

Weekly M2M—Base Metals, Met Coal, Steel, Critical Minerals, Rare Earths, Precious Metals

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Summary and Recommendation

LME aluminum prices surged 6.5% W/W, closing Friday (1/9) at \$3,180.0/mt, and the Midwest Premium also jumped 6.5% W/W to a record level of \$2,179.27/mt amid resumed demand after companies depleted their inventories at year-end. Alumina (PAX FOB Australia) bounced back after consecutive softness with a 2.0% increase W/W to \$310.0/mt. PLV benchmark prices climbed 1.4% W/W to \$221.0/mt (as of Friday's close; \$226.40/mt as of Monday's close) amid heavy rainfall from Cyclone Koji in Queensland, impacting key Australian coal terminal operations and rail service against the backdrop of already limited near-term cargo availability. U.S. met coal prices also gained W/W, with HVA and HVB prices up 2.3% to \$154.0/mt and 2.4% to \$147.70/mt, respectively. Newcastle prices inched higher by 0.6% W/W to \$107.30/mt. Indiana Hub pricing dropped another 13.3% W/W to \$39.78/MWh after last week's -19.3%. HRC achieved its highest levels since March 2025, closing at \$940.0/ton as of Friday (1/9), and we continue to believe Cleveland-Cliffs Inc. is poised to outperform, as discussed [here](#). IODEX pricing advanced by 2.8% W/W to \$108.50/mt. Tungsten prices achieved a new record, now priced at \$968.50/MTU (up 5.3% W/W), while antimony prices slipped 4.1% to \$19.96/lb.

Key Points

- **U.S. pushes allies to break China's critical mineral grip at G7 meeting.** Yesterday (1/12), U.S. officials held meetings with finance ministers from G7 nations, as well as Australia, India, Mexico, and South Korea, on rare earth supply chain security, pressing the allies to urgently reduce dependence on China. The officials discussed a possible rare earth price floor to ensure stable pricing amid market fluctuations, as well as potential partnerships to secure supplies. Before the meeting, Australia announced it would prioritize antimony, gallium, and rare earth elements for its \$802M strategic reserve. We believe this G7 meeting is just another validation of the importance of antimony and rare earth elements in modern supply chains and national security frameworks, signaling a strong political tailwind to companies in the critical mineral sector and Western REE value chain. Following the news, United States Antimony Corporation (UAMY — Buy, \$9 PT) and Ucore Rare Metals, Inc. (UURAF — Buy, \$9 PT) surged 12.0% and 6.1%, respectively, in Monday's trading session (compared to R2K's 0.4%). Energy Fuels (UUUU — Buy, \$22 PT) and Ramaco Resources (METC — Buy, \$50 PT) were also up 6.1% and 8.2%, respectively.
- **China imposes export control of dual-use items on Japan.** China announced immediate export restrictions on Japan last Tuesday (1/6) amid diplomatic tensions over Taiwan, targeting dual-use items that have both civilian and military applications. Although the official announcement lacks details, state-run China Daily reported that Beijing is specifically considering tightening export permit reviews for certain rare earth-related items destined for Japan. In our opinion, this incident further underscores the strategic vulnerability of nations dependent on a single source for rare earth elements.
- **HRC strength continues.** HRC prices climbed 1.1% W/W to \$940.0/ton as of Friday (1/9), the highest level since March 2025. According to AISI, domestic steel production climbed 2.8% W/W to 1.75M net tons in the week ending 1/10, and capacity utilization increased from 74.4% to 75.7%. Based on our 2026 assumptions, we estimate CLF is trading at a positive 2026 FCFE yield of 12.0% on our updated estimates.
- **LME up; MWP up; alumina up.** LME aluminum prices jumped 6.5% W/W to \$3,180.0/mt. In addition, Midwest premium surged 6.5% W/W to a record high of \$2,179.27/mt (98.85 cents/lb). The strength primarily came from the post-holiday buying interest after companies depleted their inventories at year-end to avoid tax liabilities. Besides the resumed demand, the market expects the momentum to continue with an anticipated tight supply through 1Q26 despite tariff uncertainties. European Premiums also increased by 3.8% since last week, closing Friday (1/9) at \$342.50/mt, amid ongoing supply chain disruptions. Alumina (PAX FOB Australia) ended its downtrend with a 2.0% increase W/W to \$310.0/mt. Sentiment is likely to remain cautious due to ongoing concerns about the surplus. We estimate Century Aluminum Company (CENX — Buy, \$37 PT) trades at a 23.0% 2026 FCFE yield at spot, and Alcoa Corporation (AA — Buy, \$44 PT) trades at a 9.0% 2026 FCFE yield.
- **Aussie PLV up; U.S. met coal up.** Benchmark PLV prices inched higher, up 1.4% W/W to \$221.0/mt amid heavy rainfall impacting Australian port operations and an already limited cargo availability. The situation worsened after GM3 declared force majeure on Illawarra coking coal due to issues at the Dendrobium longwall mine. **(Continued on the next page...)**

Analyst certification and important disclosures can be found on pages 16 - 19 of this report.

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Continued rainfall and production challenges are expected to keep the near-term supply under pressure. Across other coal grades, low-vol PCI (FOB Australia) also increased 1.4% W/W to \$148.50/mt, while Newcastle thermal slightly increased 0.7% to \$107.30/mt. Both HVA and HVB prices gained strength, up 2.3% to \$154.0/mt and 2.4% to \$147.70/mt, respectively. On our spot estimates, the met coal group continues to trade modestly above breakeven in 2026 on average.

- **SiM flat; FeSi flat.** Both U.S. and EU Silicon metal prices stayed flat W/W at \$3,196.70/mt and €1637.50/mt, respectively. Ferrosilicon prices show the same steadiness, closing Friday (1/9) at \$2,590.43/mt in the U.S. and €1,550.0/mt in the EU. Ferromanganese prices have held unchanged since last week at €1,050.0/mt, as well as silicomanganese prices at €1,140.0/mt as of Friday (1/9). Based on our estimates, Ferroglöbe PLC (GSM — Buy, \$6 PT) trades at a 9.0% FCFE yield in 2026.
- **Tungsten achieved new high; antimony down.** Tungsten prices jumped 5.3% W/W to a new high of \$968.50/MTU. However, antimony prices slipped by 4.1% to \$19.96/lb. Based on our estimates and current spot prices, Almonty Industries (ALM — Buy, \$10 PT) is trading at a 2026 FCFE yield of 4.0%, and United States Antimony Corporation (UAMY — Buy, \$9 PT) is trading modestly below 2026 FCFE breakeven.
- **Iron ore up.** IODEX pricing strengthened by 2.8% to \$108.50/mt at Friday's close (1/9). Champion Iron (CIA-CA — Buy, C\$7 PT) is trading at 5.0% CY26 FCFE yield at current spot prices.
- **Power down.** Indiana Hub pricing followed last week's weakness (down 19.3% W/W), dropping another 13.3% to \$39.78/MWh on Friday's close (1/9). On our estimates, Hallador Energy (HNRG — Neutral, \$23 PT) trades at 2026 FCFE breakeven at spot.
- **Gold up; copper up; silver up.** Gold price advanced by 4.0% W/W to \$4,500.90/oz. Copper prices climbed 3.9% W/W, closing at \$13,060.0/mt on Friday (1/9). Silver prices jumped 5.3% W/W to \$78.14/oz. Seabridge Gold (SA — Buy, \$65 PT) currently trades at a P/NAV ratio of 0.15x. At spot, Perpetua Resources Corp. (PPTA — Buy, \$30 PT) currently trades at a P/NAV ratio of 0.54x, and NOVAGOLD Resources, Inc. (NG — Buy, \$11 PT) currently trades at a P/NAV ratio of 0.34x on our estimates.

Weekly Mark to Market Update: EBITDA Estimate – January 12, 2026

Name	Ticker	Stock Price	Change WoW (%)	Market Cap (\$M)	Enterprise Value (\$M)	2026 EBITDA @ Spot	Change WoW (%)	2027 EBITDA @ Spot	Change WoW (%)
Coal									
Core Natural Resources	CNR	97.75	11%	5,148	5,072	483	5%	448	5%
Alpha Metallurgical Resources	AMR	246.09	22%	3,211	2,768	199	13%	224	17%
Hallador Energy Company	HNRG	20.29	5%	882	901	56	-20%	62	-32%
Peabody Energy Corporation	BTU	34.15	12%	4,110	3,816	773	2%	815	2%
Ramaco Resources, Inc.	METC	22.05	11%	1,265	1,346	75	17%	72	19%
Warrior Met Coal, Inc.	HCC	100.20	11%	5,257	4,941	532	6%	600	6%
Steel Facing									
Champion Iron, Ltd*	CIA-CA	5.90	-1%	3,111	3,793	628	4%	858	6%
Cleveland-Cliffs, Inc.	CLF	12.91	-2%	7,355	14,899	2,149	9%	2,988	7%
SunCoke Energy, Inc.	SXC	8.00	6%	678	980	209	0%	209	0%
Aluminum/Silicon									
Alcoa Corporation	AA	65.67	7%	17,074	18,394	3,361	25%	3,483	23%
Century Aluminum Company	CENX	47.01	7%	4,663	5,146	1,244	6%	1,432	6%
Ferroglobe PLC	GSM	5.00	3%	935	972	142	0%	214	0%
Name	Ticker	Stock Price	Change WoW (%)	Market Cap (\$M)	Enterprise Value (\$M)	2026 EBITDA @ Spot	Change WoW (%)	2027 EBITDA @ Spot	Change WoW (%)
Critical materials									
Almonty Industries Inc.	ALM	9.09	-5%	2,191	2,342	144	8%	375	6%
United States Antimony Corporation	UAMY	8.57	25%	1,071	1,054	24	-15%	50	-12%
Name	Ticker	Stock Price	Change WoW (%)	Market Cap (\$M)	Enterprise Value (\$M)	NAV @ Spot	Change WoW (%)		
Precious Metals									
Endeavour Silver	EXK	11.17	14%	2,930	2,987	3,047	7%		
NOVAGOLD Resources, Inc.	NG	10.25	6%	3,430	3,493	10,083	6%		
Seabridge Gold	SA	31.20	1%	2,996	3,270	20,556	5%		
International Tower Hill Mines Ltd	THM	2.34	22%	474	470	489	0%		
Perpetua Resources	PPTA	31.05	18%	3,335	3,316	6,137	6%		
Name	Ticker	Stock Price	Change WoW (%)	Market Cap (\$M)	Enterprise Value (\$M)	2026 EBITDA @ Spot	Change WoW (%)	2027 EBITDA @ Spot	Change WoW (%)
Uranium									
Energy Fuels Inc	UUUU	19.26	-9%	3,758	3,587	13	10%	48	3%
enCore Energy Corp	EU	2.98	-15%	542	486	(5)	N/A	9	8%
Ur-Energy Inc.	URG	1.69	-4%	617	556	14	0%	63	1%

*CIA in \$CAD; ** THM not covered; ***CIA EBITDA and FCFE represent FY26 & FY27 figures

Sources: Company filings and B. Riley Securities Research

Weekly Mark to Market Update: FCFE Estimate – January 12, 2026

Name	Ticker	2026 FCFE @ Spot	Change WoW (%)	2027 FCFE @ Spot	Change WoW (%)	2026 EV/EBITDA @ Spot	2026 FCFE Yield (%) @ Spot	2027 EV/EBITDA @ Spot	2027 FCFE Yield (%) @ Spot
Coal									
Core Natural Resources	CNR	228	8%	145	14%	10.5	4%	11.3	3%
Alpha Metallurgical Resources	AMR	8	N/A	(2)	N/A	13.9	0%	12.3	0%
Hallador Energy Company	HNRG	(3)	N/A	(13)	N/A	16.1	0%	14.5	-1%
Peabody Energy Corporation	BTU	345	4%	470	3%	4.9	8%	4.7	11%
Ramaco Resources, Inc.	METC	2	N/A	6	N/A	17.9	0%	N/A	1%
Warrior Met Coal, Inc.	HCC	254	13%	415	8%	9.3	5%	8.2	8%
Steel Facing									
Champion Iron, Ltd*	CIA-CA	146	22%	466	12%	6.0	5%	4.4	15%
Cleveland-Cliffs, Inc.	CLF	892	N/A	1,274	N/A	6.9	12%	5.0	17%
SunCoke Energy, Inc.	SXC	134	0%	123	0%	4.7	20%	4.7	18%
Aluminum/Silicon									
Alcoa Corporation	AA	1,553	38%	1,864	33%	5.5	9%	5.3	11%
Century Aluminum Company	CENX	1,067	4%	1,263	7%	4.1	23%	3.6	27%
Ferroglobe PLC	GSM	83	0%	61	0%	6.9	9%	4.5	7%
Name	Ticker	2026 FCFE @ Spot	Change WoW (%)	2027 FCFE @ Spot	Change WoW (%)	2026 EV/EBITDA @ Spot	2026 FCFE Yield (%) @ Spot	2027 EV/EBITDA @ Spot	2027 FCFE Yield (%) @ Spot
Critical materials									
Almonty Industries Inc.	ALM	79	14%	346	6%	16.2	4%	6.2	16%
United States Antimony Corporation	UAMY	(14)	N/A	11	-37%	44.8	-1%	21.2	1%
Name	Ticker	2026 FCFE @ Spot	Change WoW (%)	2026 EBITDA @ Spot	Change WoW (%)	P/NAV @ Spot	FCFE Yield (%) @ Spot	2026 EV/EBITDA @ Spot	
Precious Metals									
Endeavour Silver	EXK	44	26%			0.96	1%		
NOVAGOLD Resources, Inc.	NG	-	0%			0.34	-		
Seabridge Gold	SA	-	0%			0.15	-		
International Tower Hill Mines Ltd	THM	-	0%			0.97	-		
Perpetua Resources	PPTA	-	0%			0.54	-		
Name	Ticker	2026 FCFE @ Spot	Change WoW (%)	2027 FCFE @ Spot	Change WoW (%)	2026 EV/EBITDA @ Spot	2026 FCFE Yield (%) @ Spot	2027 EV/EBITDA @ Spot	2027 FCFE Yield (%) @ Spot
Uranium									
Energy Fuels Inc	UUUU	5	N/A	(8)	N/A	N/A	0%	N/A	
enCore Energy Corp	EU	(14)	N/A	(67)	N/A	N/A	-3%	N/A	
Ur-Energy Inc.	URG	13	0%	39	1%	N/A	2%	N/A	

*CIA in \$CAD; ** THM not covered; ***CIA EBITDA and FCFE represent FY26 & FY27 figures

Sources: Company filings and B. Riley Securities Research

Weekly Mark to Market Update: Underlying Commodity Drivers – January 12, 2026

Name	Ticker	Stock Price	Change WoW (%)	Primary Driver	Price	Change WoW (%)	Secondary Driver	Price	Change WoW (%)	Other Drivers	Price	Change WoW (%)
Coal												
Core Natural Resources	CNR	97.75	11%	API2	96.48	0.0%	USEC HVA	154	2.3%	NAPP	64.00	3.2%
Alpha Metallurgical Resources	AMR	246.09	22%	USEC HVA	154	2.3%	PLV	221	1.4%	China HRC	470	0.0%
Hallador Energy Company	HNRG	20.29	5%	Indy Hub	39.78	-13.3%	ILB	52.50	0.0%	Natural Gas	3.17	-12.8%
Peabody Energy Corporation	BTU	34.15	12%	NEWC	107.30	0.7%	PLV	221	1.4%	Natural Gas	3.17	-12.8%
Ramaco Resources, Inc.	METC	22.05	11%	USEC HVA	154	2.3%	PLV	221	1.4%	China HRC	470	0.0%
Warrior Met Coal, Inc.	HCC	100.20	11%	PLV	221	1.4%	USEC LV	185	0.0%	China HRC	470	0.0%
Steel Facing												
Champion Iron, Ltd*	CIA-CA	5.90	-1%	IODEX	109	2.8%	P65	124	2.3%	China HRC	470	0.0%
Cleveland-Cliffs Inc.	CLF	12.91	-2%	U.S. HRC	940	1.1%	Scrap	420	7.7%	IODEX	109	2.8%
SunCoke Energy, Inc.	SXC	8.00	6%	U.S. HRC	940	1.1%	API2	96.48	0.0%	Scrap	420	7.7%
Aluminum/Silicon												
Alcoa Corporation	AA	65.67	7%	Aluminum	3,180	6.5%	Alumina	310	2.0%	US MW Premium	2,179	6.5%
Century Aluminum Company	CENX	47.01	7%	Aluminum	3,180	6.5%	Alumina	310	2.0%	US MW Premium	2,179	6.5%
Ferroglobe PLC	GSM	5.00	3%	Si Metal US	3,197	0.0%	Si Metal Europe	1,867	0.0%	Ferrosilicon US	2,590	0.0%
Name	Ticker	Stock Price	Change WoW (%)	Primary Driver	Price	Change WoW (%)	Secondary Driver	Price	Change WoW (%)	Other Drivers	Price	Change WoW (%)
Critical materials												
Almonty Industries Inc.	ALM	9.09	-5%	Tungsten	-	5.3%	Molybdenum	-	3.2%			
United States Antimony Corporation	UAMY	8.57	25%	Antimony	-	-4.1%						
Precious Metals												
Endeavour Silver	EXK	11.17	14%	Silver	78.14	5.3%	Gold	4,501	4.0%			
NOVAGOLD Resources, Inc.	NG	10.25	6%	Gold	4,501	4.0%	Silver	78.14	5.3%			
Seabridge Gold	SA	31.20	1%	Gold	4,501	4.0%	Silver	78.14	5.3%			
International Tower Hill Mines Ltd	THM	2.34	22%	Gold	4,501	4.0%						
Perpetua Resources	PPTA	31.05	18%	Gold	4,501	4.0%	Silver	78.14	5.3%			
Uranium												
Energy Fuels Inc	UUUU	19.26	-9%	Uranium	82.65	1.0%						
enCore Energy Corp	EU	2.98	-15%	Uranium	82.65	1.0%						
Ur-Energy Inc.	URG	1.69	-4%	Uranium	82.65	1.0%						

*CIA in \$CAD; ** THM not covered; ***CIA EBITDA and FCFE represent FY26 & FY27 figures

Note: commodity prices are as of 1/9/25.

Sources: Company filings and B. Riley Securities Research

Coal Comp Table

*Note that all comp table EBITDA estimates represent B. Riley Securities estimates and are not at market-to-market spot commodity prices

	Ticker	Market Price	Rating	Price Target	Est. Upside	Div./Dist. Yield	Market Cap (\$ M)	Total Debt (\$ M)	Cash & Equiv. (\$ M)	EV (\$ M)
Peabody Energy	BTU	\$ 34.15	Buy	\$ 38.00	11%	0.9%	4,156	408	603	3,960
Core Natural Resources	CNR	\$ 97.75	Buy	\$ 119.00	22%	0.4%	5,031	418	487	4,963
Alpha Metallurgical Resources	AMR	\$ 246.09	Buy	\$ 204.00	(17%)	0.0%	3,203	5	458	2,750
Hallador Energy	HNRG	\$ 20.29	Neutral	\$ 23.00	13%	0.0%	889	53	35	907
Ramaco Resources	METC	\$ 22.05	Buy	\$ 50.00	127%	0.0%	1,217	136	195	1,158
Warrior Met Coal	HCC	\$ 100.20	Buy	\$ 100.00	(0%)	0.3%	5,276	237	393	5,120
Valuation Drivers	WACC	Terminal Growth	2023 Multiple	2023 EBITDA (\$ M)	2024 Multiple	2024 EBITDA (\$ M)	Terminal Multiple	Terminal EBITDA (\$ M)	Net Debt (\$ M, 2024)	Shares Out. (M)
Peabody Energy	10.0%	(0.5%)	3.2	1,348	5.0	872	4.1	1,050	(352)	122
Core Natural Resources	10.0%	0.0%	N/A	N/A	N/A	N/A	6.3	1,108	(110)	51
Alpha Metallurgical Resources	10.0%	0.0%	2.1	1,033	5.3	408	2.8	778	(476)	13
Hallador Energy	10.0%	0.0%	9.5	107	61.1	17	4.8	213	29	44
Ramaco Resources	10.0%	0.0%	4.3	182	7.4	106	4.3	180	(69)	55
Warrior Met Coal	10.0%	0.0%	7.0	699	11.0	448	4.6	1,072	(338)	53
B Riley Securities EBITDA (\$ M)					Consensus EBITDA (\$ M)					
	2023A	2024A	2025E	2026E	2027E	2023A	2024A	2025E	2026E	2027E
Peabody Energy	1,348	872	452	894	1,050	1,364	872	471	929	981
EV/EBITDA	2.9	4.5	8.8	4.4	3.8	2.9	4.5	8.4	4.3	4.0
Net Debt/EBITDA (end of 2022)	(0.3)	(0.4)	(0.8)	(0.4)	(0.3)	(0.3)	(0.4)	(0.7)	(0.4)	(0.4)
Core Natural Resources	N/A	N/A	536	928	1,108	N/A	N/A	542	1,013	1,079
EV/EBITDA	N/A	N/A	9.3	5.4	4.5	N/A	N/A	9.2	4.9	4.6
Net Debt/EBITDA (end of 2022)	N/A	N/A	(0.2)	(0.1)	(0.1)	N/A	N/A	(0.2)	(0.1)	(0.1)
Alpha Metallurgical Resources	1,033	408	142	456	778	1,033	408	138	394	466
EV/EBITDA	2.7	6.7	19.4	6.0	3.5	2.7	6.7	19.9	7.0	5.9
Net Debt/EBITDA (end of 2022)	(0.5)	(1.2)	(3.3)	(1.0)	(0.6)	(0.5)	(1.2)	(3.5)	(1.2)	(1.0)
Hallador Energy	107	17	38	86	126	107	17	38	86	126
EV/EBITDA	8.4	54.1	24.0	10.5	7.2	46.2	54.1	24.0	10.5	7.2
Net Debt/EBITDA (end of 2022)	0.3	1.8	0.8	0.3	0.2	(1.0)	1.8	0.8	0.3	0.2
Ramaco Resources	182	106	29	170	240	182	106	33	109	141
EV/EBITDA	6.4	11.0	39.4	6.8	4.8	6.4	11.0	34.9	10.6	8.2
Net Debt/EBITDA (end of 2021)	(0.4)	(0.7)	(2.4)	(0.4)	(0.3)	(0.4)	(0.7)	(2.1)	(0.6)	(0.5)
Warrior Met Coal	699	448	241	820	1,072	699	448	248	623	742
EV/EBITDA	7.3	11.4	21.3	6.2	4.8	7.3	11.4	20.6	8.2	6.9
Net Debt/EBITDA (end of 2022)	(0.5)	(0.8)	(1.4)	(0.4)	(0.3)	(0.5)	(0.8)	(1.4)	(0.5)	(0.5)
EV/EBITDA	5.0	11.3	16.4	5.8	4.4	7.6	11.3	16.0	6.6	5.6
Net Debt/EBITDA	(0.3)	(0.3)	(1.1)	(0.3)	(0.2)	(0.5)	(0.2)	(1.2)	(0.4)	(0.4)
FCFF (\$ M) Est.					FCFF Yield (end of 2021 Balance Sheet)					
	2023A	2024A	2025E	2026E	2027E	2023A	2024A	2025E	2026E	2027E
Peabody Energy	1,994	2,225	182	(118)	434	52%	59%	5%	(3%)	11%
Core Natural Resources	N/A	N/A	N/A	8	548	N/A	N/A	N/A	0%	11%
Alpha Metallurgical Resources	1,330	550	326	(9)	182	49%	20%	12%	(0%)	7%
Hallador Energy	(17)	37	(22)	39	25	(2%)	4%	(2%)	4%	3%
Ramaco Resources	55	108	33	(28)	96	5%	9%	3%	(2%)	8%
Warrior Met Coal	728	75	16	(181)	532	15%	2%	0%	(4%)	11%
FCFE (\$ M) Est.					FCFE Yield					
	2023A	2024A	2025E	2026E	2027E	2023A	2024A	2025E	2026E	2027E
Peabody Energy	1,853	2,166	207	(105)	442	45%	52%	5%	(3%)	11%
Core Natural Resources	N/A	N/A	N/A	(4)	537	N/A	N/A	N/A	(0%)	11%
Alpha Metallurgical Resources	1,309	543	322	(12)	178	41%	17%	10%	(0%)	6%
Hallador Energy	(26)	26	(35)	26	22	(3%)	3%	(4%)	3%	2%
Ramaco Resources	48	99	26	(39)	84	4%	8%	2%	(3%)	7%
Warrior Met Coal	709	98	45	(174)	520	13%	2%	1%	(3%)	10%

Source: B. Riley Securities Research

Steel Facing Comp

	Ticker	Market Price	Rating	Price Target	Est. Capital Upside	Div./Dist. Yield	Market Cap (\$ M)	Total Debt (\$ M)	Cash & Equiv. (\$ M)	EV (\$ M)
Cleveland-Cliffs	CLF	\$ 12.91	Buy	\$ 17.00	32%	0%	7,355	8,039	66	15,328
SunCoke Energy	SXC	\$ 8.00	Neutral	\$ 10.00	25%	3%	674	709	80	1,302
Champion Iron**	CIA-CA	\$ 5.90	Buy	\$ 7.00	19%	3%	3,201	1,087	326	3,963
Nucor Corp*	NUE	\$ 163.77	NA	NA	NA	1%	37,480	6,853	2,745	41,588
Steel Dynamics*	STLD	\$ 169.27	NA	NA	NA	1%	24,719	3,782	770	27,731
Algoma Steel Group Inc.**	ASTL-CA	\$ 6.09	NA	NA	NA	0%	619	744	5	1,359
*Not Covered										
**IN CAD\$										
Valuation Drivers	WACC	Terminal Growth	2023 Multiple	2023 EBITDA (\$ M)	2024 Multiple	2024 EBITDA (\$ M)	Terminal Multiple	Terminal EBITDA (\$ M)	Net Debt (\$ M, est.)	Shares Out. (M)
Champion Iron	9.5%	0.0%	8.9	492	8.0	553	5.7	765	590	535
Cleveland-Cliffs	0.0%	0.0%	8.9	1,911	21.7	780	5.5	3,093	7,097	570
SunCoke Energy	10.0%	0.0%	3.8	269	3.8	273	5.0	208	451	85
B Riley Securities EBITDA (\$ M)						Consensus EBITDA (\$ M)				
	2022A	2023A	2024A	2025E	2026E	2022A	2023A	2024A	2025E	2026E
Cleveland-Cliffs	3,156	1,911	780	53	1,750	3,156	1,906	739	124	1,497
EV/EBITDA	4.9	8.0	19.7	290.7	8.8	4.9	8.0	20.7	123.9	10.2
Net Debt/EBITDA (2020 End)	2.2	3.7	9.1	134.6	4.1	2.2	3.7	9.6	57.4	4.7
SunCoke Energy	206	269	273	236	209	298	269	273	223	242
EV/EBITDA	6.3	4.8	4.8	5.5	6.2	4.4	4.8	4.8	5.8	5.4
Net Debt/EBITDA	2.2	1.7	1.7	1.9	2.2	1.5	1.7	1.7	2.0	1.9
Champion Iron	917	492	553	469	574	556	553	471	548	652
EV/EBITDA	4.3	8.1	7.2	8.4	6.9	7.1	7.2	8.4	7.2	6.1
Net Debt/EBITDA	0.6	1.2	1.1	1.3	1.0	-	-	-	-	-
Nucor Corp*	NA	NA	NA	NA	NA	11,408	7,369	4,243	4,066	5,483
EV/EBITDA						3.6	5.6	9.8	10.2	7.6
Net Debt/EBITDA						0.4	0.6	1.0	1.0	0.7
Steel Dynamics*	NA	NA	NA	NA	NA	5,770	3,659	2,480	2,167	3,197
EV/EBITDA						4.8	7.6	11.2	12.8	8.7
Net Debt/EBITDA						0.5	0.8	1.2	1.4	0.9
Weighted-Average EV/EBITDA	4.8	7.8	16.3	218.4	8.2	5.3	7.2	13.2	30.4	8.9
Weighted-Avg Net Debt/EBITDA	1.9	3.1	7.1	100.6	3.4	0.8	1.2	3.0	10.5	1.4
*Not Covered										

Source: B. Riley Securities Research

Aluminum Comp Table

	Ticker	Market Price	Rating	Price Target	Est. Capital Upside	Div./Dist. Yield	Market Cap (\$ M)	Total Debt (\$ M)	Cash & Equiv. (\$ M)	EV (\$ M)
Alcoa Corporation	AA	\$ 65.67	Buy	\$ 44.00	(33%)	0.6%	17,098	2,578	1,618	19,999
Century Aluminum Company	CENX	\$ 47.01	Buy	\$ 37.00	(21%)	0.0%	4,663	619	153	5,129
Ferroglobe PLC	GSM	\$ 5.00	Buy	\$ 6.00	20%	1.1%	947	89	121	915
Constellium SE Class A	CSTM	\$ 20.84	NA	NA	NA	0.0%	2,872	2,030	141	4,761
Kaiser Aluminum Corporation	KALU	\$ 123.07	NA	NA	NA	2.5%	1,995	1,089	18	3,065
Norsk Hydro ASA	NHY-NO	\$ 8.11	NA	NA	NA	2.8%	16,007	3,442	1,834	17,615
Hindalco Industries Limited	500440-IN	\$ 10.00	NA	NA	NA	0.6%	22,470	7,280	2,371	27,379

No rating = Not Covered by B. Riley Securities

Valuation Drivers	WACC	Terminal Growth	2023 Multiple	2023 EBITDA (\$ M)	2024 Multiple	2024 EBITDA (\$ M)	Terminal Multiple	Terminal EBITDA (\$ M)	Net Debt (\$ M, est.)	Shares Out. (M)
Alcoa Corporation*	8.8%	0.0%	20.5	563	5.8	1,995	5.4	2,140	1,407	260
Century Aluminum Company	11.0%	0.0%	11.1	120	5.4	245	10.6	614	466	99
Ferroglobe PLC	10.0%	0.0%	3.5	315	7.2	154	5.7	197	(49)	189

*EBITDA is on a Attributable basis

	B Riley Securities EBITDA (\$ M)					Consensus EBITDA (\$ M)				
	2022A	2023A	2024A	2025E	2026E	2022A	2023A	2024A	2025E	2026E
Alcoa Corporation* (Attributable)	2,224	563	1,995	2,309	2,422	2,224	536	1,589	1,905	2,283
EV/EBITDA	9.0	35.5	10.0	8.7	8.3	9.0	37.3	12.6	10.5	8.8
Net Debt/EBITDA	0.6	2.5	0.7	0.6	0.6	0.6	2.6	0.9	0.7	0.6
Century Aluminum Company	144	120	245	428	660	144	120	245	427	714
EV/EBITDA	35.7	42.8	20.9	12.0	7.8	35.7	42.7	20.9	12.0	7.2
Net Debt/EBITDA	3.2	3.9	1.9	1.1	0.7	3.2	3.9	1.9	1.1	0.7
Ferroglobe PLC	860	315	154	14	122	860	315	154	17	113
EV/EBITDA	1.1	2.9	5.9	63.2	7.5	1.1	2.9	5.9	52.7	8.1
Net Debt/EBITDA	(0.1)	(0.2)	(0.3)	(3.4)	(0.4)	(0.1)	(0.2)	(0.3)	(2.8)	(0.4)
Constellium SE Class A	NA	NA	NA	NA	NA	715	770	623	695	731
EV/EBITDA						6.7	6.2	7.6	6.9	6.5
Net Debt/EBITDA						2.6	2.5	3.0	2.7	2.6
Kaiser Aluminum Corporation	NA	NA	NA	NA	NA	111	210	217	296	333
EV/EBITDA						27.6	14.6	14.2	10.4	9.2
Net Debt/EBITDA						9.6	5.1	4.9	3.6	3.2
Norsk Hydro ASA	NA	NA	NA	NA	NA	3,895	2,211	2,627	2,888	3,001
EV/EBITDA						4.5	8.0	6.7	6.1	5.9
Net Debt/EBITDA						0.4	0.7	0.6	0.6	0.5
Hindalco Industries Limited	NA	NA	NA	NA	NA	2,358	2,666	3,584	3,771	4,235
EV/EBITDA						11.6	10.3	7.6	7.3	6.5
Net Debt/EBITDA						2.1	1.8	1.4	1.3	1.2
Weighted-Average EV/EBITDA	14.0	35.8	12.0	11.2	8.1	11.1	18.6	9.8	8.8	7.1
Weighted-Avg Net Debt/EBITDA	1.1	2.7	0.9	0.6	0.6	2.1	2.4	1.5	1.3	1.1

*EBITDA is on an Attributable basis

Source: B. Riley Securities Research

Precious Metal Comp Table

	Ticker	Market Price	Rating	Price Target	Est. Capital Upside	Div. Yield	Market Cap (\$ M)	Total Debt (\$ M)	Cash & Equiv. (\$ M)	EV (\$ M)
Seabridge Gold Inc	SA	\$ 31.20	Buy	\$ 65.00	108%	0.0%	3,240	420	80	3,580
Endeavour Silver Corp.	EKK	\$ 11.17	Buy	\$ 11.00	(2%)	0.0%	35,311	159	58	35,412
Novagold Resources Inc	NG	\$ 10.25	Buy	\$ 11.00	7%	0.0%	4,171	163	125	4,209
International Tower Hill Mines Ltd.	THM	\$ 2.34	NA	NA	NA	0.0%	552	-	2	550
Newmont Corporation	NEM	\$ 112.96	NA	NA	NA	0.9%	118,937	9,091	3,641	124,387
Gold.com, Inc.	GOLD	\$ 42.83	NA	NA	NA	2.1%	961	907	78	1,790
Perpetua Resources	PPTA	\$ 31.05	Buy	\$ 30.00	(3%)	0.0%	115,633	0	19	115,614
No rating = Not Covered by B. Riley Securities										
Valuation Drivers	Discount Rate/WACC	Price/NAV	2023 Multiple	2023 EBITDA (\$ M)	2024 Multiple	2024 EBITDA (\$ M)	Terminal Multiple	Terminal EBITDA (\$ M)	Net Debt (\$ M, est.)	Shares Out. (M)
Seabridge Gold Inc	7.00%	0.48	-	-	-	-	-	-	480	104
Endeavour Silver Corp.	0.00%	1.77	-	13	-	14	-	10	(3,248)	3,161
Novagold Resources Inc	7.00%	14.40	-	-	-	-	-	-	(131)	407
Perpetua Resources	0.00%	1.20	-	-	-	-	-	-	3,119	0
B Riley Securities EBITDA (\$ M)					Consensus EBITDA (\$ M)					
	2022A	2023A	2024A	2025E	2026E	2022A	2023A	2024A	2025E	2026E
Seabridge Gold Inc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EV/EBITDA	-	-	-	-	-	-	-	-	-	-
Endeavour Silver Corp.	11	13	14	25	26	56	50	36	68	376
EV/EBITDA	3,163.7	2,767.0	2,497.8	1,419.0	1,354.3	633.9	703.1	974.9	521.1	94.3
Novagold Resources Inc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EV/EBITDA	-	-	-	-	-	-	-	-	-	-
International Tower Hill Mines Ltd.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EV/EBITDA	-	-	-	-	-	-	-	-	-	-
Newmont Corporation	NA	NA	NA	NA	NA	4,550	3,216	8,287	13,343	16,625
EV/EBITDA	-	-	-	-	-	27.3	38.7	15.0	9.3	7.5
Gold.com, Inc.	NA	NA	NA	NA	NA	187	225	104	64	97
EV/EBITDA	-	-	-	-	-	9.6	8.0	17.2	27.8	18.4
Perpetua Resources	-	-	-	-	-	-	-	-	-	-
EV/EBITDA	-	-	-	-	-	-	-	-	-	-

Source: B. Riley Securities Research

Titanium Comp Table

	Ticker	Market Price	Rating	Price Target	Est. Capital Upside	Div./Dist. Yield	Market Cap (\$ M)	Total Debt (\$ M)	Cash & Equiv. (\$ M)	EV (\$ M)
IperionX Limited	IPX	\$ 45.32	Buy	\$ 58.00	28%	0%	1,529	4	77	1,590
Baoji Titanium Industry Co., Ltd. Class A*	600456-CN	\$ 5.92	NA	NA	NA	1%	19,168	3,357	1,193	21,332
Toho Titanium Co*	5727-JP	\$ 9.79	NA	NA	NA	1%	110,114	53,127	3,366	159,875
ATI Inc*	ATI	\$ 123.46	NA	NA	NA	0%	16,616	1,907	372	18,151
Howmet Aerospace*	HWM	\$ 220.15	NA	NA	NA	0%	87,758	3,352	664	90,446
Carpenter Technology*	CRS	\$ 322.83	NA	NA	NA	0%	16,373	704	208	16,869

*Not Covered

Valuation Drivers	WACC	Terminal Growth	2025 Multiple	2025 EBITDA (\$ M)	2026 Multiple	2026 EBITDA (\$ M)	Terminal Multiple	Terminal EBITDA (\$ M)	Net Debt (\$M, est.)	ADRs (M)
IperionX Limited	0.0%	0.0%	N/A	(36)	-	(21)	-	401	-	-
	B Riley Securities EBITDA (\$ M)					Consensus EBITDA (\$ M)				
	2025E	2026E	2027E	Terminal		2025E	2026E	2027E		
IperionX Limited	(36)	(21)	44	206		(34.6)	(12.5)	35.9		
EV/EBITDA	N/A	N/A	36.3	7.7		N/A	N/A	44.3		
Net Debt/EBITDA (FY2024 End)	N/A	N/A	N/A	N/A		N/A	N/A	(2.0)		
ATI Inc*						851	966	1,102		
EV/EBITDA						21.3	18.8	16.5		
Net Debt/EBITDA						1.8	1.6	1.4		
Howmet Aerospace*						2,385	2,755	3,140		
EV/EBITDA						37.9	32.8	28.8		
Net Debt/EBITDA						1.1	1.0	0.9		
Carpenter Technology*						672	827	960		
EV/EBITDA						25.1	20.4	17.6		
Net Debt/EBITDA						0.7	0.6	0.5		
Weighted-Average EV/EBITDA	N/A	N/A	36.3			33.4	28.8	25.2		
Weighted-Avg Net Debt/EBITDA	N/A	N/A	N/A			1.2	1.0	0.9		

*Not Covered

Source: B. Riley Securities Research

Rare Earth Elements Comp Table

	Ticker	Market Price	Rating	Price Target	Potential Upside	Div./Dist. Yield	Market Cap (\$ M)	Total Debt (\$ M)	Cash & Equiv. (\$ M)	EV (\$ M)
Ramaco Resources	METC	\$ 22.05	Buy	\$50	127%	0.0%	1,213	136	195	1,154
Energy Fuels	UUUU	\$ 19.26	Buy	\$22	14%	0.0%	4,570	700	935	4,335
Ucore Rare Metals	UURAF-US	\$ 5.68	Buy	\$9	58%	0.0%	632	9	19	622
MP Materials	MP	\$ 65.34	NA	NA	NA	0.0%	11,580	1,035	1,941	10,674
Lynas Rare Earth	LYC	\$ 9.93	NA	NA	NA	0.0%	9,997	100	110	9,986
USA Rare Earth	USAR	\$ 17.74	NA	NA	NA	0.0%	2,620	15	258	2,377
American Rare Earth	ARR-AU	\$ 0.28	NA	NA	NA	0.0%	158	-	8	150

No rating = Not Covered by B. Riley Securities

Valuation Drivers	WACC	Terminal Growth	2024 Multiple	2024 EBITDA (\$ M)	2025 Multiple	2025 EBITDA (\$ M)	Terminal Multiple	Terminal EBITDA (\$ M)	Net Debt (\$ M, est.)	Shares Out. (M)
Ramaco Resources*	10.0%	0.0%	7.4	106	26.5	29	2.5	317	(58)	55
Energy Fuels	10.0%	0.0%	280.3	18	(49.7)	(103)	7.5	682	(235)	237
Ucore Rare Metals	10.0%	0.0%	(75.8)	(8)	(75.0)	(9)	5.6	114	(10)	97

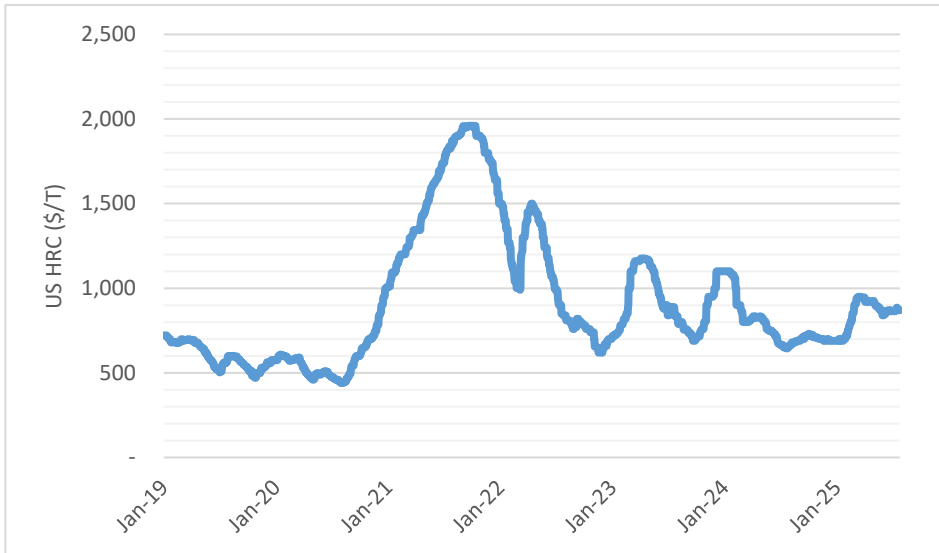
*EBITDA is on a Attributable basis

	B Riley Securities EBITDA (\$ M)					Consensus EBITDA (\$ M)				
	2024A	2025E	2026E	2027E	2028E	2024A	2025E	2026E	2027E	2028E
Ramaco Resources* (Attributable)	106	29	170	240	309	106	33	109	141	179
EV/EBITDA	10.9	39.3	6.8	4.8	3.7	10.9	34.8	10.6	8.2	6.5
Net Debt/EBITDA	(0.6)	(2.0)	(0.3)	(0.2)	(0.2)	(0.6)	(1.8)	(0.5)	(0.4)	(0.3)
Energy Fuels	18	(103)	17	59	159		(103)	5	52	159
EV/EBITDA	237.9	(42.2)	257.2	73.9	27.2		(42.1)	810.3	83.7	27.2
Net Debt/EBITDA	(12.9)	2.3	(14.0)	(4.0)	(1.5)		2.3	(44.0)	(4.5)	(1.5)
Ucore Rare Metals	(8.5)	(8.6)	(8.4)	31.3	76.7	NA	(5)	6	39	79
EV/EBITDA	(73.3)	(72.5)	(74.3)	19.9	8.1		(124.4)	109.1	15.9	7.8
Net Debt/EBITDA	1.2	1.2	1.2	(0.3)	(0.1)		2.0	(1.8)	(0.3)	(0.1)
MP Materials	NA	NA	NA	NA	NA	(50)	(0)	264	446	600
EV/EBITDA						(212.8)	(60,703.6)	40.4	23.9	17.8
Net Debt/EBITDA						18.1	5,154.2	(3.4)	(2.0)	(1.5)
Lynas Rare Earth	NA	NA	NA	NA	NA	91	70	319	556	808
EV/EBITDA						109.8	141.7	31.3	18.0	12.4
Net Debt/EBITDA						(0.1)	(0.1)	(0.0)	(0.0)	(0.0)
USA Rare Earth	NA	NA	NA	NA	NA	(25)	(6)	(14)	21	136
EV/EBITDA						(94.7)	(365.7)	(165.1)	115.2	17.5
Net Debt/EBITDA						9.7	37.4	16.9	(11.8)	(1.8)
American Rare Earth	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EV/EBITDA										
Net Debt/EBITDA										
Weighted-Average EV/EBITDA	163.4	-29.9	176.1	55.3	20.8	(46.4)	(22,104.0)	134.6	37.2	16.6
Weighted-Avg Net Debt/EBITDA	-9.1	1.4	-9.8	-2.9	-1.1	7.2	1,851.2	(6.4)	(2.4)	(0.9)

*EBITDA is on an Attributable basis

Source: B. Riley Securities Research

US HRC Historical Pricing (2019 – Present)



Source: B. Riley Securities Research, Platts, and FactSet

IODEX Historical Pricing (2019 – Present)



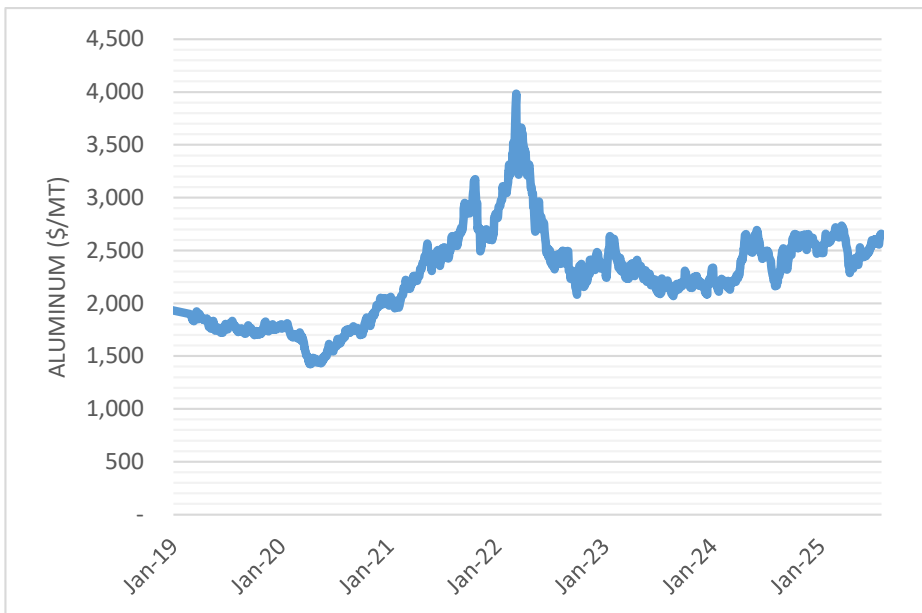
Source: B. Riley Securities Research, Platts, and FactSet

Copper Historical Pricing (2019 – Present)



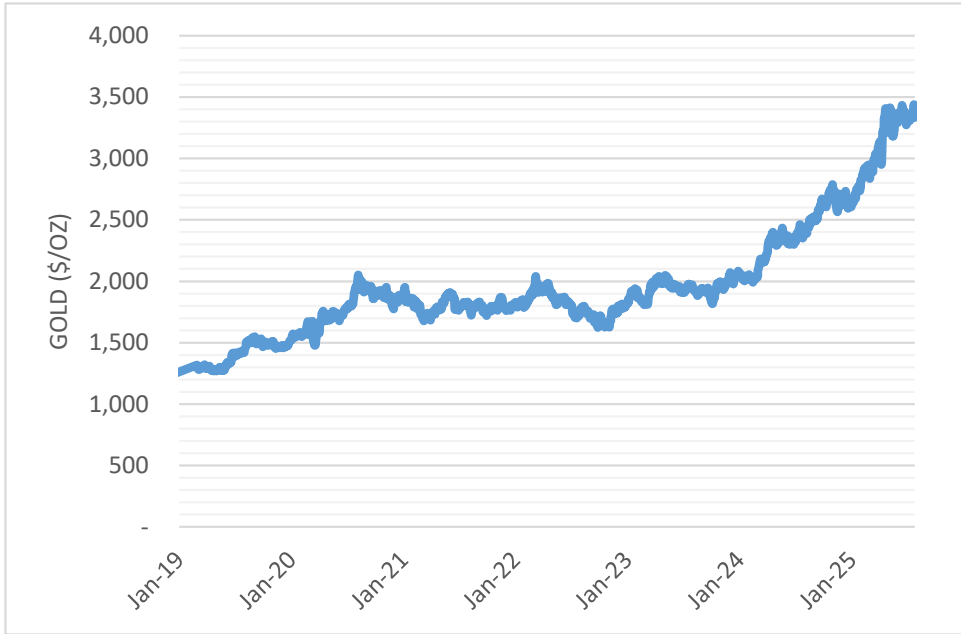
Source: B. Riley Securities Research, Platts, and FactSet

Aluminum Historical Pricing (2019 – Present)



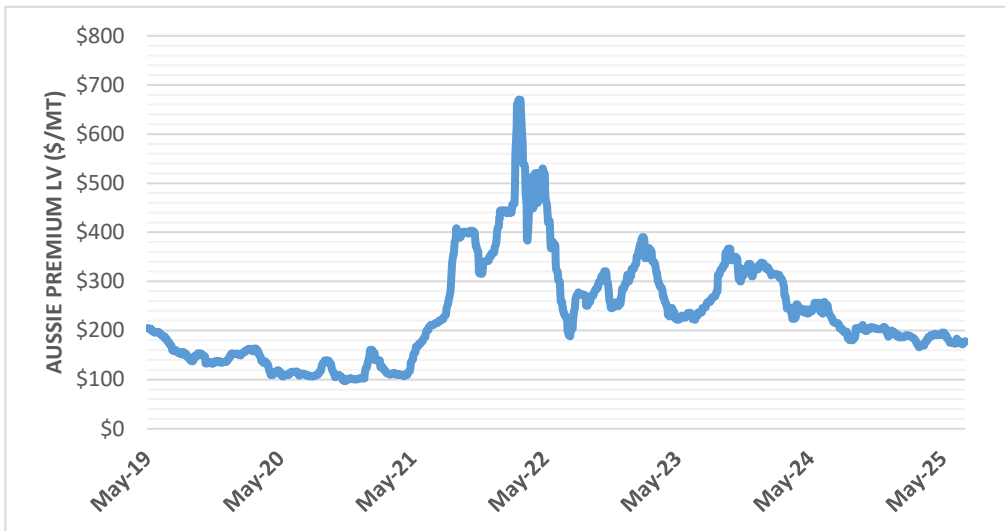
Source: B. Riley Securities Research, Platts, and FactSet

Gold Historical Pricing (2019 – Present)



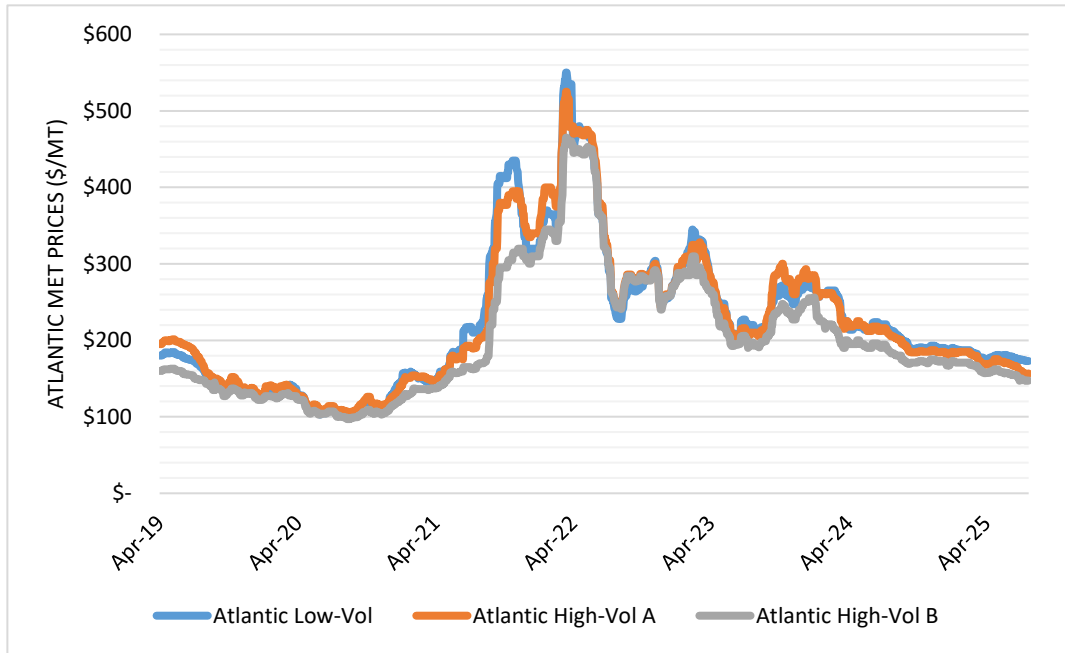
Source: B. Riley Securities Research, Platts, and FactSet

Seaborne Met Historical Pricing (2019 – Present)



Source: B. Riley Securities Research, Platts, and FactSet

Atlantic Met Coal Historical Pricing (2019 – Present)



Source: B. Riley Securities Research, Platts, and FactSet

*Closing price of last trading day immediately prior to the date of this publication unless otherwise indicated.

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