jefferson, Harrison, Ohio	Columbiana, Cochocton, Stark, Tuscarawas, Ohio	Belmont, Ohio	Perry, Belmont & Morgan, Ohio	Noble & Guernsey, Ohio	Mukwungum, Guernsey & Cochocton, Ohio	Muhlenberg, Kentucky	Harrison & Tuscarawas, Ohio	Lincoln, Wyoming
Proven reserves	4,065	4,301	7,414	4,839	—	3,622	—	14,581	69,964
Probable reserves	439	—	306	56	—	—	—	2,062	8,867
Total reserves	4,504	4,301	7,720	4,895	—	3,622	—	16,643	78,831
Permitted reserves	4,133	1,740	1,300	708	—	1,070	—	16,643	37,003
2017 tons produced	1,573	211	400	228	—	—	6	—	4,224
Production capacity	1,500	250	1,000	500	N/A	N/A	N/A	N/A	4,500
2017 tons sold	2,232	211	394	235	—	—	6	—	4,294
2016 tons sold	2,258	456	333	390	—	—	—	—	4,106
2015 tons sold	2,125	673	644	551	17	—	—	—	4,471
Estimated mine life with current plan	2023	2021	2023	2022	N/A	N/A	N/A	N/A	2026

Lessor ⁶	Private parties, Council	Private parties	Private parties	AEP, Private parties	Private parties	Private parties	Private parties	Private parties	Fed Gov., Private parties
Lease term	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Coal seam	Pittsburgh, Redstone & Mags Creek	Lower & Middle Kittanning, Upper Freeport, Mahoning, Brookville	Pittsburgh, Mags Creek & Waynesburg	Lower & Middle Kittanning, Pittsburgh	Pittsburgh	Middle Kittanning	Tradewater & Carbondale Formations	Middle Kittanning & Upper Freeport	Adaville Series
Coal type	Bituminous	Bituminous	Bituminous	Bituminous	Bituminous	Bituminous	Bituminous	Bituminous	Sub-bituminous
Approx. heat content of reserves (BTU/lb.)	11,465	11,771	11,735	11,708	N/A	11,711	N/A	12,900	9,800
Approx. sulfur content of reserves (%)	2.80	3.70	4.30	3.80	N/A	4.40	N/A	2.00	0.69

Westmoreland Coal Company Form 10-K for 2017, page 6:

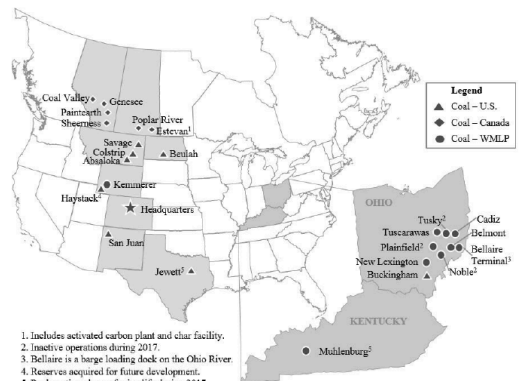
ITEM 1 — BUSINESS.

Overview

We produce and sell thermal coal primarily to investment grade utility customers under long-term, cost-protected contracts. Our focus is primarily on mine locations which allow us to employ dragline surface mining methods and take advantage of close customer proximity through mine-mouth power plants and strategically located rail transportation. At December 31, 2017, our U.S. coal operations were located in Montana, Wyoming, North Dakota, Texas, New Mexico and Ohio, and our Canadian coal operations were located in Alberta and Saskatchewan. We sold 49.7 million tons of coal in 2017.

Westmoreland Coal Company began mining in Westmoreland County, Pennsylvania in 1854 as a Pennsylvania corporation. In 1910, we incorporated in Delaware and continued our focus on coal operations in Pennsylvania and the Appalachian Basin. We moved our headquarters from Philadelphia, Pennsylvania to Colorado Springs, Colorado in 1995 and relocated the headquarters to Englewood, Colorado in November 2011.

Today, Westmoreland Coal Company is an energy company employing approximately 2,950 employees. We conduct our operations through our subsidiaries and our principal sources of cash are distributions from our operating subsidiaries. See Exhibit 21.1 - Subsidiaries of the Registrant for a list of our subsidiaries. As of December 31, 2017, our operations included 12 wholly-owned actively producing coal mines in the U.S. and Canada, a char production facility, and a 50% stake in an activated carbon plant. We also own the general partner of and, at December 31, 2017, own 93.94% of the total equity interest in, Westmoreland Resource Partners, LP ("WMLP"), which is a publicly traded limited partnership that owns and actively operates four mining complexes in Ohio and one mine in Wyoming. The following map shows our operations as of the date of this filing.



1. Includes activated carbon plant and char facility.
2. Inactive operations during 2017.
3. Belah is a large loading dock on the Ohio River.
4. Reserves acquired for future development.
5. Reclamation phase of mine life during 2017.

Westmoreland Coal Company Form 10-K for 2017, page 8-10:

US mines	8,636	Sub-bituminous
	3,566	Sub-bituminous
	273	Lignite
	5,327	Sub-bituminous
	432	Lignite
	609	Bituminous
Canadian Prodn 2017	1,350	Sub-bituminous
	5,560	Sub-bituminous
	3,499	Sub-bituminous
	2,168	Bituminous
	3,587	Lignite
	6,248	Lignite
WMLP prodn 2017	1,573	Bituminous
	211	Bituminous
	400	Bituminous
	228	Bituminous
	6	Bituminous
	4,224	Sub-bituminous
	47,897	Total

see forms at left

	Lignite	Sub-bituminous	Bituminous	Total
	10,540	32,162	5,195	47,897
	22.0%	67.1%	10.8%	100%

	Coal - U.S.	Coal - Canada	Coal - WMLP ³	Total
(In thousands of tons)				
Coal reserves ¹ :				
Proven	316,330	274,159	108,786	699,275
Probable	1,562	19,575	11,730	32,867
Total proven and probable reserves ²	317,892	293,734	120,516	732,142
Permitted reserves	161,846	241,966	62,597	466,409
Current year production	18,843	22,462	6,642	47,947

Westmoreland Coal Company Form 10-K for 2017, page 7:

	Three Months Ended September 30,	
	2018	2017
(In thousands, exc)		
Revenues	\$ 328,890	\$ 365,014
Operating (loss) income	\$ (7,368)	\$ 24,981
Net loss applicable to common shareholders	\$ (40,540)	\$ (12,397)
Adjusted EBITDA ⁽¹⁾	\$ 40,811	\$ 69,587
Tons sold—millions of equivalent tons	11.2	13.6

Westmoreland

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: B17

Comment: Rick Heede:

Westmoreland Coal website "Our Legacy;" 1854: "The Company is formally organized to mine coal in the Irwin Basin of Westmoreland County, Pennsylvania. The business of the Company centers on the gas coal market. The Larimer #1 mine opens shipping 56,223 tons and earning 8% on its initial investment."
www.westmoreland.com/about-us/our-legacy

Cell: B19

Comment: Rick Heede:

"Westmoreland contributes indirectly to the growth of the American gaslight industry by furnishing coal to 22 gas companies. By 1861, it is supplying 69 gasworks from Maine to Georgia. Production swells from 90,000 tons to 280,000 tons in 1869. The Pennsylvania Railroad to Philadelphia and Baltimore ships all of the Company's coal."

Cell: B76

Comment: Rick Heede:

1913: "The Company's peak production of 4.8 million tons rapidly depletes the Irwin Basin and electricity, natural gas, and petroleum products destroy the gaslight market."

Cell: H94

Comment: Rick Heede:

As a conservatism, CMS has assumed that Westmoreland coal production declined from 4.8 million tons (company data) in 1913 to the depression year 1931, and rose gradually to 8.4 million tons in 1968 (equal to Keystone Coal Industry Manual estimate for 1971, though Keystone estimated production in 1969 and 1970 at over 11 million tons). The resulting total production from the company's founding in 1854 to 2010 is likely conservative. See text box for details.

Cell: B127

Comment: Rick Heede:

1964: "The old Westmoreland Coal Company is merged into the Stonega Coke and Coal Company, but is re-titled the Westmoreland Coal Company to retain the name that was then the oldest in the industry. Virginia Coal and Iron Company absorbs Westmoreland Inc., which later becomes Penn Virginia Corporation, a land, mineral rights, and investment company."

Cell: B133

Comment: Rick Heede:

1970: "Westmoreland Resources, Inc. is formed to mine coal in Montana on the Crow Tribe land in Big Horn County, Montana."

Cell: G137

Comment: Rick Heede:

1974 and 1975 production data from keystone Coal Industry Manual for 1976, p. 520.

Cell: B139

Comment: Rick Heede:

1976: "Colorado Westmoreland, Inc., is incorporated to mine steam coal in the Grand Mesa coalfields near Paonia, Colorado to begin development of its Orchard Valley Mine."

Cell: G150

Comment: Rick Heede:

Production data for 1987-1994 from Westmoreland Coal Company Annual reports.

Cell: G155

Comment: Rick Heede:

Westmoreland Annual Rpt 2001, chart on page 6. There is conflicting data in its various annual reports, perhaps between "company produced tons sold" (as in this column chart) and other reports that list coal production by mine.

CMS will use this data in our column "G", even though Westmoreland's coal production may have been substantially higher in some years than reported here.

Cell: M155

Comment: Rick Heede:

Westmoreland Annual Rpt 2001, chart on page 6. There is conflicting data in its various annual reports, perhaps between "company produced tons sold" (as in this column chart) and other reports that list coal production by mine.

CMS will use this data in our column "G", even though Westmoreland's coal production may have been substantially higher in some years than reported here.

Cell: D157

Comment: Rick Heede:

One of Westmoreland's acquired properties in Saskatchewan and Alberta in April 2013.

Cell: B158

Comment: Rick Heede:

Westmore history, Modern Era: "Mid-1990s: Company divests of Eastern operations and moves to Colorado."

Cell: G163

Comment: Rick Heede:

Westmoreland Annual Rpt 2000, p. 15: 26.57 million tons, of which 15.3 Mt has heating values 8,500-8,700 Btu/lb

Cell: M163

Comment: Rick Heede:

Coal production in 2000 reported as 4.9 million tons in 2004 annual report (p. 13) but as 26.57 Mt in the 2000 annual report (p. 15).

Cell: G164

Comment: Rick Heede:

Coal production 2001-2004 from Westmoreland (2005) Annual Report, pp. 11 and 13.

Cell: M164

Comment: Rick Heede:

Coal production 2001-2004 from Westmoreland (2005) Annual Report, pp. 11 and 13.

Cell: B167

Comment: Rick Heede:

Westmoreland history, Modern Era: "Westmoreland celebrates its 150th anniversary. It has become the 10th largest coal producer in the U.S., mining over 27 million tons in 2003."

Cell: G167

Comment: Rick Heede:

Note: Based on 2004 production by coal mine and coal type, we allocate total production for 2000-2004 on the basis of 34.2 percent lignite (6,400-7,000 Btu/lb) production (TX and MT) and 65.8 percent to subbituminous (8,500-8,700 Btu/lb) thermal coal.

Cell: M168

Comment: Rick Heede:

Westmoreland SEC Form 10-K for 2005, page 6.

Cell: M169

Westmoreland

Comment: Rick Heede:

Westmoreland SEC Form 10-K for 2008, page 4: coal sales (chiefly to power plants and sugar mills).

Cell: D171

Comment: Rick Heede (Feb10):

Form 10-K for 2008, page 21: 9.90 million tons of lignite, 6,590 to 7,000 Btu/lb (Jewett Mine in TX, Beulah Mine in ND, and Savage Mine in MT).

Cell: G171

Comment: Rick Heede (Feb10):

Form 10-K for 2008, page 21: 19.22 million tons of sub-bituminous (8,530 to 8,690 Btu/lb) coal produced (Absaloka Mine in MT, and Rosebud Mine in MT).

Cell: D172

Comment: Rick Heede:

Form 10-K pdf report pg 5, tons sold, sum of Savage, Jewett, and Beulah mines, sum for 2008 is 7.4, not 9.9

Cell: G172

Comment: Rick Heede:

Form 10-K pdf report pg 5; tons sold from Rosebud and Absaloka mines; note same sum for 2008 is 17.7, not 19.22

Cell: J172

Comment: Rick Heede:

Form 10-K 2011 pdf report pg 33, tons sold, no differentiation as to type

Cell: J176

Comment: Rick Heede:

Westmoreland Coal Form 10-K for 2013. Page 62-64: "Tons Sold" in 2013 for US + Canada + WMPL Segment operating results.

Cell: L176

Comment: Rick Heede:

"Englewood, CO – April 29, 2014 – Westmoreland Coal Company (NasdaqGM:WLB) has completed the acquisition of Sherritt International's Prairie and Mountain coal mining operations, which include seven producing thermal coal mines in the Canadian provinces of Alberta and Saskatchewan, a 50% interest in an activated carbon plant and a Char production facility. Together with Westmoreland's existing U.S. operations, the acquisition places the firm as North America's sixth largest coal producer."

CAI: research heat content: may be chiefly bituminous coal (>16,800 kJ

Cell: J177

Comment: Rick Heede:

Westmoreland Coal Form 10-K for 2015. "Tons Sold" in 2014 for US + Canada + WMPL Segment operating results.

Cell: J178

Comment: Rick Heede:

Westmoreland Coal Form 10-K for 2017, page 62-63. "Tons Sold" in 2015 for US + Canada + WMPL Segment operating results.

Cell: N178

Comment: Rick Heede:

Westmoreland Form 10-K for 2013, page 8: "We had an estimated 514.5 million tons of total proven or probable coal reserves as of December 31, 2013. Montana, Wyoming, Texas, and North Dakota each use a permitting process approved by the Office of Surface Mining."

Note: this excludes coal assets acquired in Canada from Sherritt.

Cell: J179

Comment: Rick Heede:

Westmoreland Coal Form 10-K for 2017, page 62-63. "Tons Sold" in 2016 for US + Canada + WMPL Segment operating results.

Cell: N179

Comment: Rick Heede:

Westmoreland 10-K for 2017, page 7. Coal reserves (proven): 699.275 million tons, Probable: 32.867.

Cell: J180

Comment: Rick Heede:

Westmoreland Coal Form 10-K for 2017, page 7. "Tons sold" in 2017 for US + Canada + WMPL Segment operating results.

Cell: D181

Comment: Rick Heede:

EIA Coal Report for 2018 Table 10; Westmoreland Mining: 14.846 Mt.

Cell: J181

Comment: Rick Heede:

Westmoreland voluntarily entered Chapter 11 in October 2018. the company did not file a 10-K for 2018, but did file a quarterly 10-Q in October. Results of Operations table, page 39, reports 3Q tons sold of 11.2 million short tons. CAI assumes that Q3 is representative of the first nine months of 2018, and that no coal was produced or sold in the Fourth Quarter: 3 times 11.2 Msht = 33.6 Msht.

Subject to revision with updated production or sales data.

Cell: G183

Comment: Rick Heede:

CMS has production data for 1854, 1856, 1859, 1913, and 1969 forward, and interpolates between known production dates. Westmoreland website states that cumulative production from inception through ~2008 totaled 857 million tons, and our total 1954-2008 totals 842 million tons, hence ~15 million tons low (which we do not adjust).

See the table reproduced above (note: this lists Rosebud's "current complex", but previous editions of the same table shows Rosebud opened in 1924 (e.g., AnnRpt 2000: Rosebud alone has produced 300 to 404 million tons, depending on which Westmoreland rpt is cited).

CMS methodology: subtract 0.2 million tons from the last documented production year in 1968, and repeat back to 1924.

Cell: E185

Comment: Rick Heede:

This number is based on lignite vs sub-bituminous coal production for 2000-2004 and 2008 and applied to 2005-2007.

Cell: M185

Comment: Rick Heede:

Heede, May18: the data in column J is "tons of coal sold". However, the data sum here is for production

Cell: Q294

Comment: Rick Heede:

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