

As the US Dollar Index Hits 3-Week High, Gold Tests 3-Week Low

Precious Metals

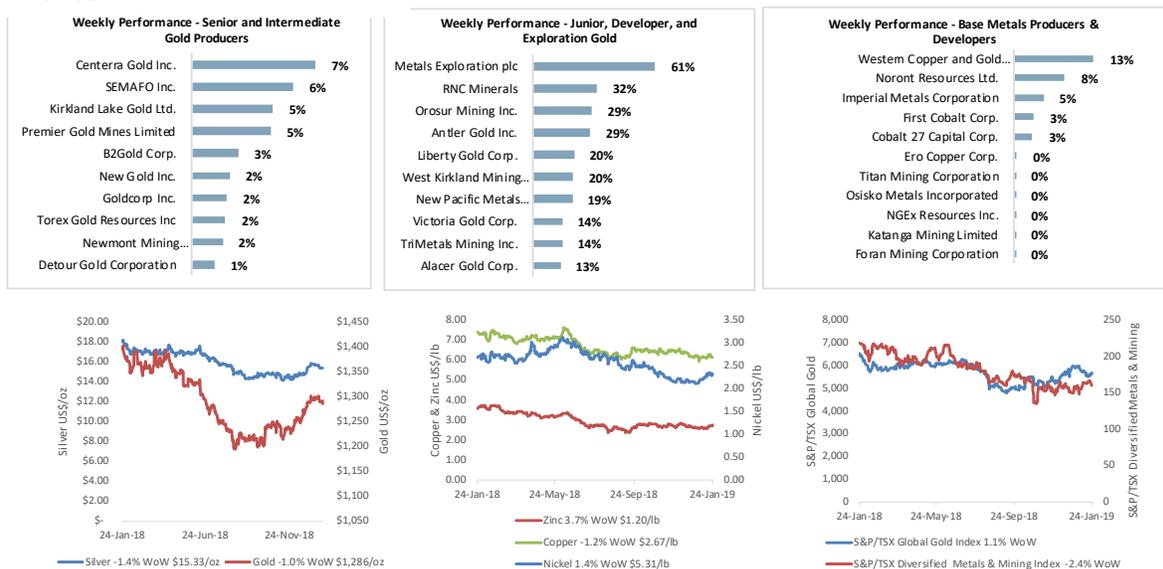
Gold tested the bottom of its 3-week range twice this week as it reached lows of US\$1,276 on Monday and then again during Thursday morning trading before regaining ground to finish the day at US\$1,281 (down 0.8% week over week). Meanwhile, the US Dollar index rose to just over 96.66, a 3-week high, before finishing Thursday afternoon at 96.53. Silver recorded Thursday morning losses before recovering during the day to finish at US\$15.32 (down 1.3% for the week). Platinum and palladium also recorded losses finishing down 0.9% and 5.8% week over week, respectively, at US\$803 and US\$1,322. Meanwhile, the S&P/TSX Global Gold index recorded a 1.11% increase this week to finish Thursday afternoon at 176.96, while the VanEck Vectors Junior Gold miners EFT fell 2.35%. This week saw a number of positive performers from our coverage universe; amongst the gold producers, SEMAFO Inc (SMF-T, BUY rating, \$6.00 target, up 6%) and B2Gold Corp (BTO-T, BUY rating, \$5.00 target; up 3%) were amongst the better performers, while RNC Minerals (RNX-T, BUY rating, \$0.75 target), Liberty Gold Corp (LGD-T, BUY rating, \$1.00 target), and Pure Gold (PGM-V, BUY rating, \$1.00 target) rose 32%, 20%, and 8% respectively.

Base Metals

As GDP growth in China slowed to its lowest level in 28 years (Reuters), base metal prices have followed suit, exacerbated by weaker German manufacturing data later in the week. However, supply is tight; we note that on-warrant zinc stocks in LME warehouses have fallen by 42% since the start of the year and are at their lowest level since 2007. Copper supply will be constrained by ongoing disruptions at smelters and low visible exchange stock. LME inventories are all down YoY with copper, zinc and nickel down -50%, -43% and -48% respectively. Excluding bonded warehouse inventories, we calculate current days of consumption at 5.1 for copper and 4.1 for zinc. Week over week, LME zinc and nickel prices have climbed 3.7% and 1.4% respectively to \$1.20/lb and \$5.31/lb on Thursday's close. However, Copper price fell -1.2% to \$2.67/lb, and year over year, all metals were down with copper, zinc and nickel down -17.1%, -23.6% and -13.5% respectively. This week, the US Dollar Index was up 46bps, closing at 96.51. The LME Index also edged higher, closing at 2,859.50 from 2,842.00. The equities in our coverage universe were mostly down this week, concurrent with the S&P Composite Diversified Metals & Mining Industry Index, which fell by -2.45% to 5,138.66. The most negatively impacted performer in our coverage universe was Lundin Mining Corp (LUN: TSX, BUY, \$8.00 target), which was down -8.9% on Thursday. The least negatively impacted performer was Capstone Mining Corp (CS: TSX, BUY, \$0.85 target), which was down -1.6%.

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Weekly Performance



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Haywood Research: The Week in Review – Covered Companies

Publications from the Haywood Research team for the week included the following for covered companies:

- ◆ **Precious metal industry report:** Commodity update and Q4/18 preview
- ◆ **Base metal industry report:** Commodity update and Q4/18 preview
- ◆ **Asanko Gold Inc. (AKG-T, \$0.93):** Q4/18 operations update
- ◆ **Trevali Mining Corp (TV-T, C\$0.35):** Year-end production results
- ◆ **SEMAFO Inc. (SMF-T, \$2.70):** Drilling results
- ◆ **Steppe Gold Ltd. (STGO-T, C\$0.82):** Corporate update
- ◆ **Roxgold Inc. (ROXG-T, \$0.75):** Q4/18 operations results
- ◆ **Eldorado Gold Corp. (ELD-T, \$3.46):** Q4/18 production results
- ◆ **Detour Gold Corporation (DGC-T, \$12.15):** 2019 guidance
- ◆ **RNC Minerals (RNX-T, C\$0.58):** Drilling results
- ◆ **Bluestone Resources Inc. (BSR-V, \$1.25):** Drill program update
- ◆ **OceanaGold Corporation (OGC-T, \$4.69):** Q4/18 operations update

INDUSTRY REPORTS

Precious metals commodity update and Q4/18 preview

- ◆ 2019 has welcomed a U.S. that continues to be ensconced in a political flux partly imparted by the aftermath of the mid-term electoral results. In addition, the progressive dissemination of softer than expected data coming out of China and elsewhere on growth and demand rates across a range of sectors has collectively culminated in improved precious metals prices and sentiment in the related equities venturing into the new year. We saw gold prices lift 7.11% in Q4/18 with silver echoing such pricing sentiment closing up 5.63%. Physical gold ETF and net futures market balances echoed such pricing directions during this period and have grown further in 2019, although at somewhat of a discord physical silver ETF balances have atrophied over that period with the gold:silver ratio now exceeding 82:1. Gold and silver prices continue to be buoyed in early 2019 with gold hovering a touch under US\$1,300 per ounce and silver residing around US\$15.50 per ounce. While momentum in precious metals prices has rekindled some interest in related equities with projected 12-Mth CFPS multiples for producing companies exceeding historic averages (now >8.5, see Figure 4.), equity prices and valuations are seemingly in disequilibrium with commodity pricing levels. With that in mind, we continue to focus on value rather than leverage in our focus names selection and prefer equities backed by assets expected to deliver margin and cashflow growth through production, and or NAV accretion through development and exploration success.

See Haywood Securities for the full report

Base metals commodity update and Q4/18 preview

- ◆ In 4Q18, the average copper and zinc prices were marginally higher QoQ, while nickel and lead prices were slightly lower QoQ. However, the price trend during the quarter was down as economic conditions weakened in China. Since hitting a 4-year high of \$3.37/lb in June, 2018, the copper price has fallen by 20%, while zinc is down 23% from Q1/18 highs of \$1.53/lb, and nickel is down 26% from its highs of June, 2018 of \$7.14/lb. Overall, equities we follow (except for Nevsun, which was acquired by Zijin Mining) were all down by an average of 17% in 4Q18, capping a year in which the equities declined by an average of 23%.

See Haywood Securities for the full report

COVERED NAMES

Asanko Gold Inc. (AKG-T, \$0.93, [Hold Rating, \$1.65 Target Price])

- ◆ Quarterly gold production totaled 59,823 ounces, which was in line with our estimates for 59,300 koz gold, however, additional details pertaining to operational performance were not provided with the release. Quarterly gold sales of 61,821 ounces were slightly ahead of gold production and realized an average price of US\$1,215 per ounce yielding US\$75.1 million in revenues (100% attributable to the Joint Venture). Full-year production totaled 223,152 ounces, slightly exceeding the top end of guidance of 200 koz – 220 koz gold, with annual gold sales of 227,722 ounces generating US\$284.1 million (100% basis).

See Haywood Securities for the full report



Trevali Mining Corp (TV-T, C\$0.35 [Buy Rating, C\$0.80 Target Price (from C\$1.00)])

- ◆ Trevali has reduced inventories and rebounded from its weak 3Q18 last but has adopted a more cautious outlook for 2019 as mine optimizations continue. Based on challenges ahead for 1Q19, the stock could face more volatility. Accordingly, we are reducing our target to C\$0.80.

See Haywood Securities for the full report

SEMAFO Inc. (SMF-T, \$2.70, [Buy Rating, \$6.00 Target Price])

- ◆ SEMAFO released drill results from the Dangou area, located ~30-km northeast of the Boungou mine. A total of 5,210 meters in 43 RC holes were drilled in Q4. Although early days, these results highlight the potential for additional zones of mineralization that could provide supplemental feed to the Boungou Mill and extend the mine life.

See Haywood Securities for the full report

Steppe Gold Ltd. (STGO-T, C\$0.82, [Buy Rating, \$1.75 Target Price])

- ◆ Steppe is making progress slowly but surely on ATO mine construction and will be in position for gold production and cash flow generation by 3Q19. STGO expects to have approximately \$4M in cash once the ADR plant construction is complete. Until production starts, cash will be tight, and spending will be limited, although management is not planning to raise additional funds until production starts in June. If necessary, the Company can resort to bridge financing with Triple Flag, make arrangements with suppliers and contractors, or sell royalties.

See Haywood Securities for the full report

Roxgold Inc. (ROXG-T, \$0.75, [Buy Rating, \$1.90 Target Price])

- ◆ Q4/18 gold production of 25,845 oz was slightly below our expectations of 28.37 koz gold on grade, however, plant throughput outperformed our expectations. 2019 guidance points towards operations resembling 2018 performance, albeit, at slightly higher than anticipated AISC. Currently, Roxgold trades well below peers at 0.46x P/NAV6%, and 1.8x EV/OCF2019 compared to peers at 0.68x P/NAV and 4.4 EV/OCF2019, respectively.

See Haywood Securities for the full report

Eldorado Gold Corp. (ELD-T, \$3.46, [Buy Rating, \$6.50 Target Price])

- ◆ Eldorado reported Q4/18 production of 75,877 oz including pre-commercial production from Lamaque of 16,046 oz, which was slightly above our expectation of 70,000 oz. Total cash costs for the quarter averaged US\$645/oz, again slightly better than our US\$650/oz estimate. The heap leach pad at Kisladag continues to perform better than expected and if this continues the incremental economics from the high capex mill expansion continue to erode. Overall a solid performance for the quarter, but until the debt is re-financed we think investors will steer clear.

See Haywood Securities for the full report

Detour Gold Corporation (DGC-T, \$12.15, [Buy Rating, \$15.50 Target Price])

- ◆ Detour released 2019 guidance last night. For the year the Company expects gold production to be between 570,000 and 605,000 ounces with total cash costs expected to average between US\$790 and US\$840/oz and AISC of between US\$1,175 and US\$1,250/oz. We currently model production of 600,000 ounces at a total cash cost of US\$800/oz and AISC of US\$1,155/oz in 2019. Our production is at the top end of Company guidance, and our cash cost is at the bottom end.

See Haywood Securities for the full report

RNC Minerals (RNX-T, C\$0.58, [Buy Rating (from Hold), \$0.75 Target Price])

- ◆ RNC announced that it has closed its bought deal of a total of 19.6M shares at a price of C\$0.46 per share for gross proceeds of C\$9M. A total of 6.5M shares (33%) were sold to Eric Sprott's holding company, increasing his holding of the Company to over 47.7M shares, or 10%. There is an over-allotment option to purchase up to an additional 1.956M shares at C\$0.46 per share, for an additional \$900k in gross proceeds.

See Haywood Securities for the full report

Bluestone Resources Inc. (BSR-V, \$1.25, [Buy Rating, \$2.75 Target Price])

- ◆ Bluestone announced drill results from its ongoing resource conversion drilling program that is currently underway and focused on upgrading Inferred resources into the Measured and Indicated categories. Measured and Indicated resources currently total 1.2 million ounces of gold at an average grade of 10.1 g/t gold and the Inferred resource totals 357,319 ounces of gold at an average grade of 8.1 g/t.

See Haywood Securities for the full report



OceanaGold Corporation (OGC-T, \$4.69, [Hold Rating, \$4.20 Target Price])

- ◆ Q4/18 delivered production that was in-line with our forecasts, as weaker production from Haile was offset by better than anticipated output from Macraes and Waihi. Gold and Copper sales exceeded production for the quarter, driving cash costs a touch under our estimates. Summary production data was released prior to quarterly financials (expected on February 19th, 2019), which also outlined select sales and cost data, however, excluded detailed operations performance data. Consolidated production totaled 126.7 koz of gold (Hay Est. 119.8 koz) and 6.39 Mlb copper (Hay Est. 6.67 Mlb) with sales of 132.2 koz gold and 6.83 Mlb copper at a cash cost of US\$563/oz gold (net of copper) and AISC of US\$814/oz gold, which compared to our estimates of US\$574/oz and AISC US\$822/oz gold respectively.

See Haywood Securities for the full report



Weekly Commodities

PRECIOUS METALS

Name	Close	1Wk Δ	1 week %	1 Month %	3 Month %	6 Month %	12 Month %	5 Day Trend	52W H/L	1W H/L
Gold Spot	\$ 1,281	\$ (10.86)	(0.8%)	1.0%	4.0%	4.0%	(5.0)%		\$ 1,366	\$ 1,292
US\$/oz									\$ 1,160	\$ 1,280
Silver Spot	\$ 15.32	\$ (0.21)	(1.3%)	3.7%	4.6%	(1.9)%	(11.4)%		\$ 17.70	\$ 15.53
US\$/oz									\$ 13.90	\$ 15.27
Platinum Spot	\$ 803	\$ (7.03)	(0.9%)	2.2%	(2.9)%	(4.9)%	(20.8)%		\$ 1,029	\$ 810
US\$/oz									\$ 756	\$ 791
Palladium Spot	\$ 1,322	\$ (77.17)	(5.8%)	6.3%	19.8%	40.7%	20.7%		\$ 1,439	\$ 1,399
US\$/oz									\$ 834	\$ 1,324

BASE METALS

Name	Close	1Wk Δ	1 week %	1 Month %	3 Month %	6 Month %	12 Month %	5 Day Trend	52W H/L	1W H/L
Copper Future	\$ 2.67	\$ (0.03)	(1.2%)	(0.6)%	(4.8)%	(5.9)%	(17.1)%		\$ 3.32	\$ 2.73
US\$/lb									\$ 2.64	\$ 2.67
Nickel Spot	\$ 5.31	\$ 0.07	1.4%	8.4%	(3.6)%	(13.3)%	(13.5)%		\$ 7.14	\$ 5.34
US\$/lb									\$ 4.73	\$ 5.22
Lead Spot	\$ 0.94	\$ 0.06	6.1%	4.5%	4.2%	(3.0)%	(21.5)%		\$ 1.22	\$ 0.94
US\$/lb									\$ 0.85	\$ 0.88
Zinc Spot	\$ 1.20	\$ 0.04	3.6%	4.7%	(2.3)%	(0.2)%	(23.6)%		\$ 1.64	\$ 1.20
US\$/lb									\$ 1.04	\$ 1.16
Aluminum Spot	\$ 0.85	\$ 0.01	1.5%	(1.3)%	(5.3)%	(9.2)%	(16.6)%		\$ 1.18	\$ 0.86
US\$/lb									\$ 0.81	\$ 0.84
Iron Ore Spot	\$ 74.50	\$ (0.15)	(0.2%)	7.7%	2.3%	16.1%	(2.0)%		\$ 140.00	\$ 78.80
US\$/t									\$ 77.70	\$ 77.70

ENERGY

Name	Close	1Wk Δ	1 week %	1 Month %	3 Month %	6 Month %	12 Month %	5 Day Trend	52W H/L	1W H/L
Newcastle Coal	\$ 99.45	\$ (2.50)	(2.5%)	(2.6)%	(10.9)%	(9.8)%	(6.3)%		\$ 115.30	\$ 101.95
US\$/t									\$ 89.50	\$ 99.45
Uranium Spot	\$ 29.00	\$ 0.15	0.5%	1.2%	3.9%	19.1%	18.9%		\$ 30.40	\$ 29.00
US\$/lb									\$ 27.30	\$ 28.85
WTI	\$ 53.22	\$ 0.86	1.6%	24.3%	(20.8)%	(18.8)%	(11.7)%		\$ 76.29	\$ 54.04
US\$/bbl									\$ 42.67	\$ 52.36
Brent	\$ 61.18	\$ -	-	20.5%	(19.7)%	(17.4)%	(6.8)%		\$ 85.58	\$ 62.74
US\$/bbl									\$ 50.22	\$ 61.14
Henry Hub	\$ 3.13	\$ (0.28)	(8.9%)	(8.5)%	(2.1)%	5.9%	0.1%		\$ 4.85	\$ 3.48
US\$/MMBtu									\$ 2.88	\$ 2.98

Source: Haywood Securities and Bloomberg

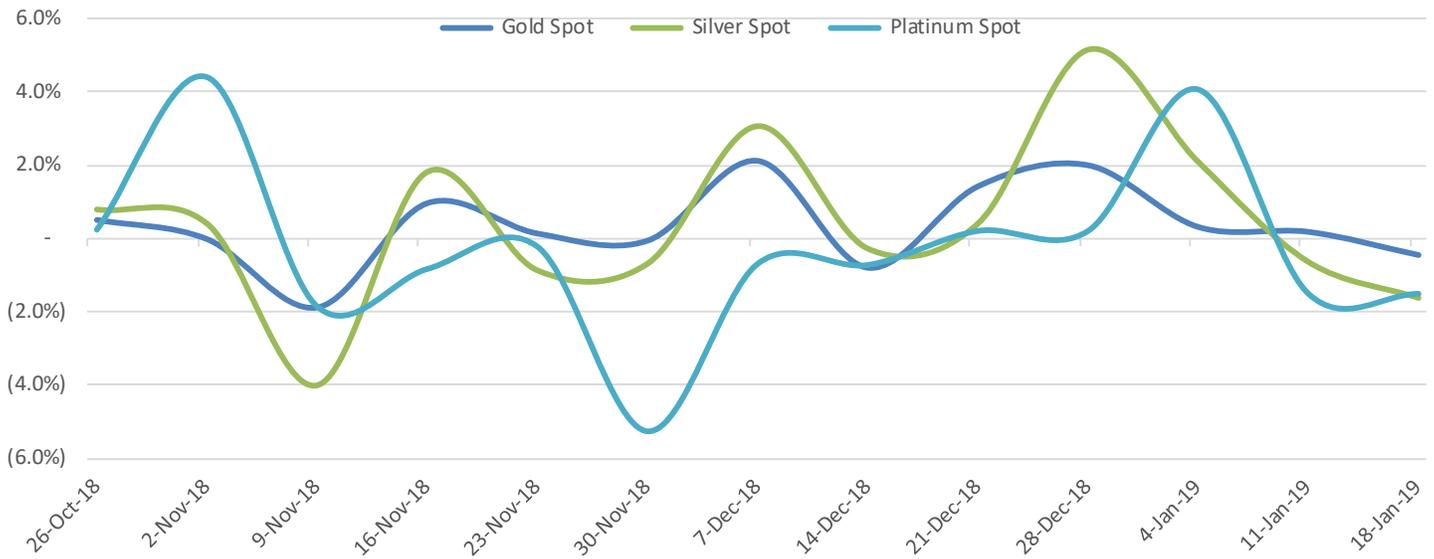


Commodities Prices and Inventories

Precious Metals

Spot Price				
Commodities	LME Spot Price	Weekly Δ	YTD Δ	1 Year Δ
Gold	US\$ 1,281 /oz	-0.8%	-1.2%	-1.2%
Silver	US\$ 15.32 /oz	-1.4%	-1.1%	-12.7%
Platinum	US\$ 803 /oz	-0.9%	0.8%	-20.9%

Precious Metals Weekly Change (12 weeks)



Source: Haywood Securities and Bloomberg

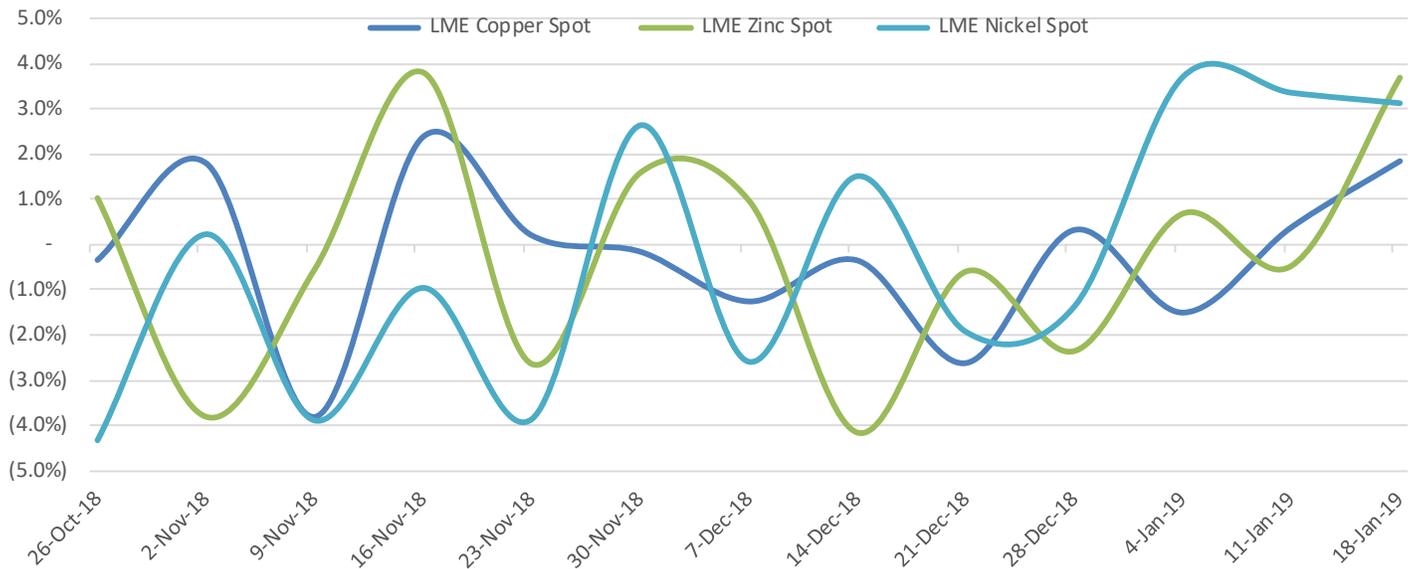


Base Metals

Spot Price				
Commodities	LME Spot Price	Weekly Δ	YTD Δ	1 Year Δ
Copper	US\$ 2.67 /lb	-1.2%	-0.9%	-17.1%
Zinc	US\$ 1.20 /lb	3.7%	5.2%	-23.6%
Nickel	US\$ 5.31 /lb	1.4%	10.4%	-13.5%

Commodities	LME Inventory		Total Inventory Excluding Bonded Warehouse Inventory			
	LME Inventory	Weekly Δ	Total (t)	YTD Δ	1 Year Δ	Days of Consumption
Copper	145,675	7.9%	330,414	-6%	-50%	5.1
Zinc	117,475	-4.4%	146,909	-2%	-43%	4.1
Nickel	203,088	0.8%	216,972	-3%	-48%	36.1

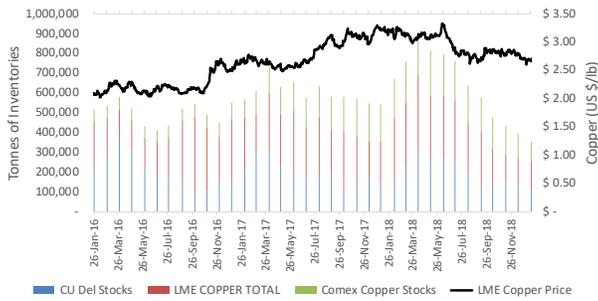
Base Metals Weekly Change (12 weeks)



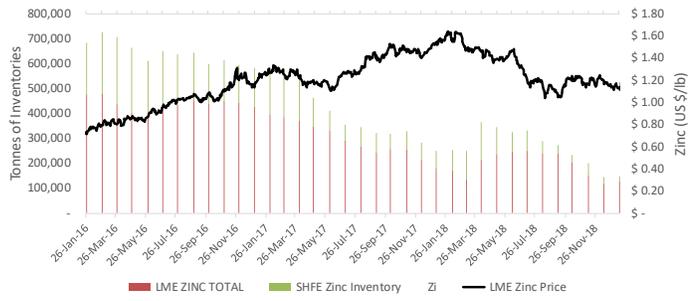
Source: Haywood Securities and Bloomberg



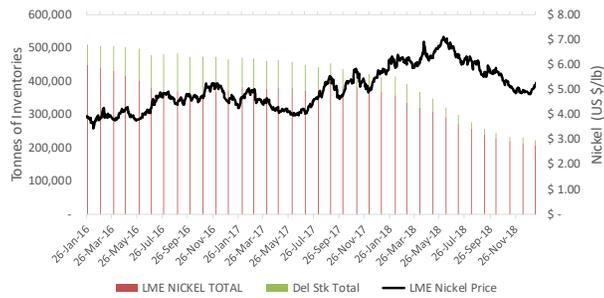
Copper Price & Inventories



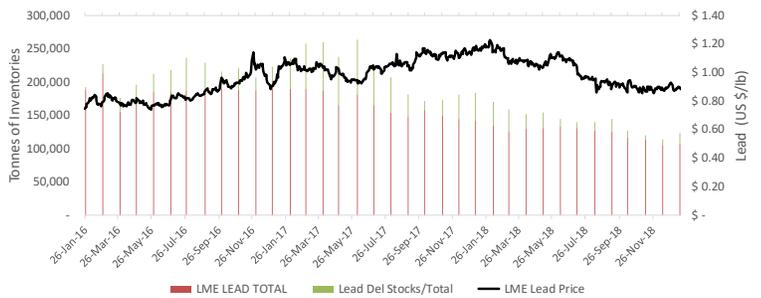
Zinc Price & Inventories



Nickel Price & Inventories



Lead Price & Inventories



Note: Total Inventories exclude the bonded warehouse inventories

Source: Haywood Securities and Bloomberg



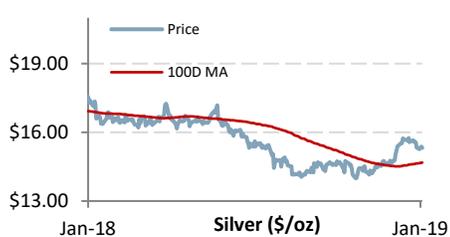
Commodities and ETFs: A Week in Action

Gold – 1-Year US\$/oz (left) and Total ETF Holdings (right)



- ◆ Spot: Loss (-0.9%) for the week
- ◆ ETF Holdings: 72,357,874 ounces, up 384,567 ounces for the week

Silver – 1-Year US\$/oz (left) and Total ETF Holdings (right)



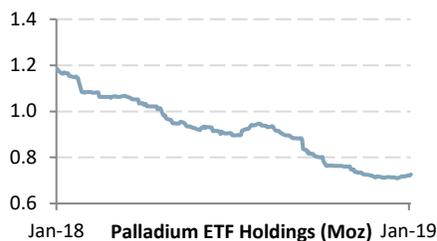
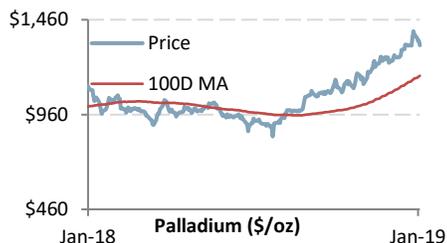
- ◆ Spot: Loss (-1.3%) for the week
- ◆ ETF Holdings: 504,378,538 ounces, down 3,912,823 ounces for the week

Platinum – 1-Year US\$/oz (left) and Total ETF Holdings (right)



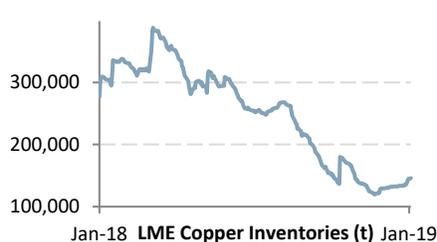
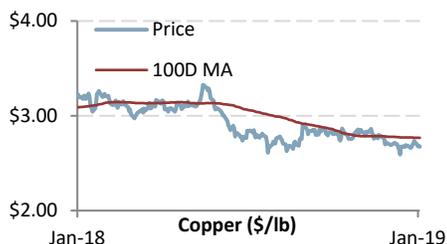
- ◆ Spot: Loss (-0.9%) for the week
- ◆ ETF Holdings: 2,449,108 ounces, up 70,631 ounces for the week

Palladium – 1-Year US\$/oz (left) and Total ETF Holdings (right)



- ◆ Spot: Loss (-5.4%) for the week
- ◆ ETF Holdings: 725,651 ounces, up 7,927 ounces for the week

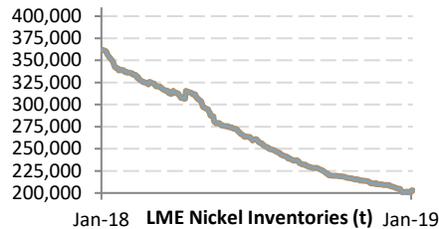
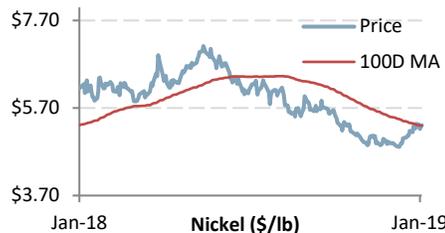
Copper – 1-Year US\$/lb (left) and LME Inventory (right)



- ◆ Futures: Loss (-1.2%) for the week
- ◆ LME Copper: 145,675 tonnes, up 10,700 tonnes for the week

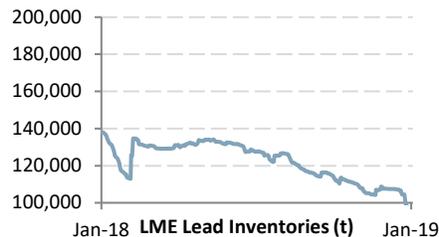
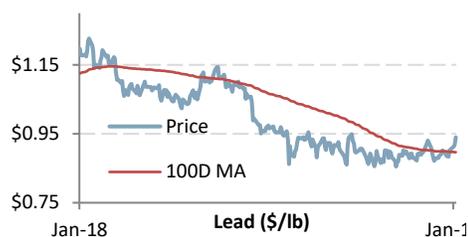


Nickel – 1-Year US\$/lb (left) and LME Inventory (right)



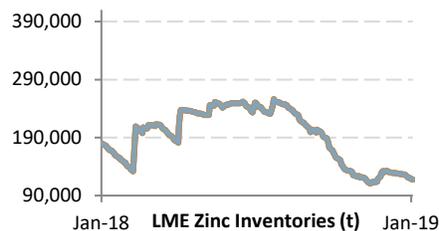
- ◆ Spot: Gain (+1.4%) for the week
- ◆ LME Nickel: 203,088 tonnes, up 1,704 tonnes for the week

Lead – 1-Year US\$/lb (left) and LME Inventory (right)



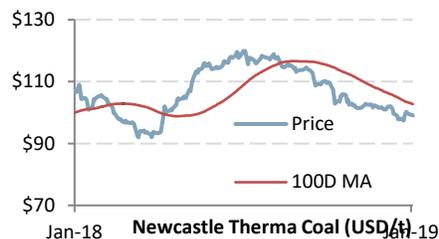
- ◆ Spot: Gain (+6.5%) for the week
- ◆ LME Lead: 85,200 tonnes, down 13,200 tonnes for the week

Zinc – 1-Year US\$/lb (left) and LME Inventory (right)



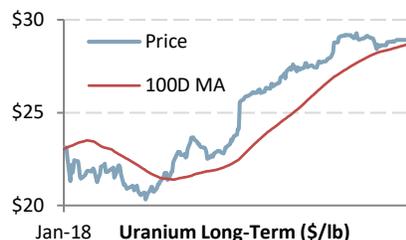
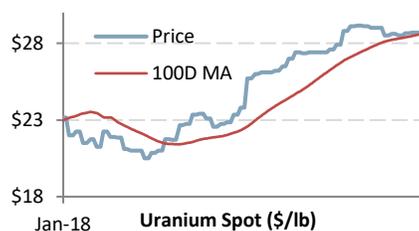
- ◆ Spot: Gain (+3.7%) for the week
- ◆ LME Zinc: 117,475 tonnes, down 5,400 tonnes for the week

Iron – 1-Year US\$/t 62% Fe (left) and 1-Year US\$/t Newcastle (right)



- ◆ Newcastle Thermal Futures: Loss (-1.3%) for the week
- ◆ 62% Fe Iron Ore: Loss (-0.9%) for the week

Uranium – 1-Year US\$/lb Short Term (left) and Long-term (right)



- ◆ Uranium Long: Unchanged (0.0%) for the week

Source: Bloomberg, UxC Consulting, and Haywood Securities



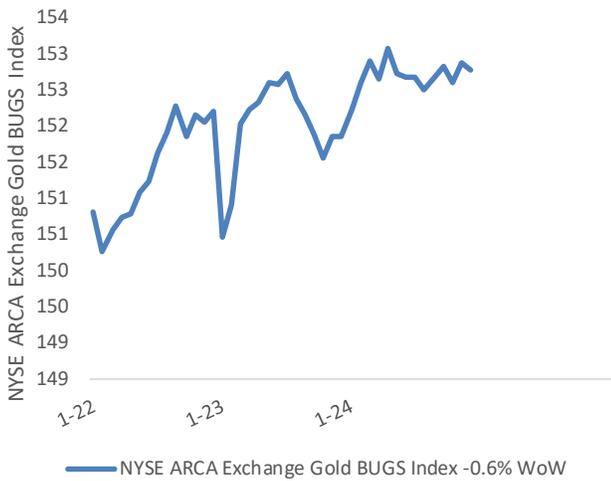
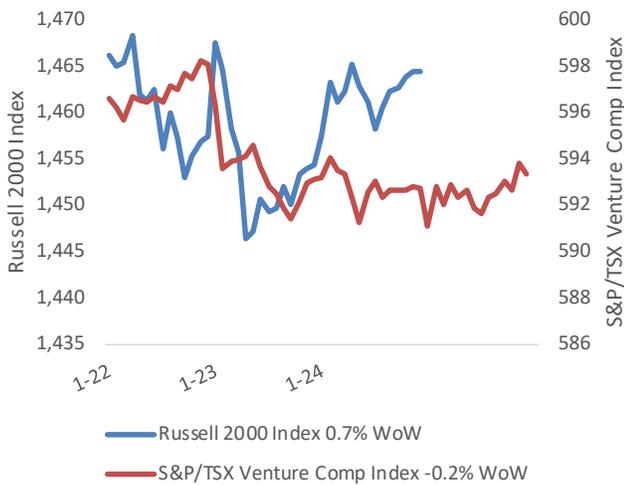
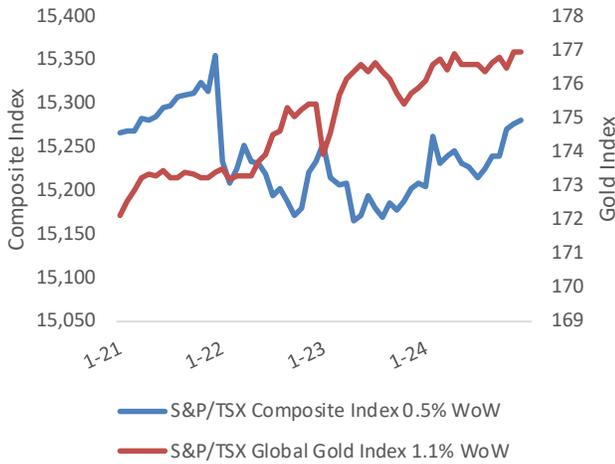
Upcoming Macroeconomic News and Events

Date	Event	Period	Survey	Prior	Relevance
United States					
01/28/2019	Chicago Fed Nat Activity Index	Dec	--	0.22	63
01/28/2019	Dallas Fed Manf. Activity	Jan	-2.1	-5.1	65
01/28/2019	Wholesale Inventories MoM	Nov P	0.50%	0.80%	81
01/28/2019	New Home Sales	Nov	567k	544k	91
01/28/2019	Construction Spending MoM	Nov	0.20%	-0.10%	80
01/28/2019	Factory Orders	Nov	0.30%	-2.10%	86
01/28/2019	Durable Goods Orders	Nov F	0.80%	0.80%	93
01/28/2019	Durables Ex Transportation	Nov F	--	-0.30%	74
01/28/2019	Cap Goods Orders Nondef Ex Air	Nov F	--	-0.60%	60
01/28/2019	Trade Balance	Nov	-\$54.0b	-\$55.5b	84
01/28/2019	Monthly Budget Statement	Dec	-\$10.0b	-\$204.9b	77
01/28/2019	Retail Sales Advance MoM	Dec	0.10%	0.20%	92
01/28/2019	Retail Sales Ex Auto MoM	Dec	0.00%	0.20%	65
01/28/2019	Retail Sales Ex Auto and Gas	Dec	0.40%	0.50%	62
01/28/2019	Net Long-term TIC Flows	Nov	--	\$31.3b	74
01/28/2019	Total Net TIC Flows	Nov	--	\$42.0b	66
01/28/2019	Housing Starts	Dec	1253k	1256k	90
01/28/2019	Building Permits	Dec	1290k	1328k	63
01/29/2019	Wholesale Inventories MoM	Dec P	--	--	81
01/29/2019	Conf. Board Consumer Confidence	Jan	125	128.1	94
01/29/2019	Cap Goods Orders Nondef Ex Air	Dec P	0.00%	--	60
01/29/2019	Durables Ex Transportation	Dec P	0.20%	--	74
01/29/2019	Durable Goods Orders	Dec P	1.70%	--	93
01/29/2019	New Home Sales	Dec	575k	--	91
01/29/2019	Wholesale Inventories MoM	Nov F	--	--	81
01/30/2019	MBA Mortgage Applications	25-Jan	--	-2.70%	92
01/30/2019	ADP Employment Change	Jan	170k	271k	88
01/30/2019	GDP Annualized QoQ	4Q A	2.50%	3.40%	97
01/30/2019	Core PCE QoQ	4Q A	--	1.60%	68
01/30/2019	Personal Consumption	4Q A	--	3.50%	68
01/30/2019	GDP Price Index	4Q A	1.70%	1.80%	78
01/30/2019	Pending Home Sales MoM	Dec	1.00%	-0.70%	77
01/30/2019	FOMC Rate Decision (Upper Bound)	30-Jan	2.50%	2.50%	98
01/31/2019	Employment Cost Index	4Q	0.80%	0.80%	75
01/31/2019	Personal Income	Dec	0.50%	0.20%	85
01/31/2019	Personal Spending	Dec	0.30%	0.40%	85
01/31/2019	PCE Core MoM	Dec	0.20%	0.10%	60
01/31/2019	Initial Jobless Claims	26-Jan	--	199k	98
01/31/2019	Continuing Claims	19-Jan	--	1713k	69
01/31/2019	Chicago Purchasing Manager	Jan	60	65.4	82
01/31/2019	Bloomberg Consumer Comfort	27-Jan	--	57.4	68
Canada					
01/31/2019	GDP MoM	Nov	--	0.30%	84
01/31/2019	Industrial Product Price MoM	Dec	--	-0.80%	67
China					
01/30/2019	Non-manufacturing PMI	Jan	--	53.8	65
01/30/2019	Manufacturing PMI	Jan	--	49.4	88
01/31/2019	Caixin China PMI Mfg	Jan	--	49.7	93

Source: Bloomberg



Weekly Indices

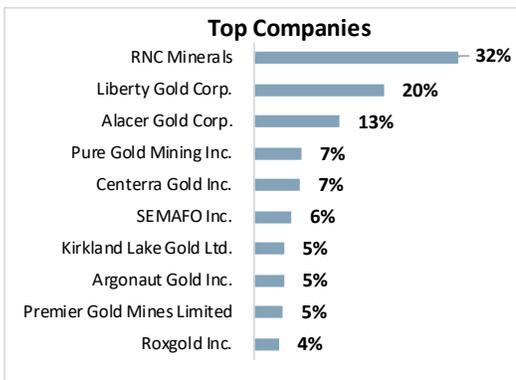


Source: Bloomberg and Haywood Securities



Weekly Equities

Equity Weekly Performance – Precious Metals Companies (S&P/TSX Global Mining Index and Haywood Covered Companies)

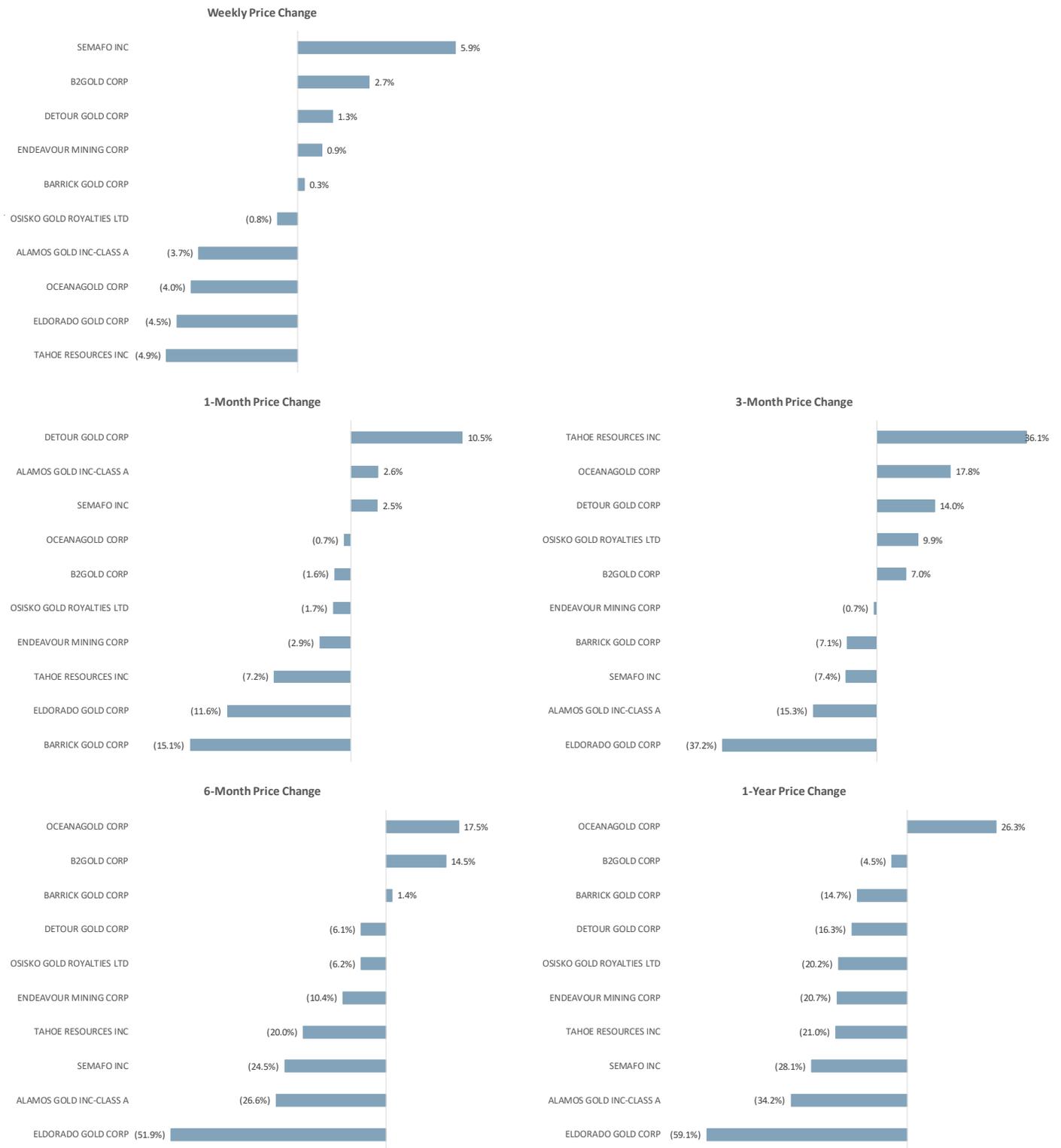


Ticker	Company	Close	1Wk \$Δ	%Δ	52Wk High	Low	Ticker	Company	Close	1Wk \$Δ	%Δ	52Wk High	Low
TSX:AEM	Agnico Eagle Mines Limited	52.92	0.54	1%	62.80	42.35	TSX:LGD	Liberty Gold Corp.	0.36	0.06	20%	0.46	0.29
TSX:ASR	Alacer Gold Corp.	3.04	0.36	13%	2.99	1.97	TSX:LUG	Lundin Gold Inc.	4.82	0.07	1%	5.52	4.33
TSX:AGI	Alamos Gold Inc.	5.19	(0.20)	(4)%	7.97	3.88	TSX:MAG	MAG Silver Corp.	10.56	0.33	3%	15.77	8.10
NYSE:AU	AngloGold Ashanti Limited	12.66	0.15	1%	13.27	7.08	TSX:MOZ	Marathon Gold Corporation	0.87	(0.01)	(1)%	1.25	0.65
TSX:AR	Argonaut Gold Inc.	1.55	0.07	5%	2.86	1.18	NYSE:MUX	McEwen Mining Inc.	1.64	(0.08)	(5)%	2.53	1.62
TSX:AKG	Asanko Gold Inc.	0.88	(0.05)	(5)%	1.79	0.80	TSX:MAX	Midas Gold Corp.	0.93	(0.01)	(1)%	1.21	0.60
TSXV:AGB	Atlantic Gold Corporation	1.66	0.02	1%	1.99	1.40	TSX:NGD	New Gold Inc.	1.40	0.03	2%	4.19	0.90
TSX:BTO	B2Gold Corp.	3.80	0.10	3%	4.03	2.77	NYSE:NEM	Newmont Mining Corporation	32.18	0.56	2%	41.98	29.06
TSXV:BGM	Barkerville Gold Mines Ltd.	0.43	-	-	0.75	0.30	TSX:NHK	Nighthawk Gold Corp.	0.37	(0.03)	(6)%	0.76	0.30
TSX:ABX	Barrick Gold Corporation	15.82	0.04	0%	18.99	12.54	TSX:NG	NovaGold Resources Inc.	4.71	(0.23)	(5)%	6.47	4.44
TSX:CG	Centerra Gold Inc.	6.66	0.45	7%	8.21	4.76	TSX:OGC	OceanaGold Corporation	4.56	(0.19)	(4)%	5.01	2.97
TSX:CGG	China Gold International Resources (1.51	(0.01)	(1)%	3.19	1.46	TSX:OR	Osisko Gold Royalties Ltd	11.74	(0.09)	(1)%	14.80	9.27
NYSE:CDE	Coeur Mining, Inc.	4.40	(0.08)	(2)%	8.89	3.80	TSX:OSK	Osisko Mining Inc.	2.51	(0.20)	(7)%	3.69	1.60
NYSE:BVN	Compañía de Minas Buenaventura S.	15.12	(0.30)	(2)%	16.83	11.67	TSX:PAAS	Pan American Silver Corp.	17.71	(1.50)	(8)%	24.22	16.05
TSX:CNL	Continental Gold Inc.	1.76	(0.22)	(11)%	4.01	1.80	TSX:PG	Premier Gold Mines Limited	1.59	0.07	5%	3.64	1.39
TSX:DGC	Detour Gold Corporation	12.29	0.16	1%	15.40	9.11	TSX:PVG	Pretium Resources Inc.	9.22	0.09	1%	12.87	7.93
TSX:ELD	Eldorado Gold Corporation	3.58	(0.17)	(5)%	8.90	3.36	TSXV:PGM	Pure Gold Mining Inc.	0.72	0.05	7%	0.75	0.50
TSX:EDV	Endeavour Mining Corporation	21.07	0.19	1%	26.76	16.34	TSX:RNx	RNC Minerals	0.64	0.16	32%	1.18	0.07
TSX:EDR	Endeavour Silver Corp.	2.61	(0.07)	(3)%	4.40	2.27	TSX:ROXG	Roxgold Inc.	0.79	0.03	4%	1.35	0.72
TSXV:EQX	Equinox Gold Corp.	1.04	(0.01)	(1)%	1.23	0.85	NasdaqGS:RGLD	Royal Gold, Inc.	81.00	(1.83)	(2)%	98.53	70.16
TSXV:FPC	Falco Resources Ltd.	0.33	(0.05)	(12)%	1.06	0.28	TSX:SBB	Sabina Gold & Silver Corp.	1.27	(0.07)	(5)%	2.15	1.11
TSX:FR	First Majestic Silver Corp.	7.02	0.04	1%	11.09	6.12	TSX:SSL	Sandstorm Gold Ltd.	6.14	0.16	3%	6.93	4.60
TSX:FVI	Fortuna Silver Mines Inc.	4.63	(0.02)	(0)%	7.78	4.22	NYSE:SA	Seabridge Gold Inc.	13.05	(0.03)	(0)%	15.30	10.20
TSX:FNV	Franco-Nevada Corporation	94.95	3.20	3%	99.93	76.53	TSX:SMF	SEMAFO Inc.	2.86	0.16	6%	4.14	2.24
NYSE:GFI	Gold Fields Limited	3.75	0.03	1%	4.54	2.20	NYSE:SBGL	Sibanye Gold Limited	2.88	(0.07)	(2)%	5.00	2.02
TSX:G	Goldcorp Inc.	13.99	0.28	2%	18.78	11.00	TSX:SVM	Silvercorp Metals Inc.	2.77	0.05	2%	4.02	2.43
TSX:GSC	Golden Star Resources Ltd.	4.41	(0.03)	(1)%	5.15	3.24	TSX:SSRM	SSR Mining Inc.	16.10	(0.08)	(0)%	16.84	9.70
TSXV:GQC	Goldquest Mining Corp.	0.11	(0.01)	(4)%	0.42	0.09	TSX:THO	Tahoe Resources Inc.	4.64	(0.24)	(5)%	7.27	2.88
TSX:GUY	Guyana Goldfields Inc.	1.60	(0.10)	(6)%	5.42	1.24	TSX:TMR	TMAC Resources Inc.	5.61	(0.32)	(5)%	10.65	3.95
NYSE:HMY	Harmony Gold Mining Company Limi	1.76	(0.02)	(1)%	2.53	1.43	TSX:TXG	Torex Gold Resources Inc	14.03	0.27	2%	14.58	7.29
TSX:HRT	Harte Gold Corp.	0.38	(0.03)	(6)%	0.55	0.29	TSX:TML	Treasury Metals Inc.	0.31	(0.02)	(5)%	0.60	0.21
NYSE:HL	Hecla Mining Company	2.36	(0.10)	(4)%	4.43	2.17	TSX:TLG	Troilus Gold Corp.	0.65	-	-	2.16	0.40
TSX:IMG	IAMGOLD Corporation	3.83	(0.15)	(4)%	8.20	3.64	TSX:WDO	Wesdome Gold Mines Ltd.	4.36	-	-	4.75	1.71
TSX:IVN	Ivanhoe Mines Ltd.	2.31	(0.06)	(3)%	4.29	2.00	TSX:WPM	Wheaton Precious Metals Corp.	25.18	(0.17)	(1)%	29.93	19.87
TSX:K	Kinross Gold Corporation	4.19	0.01	0%	5.71	3.15	TSX:YRI	Yamana Gold Inc.	3.23	(0.01)	(0)%	4.63	2.66
TSX:KL	Kirkland Lake Gold Ltd.	37.57	1.70	5%	37.15	16.54							

Source: Capital IQ and Haywood Securities



Weekly Performance – Precious Metals Companies (Covered Large Cap)

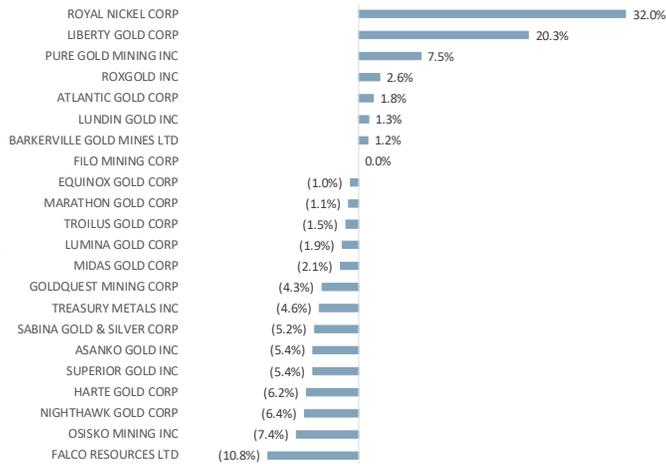


Source: Bloomberg and Haywood Securities

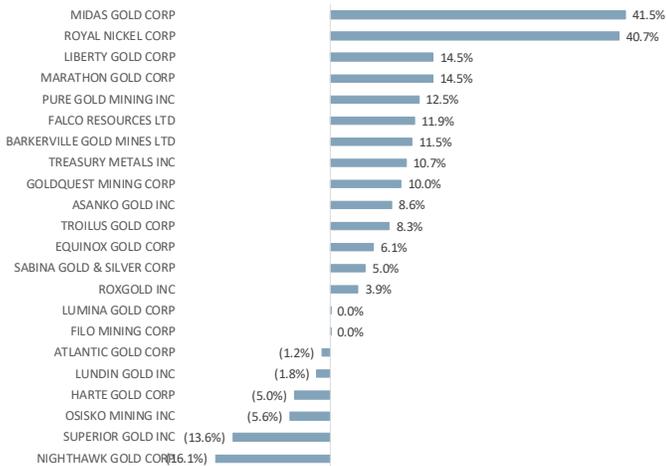


Weekly Performance – Precious Metals Companies (Covered Small Cap)

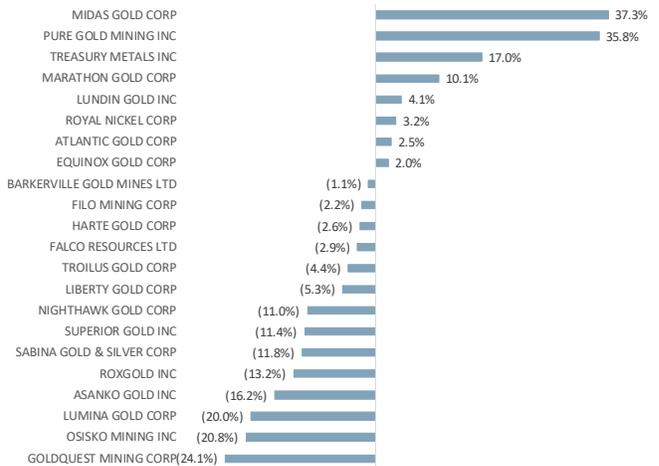
Weekly Price Change



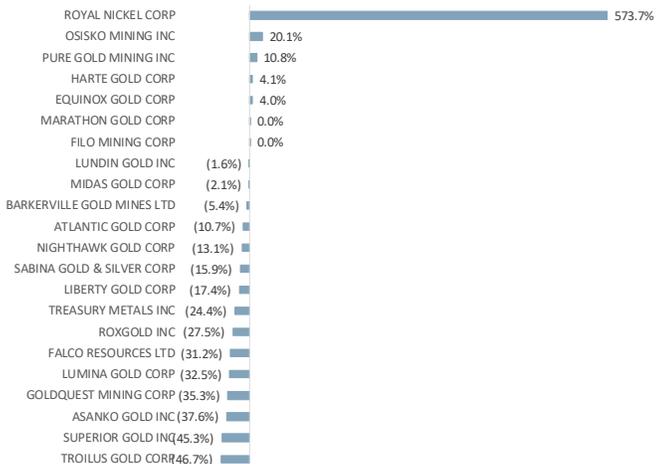
1-Month Price Change



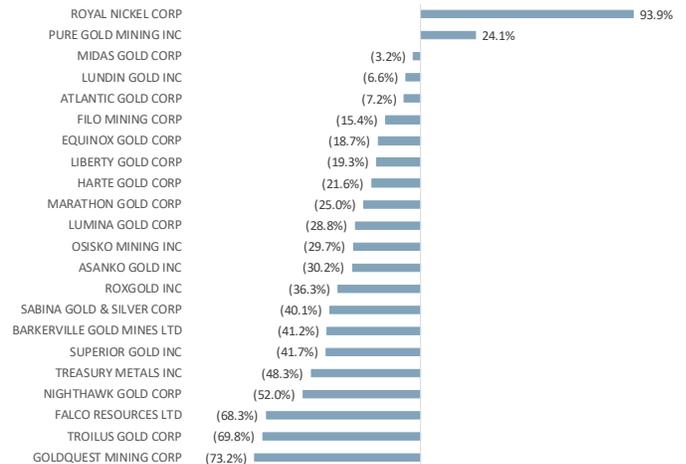
3-Month Price Change



6-Month Price Change



1-Year Price Change

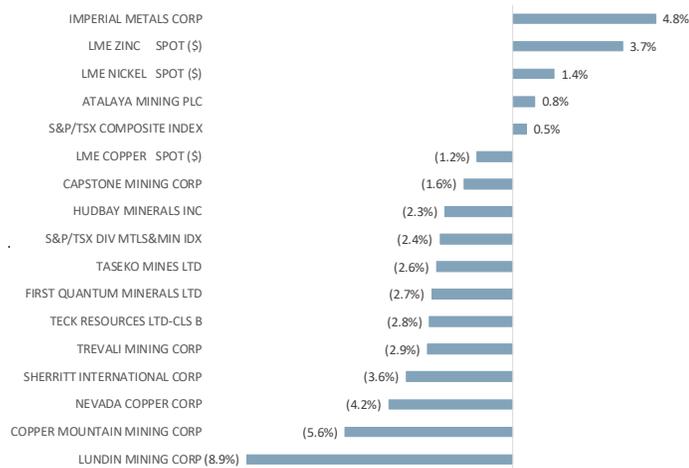


Source: Bloomberg and Haywood Securities

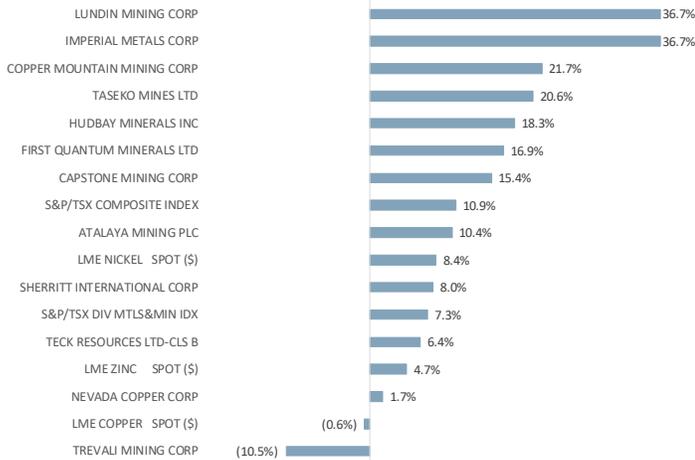


Equity Weekly Performance – Base Metals Companies

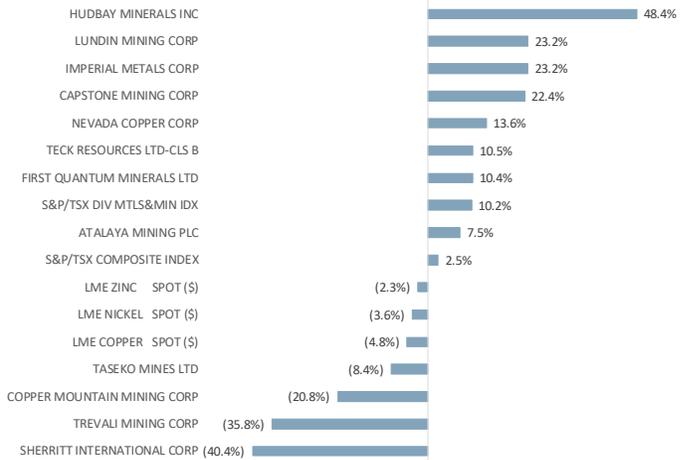
Weekly Price Change



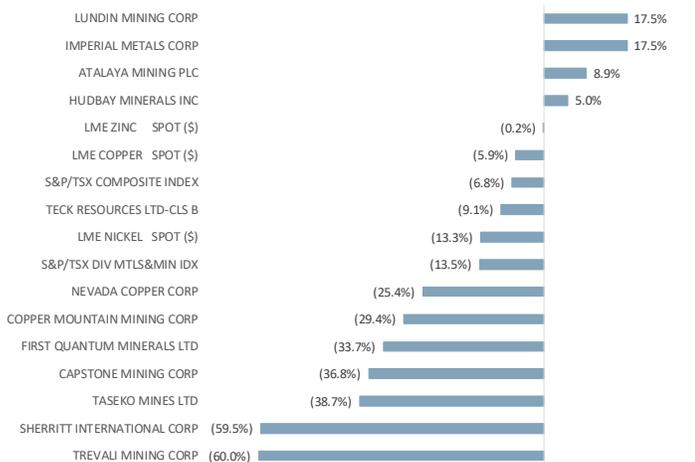
1-Month Price Change



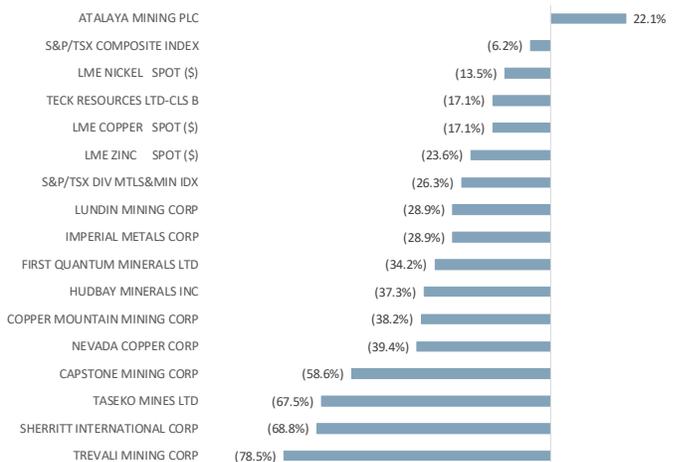
3-Month Price Change



6-Month Price Change



1-Year Price Change

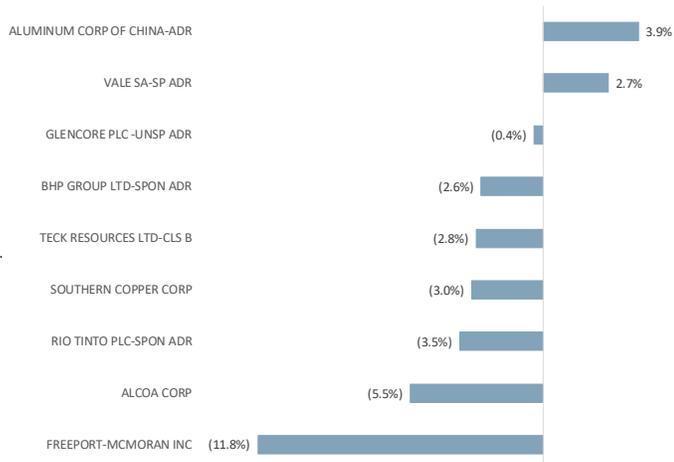


Source: Bloomberg and Haywood Securities

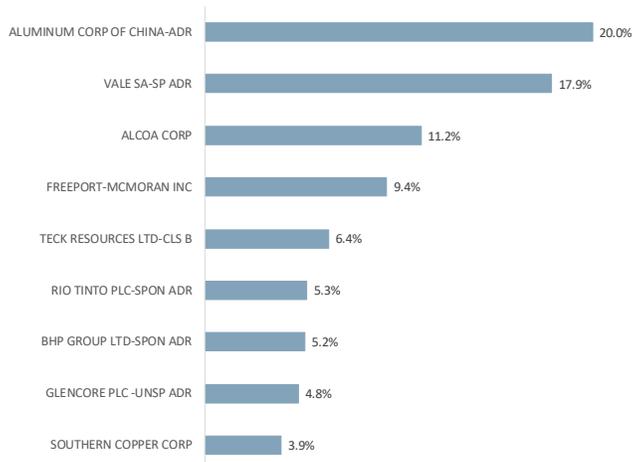


Equity Weekly Performance – Major International Miners

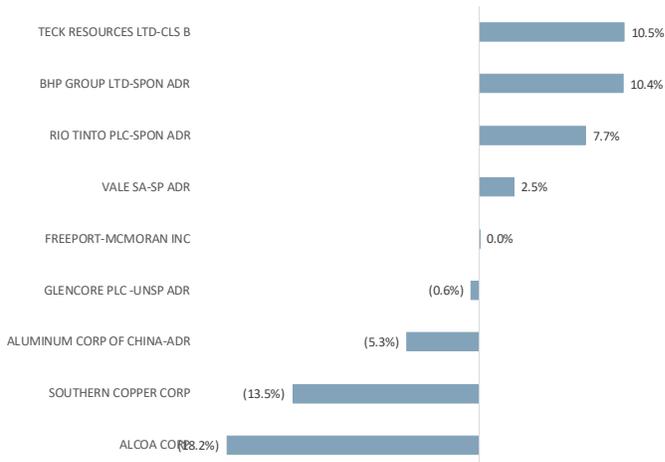
Weekly Price Change



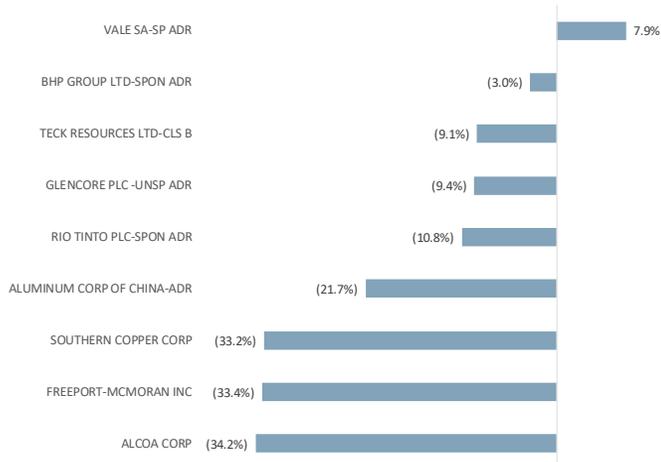
1-Month Price Change



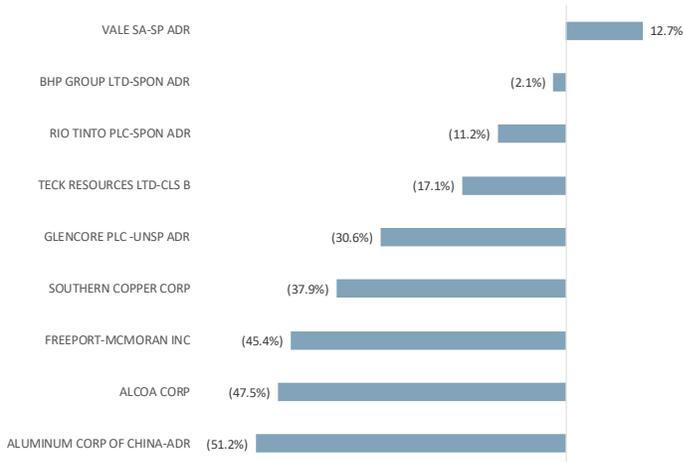
3-Month Price Change



6-Month Price Change



1-Year Price Change



Source: Bloomberg and Haywood Securities



Comparables Tables – Precious Metals

Precious Metals Companies – Market and Valuation Statistics (Consensus Estimates)

Company	Symbol	Price	Shares	Market	Cash	Working	Debt	Enterprise	2018E	2019E	Number of	P/CF Ratio		EV/CF Ratio		EV/EBITDA Ratio		P/NAV
			O/S	Capitalization	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)		CFPS	CFPS	Estimates	2018E	2019E	2018E	2019E
Senior Precious Metals Producers																		
Agnico Eagle Mines Limited	NYSE:AEM	C\$ 52.85	232.1	US\$ 9,191	US\$ 610	US\$ 896	US\$ 1,722	US\$ 10,016	US\$ 2.68	US\$ 3.34	12	14.8x	11.9x	16.1x	12.9x	13.2x	10.6x	1.6x
Alamos Gold Inc.	TSX:AGI	C\$ 5.19	391.3	US\$ 1,522	US\$ 230	US\$ 301	US\$ 2	US\$ 1,223	US\$ 0.53	US\$ 0.63	12	7.3x	6.2x	5.9x	5.0x	6.0x	4.9x	0.6x
AngloGold Ashanti Limited	JSE:ANG	C\$ 17.15	412.8	US\$ 5,303	US\$ 221	US\$ 519	US\$ 2,004	US\$ 6,788	US\$ 2.00	US\$ 2.98	3	6.4x	4.3x	8.2x	5.5x	5.0x	4.3x	1.3x
B2Gold Corp.	TSX:BTG	C\$ 3.80	990.4	US\$ 2,820	US\$ 355	US\$ 132	US\$ 458	US\$ 3,146	US\$ 0.45	US\$ 0.43	8	6.3x	6.6x	7.0x	7.4x	5.2x	5.3x	1.3x
Barrick Gold Corporation	TSX:ABX	C\$ 15.82	1751.3	US\$ 20,759	US\$ 1,697	US\$ 2,554	US\$ 5,687	US\$ 23,892	US\$ 1.71	US\$ 1.62	11	6.9x	7.3x	8.0x	8.4x	8.1x	6.5x	1.2x
Centamin plc	LSE:CEY	C\$ 1.97	1153.9	US\$ 1,706	US\$ 254	US\$ 337	-	US\$ 1,369	US\$ 0.18	US\$ 0.21	4	8.3x	7.0x	6.7x	5.6x	5.3x	4.2x	1.0x
Compania de Minas Buenaventura S.A.A.	NYSE:BVN	C\$ 20.18	254.0	US\$ 3,840	US\$ 355	US\$ 358	US\$ 271	US\$ 3,754	US\$ 1.27	US\$ 1.44	2	11.9x	10.5x	11.7x	10.3x	8.8x	11.0x	0.9x
Endeavour Mining Corporation	TSX:EDV	C\$ 21.07	109.2	US\$ 1,723	US\$ 43	US\$ 146	US\$ 474	US\$ 2,052	US\$ 2.08	US\$ 2.88	10	7.6x	5.5x	9.0x	6.5x	7.0x	5.6x	1.0x
Evolution Mining Limited	ASX:EVN	C\$ 3.52	1697.1	US\$ 4,471	US\$ 239	US\$ 247	US\$ 216	US\$ 4,441	US\$ 0.31	US\$ 0.27	5	8.5x	9.6x	8.5x	9.5x	7.9x	8.3x	1.5x
Fresnillo PLC	LSE:FRES	C\$ 15.52	736.9	US\$ 8,570	US\$ 689	US\$ 1,240	US\$ 799	US\$ 8,129	US\$ 1.07	US\$ 1.10	5	10.9x	10.6x	10.3x	10.0x	8.0x	7.4x	1.1x
Gold Fields Limited	JSE:GFI	C\$ 5.01	821.5	US\$ 3,084	US\$ 498	US\$ 86	US\$ 1,463	US\$ 4,461	US\$ 0.92	US\$ 1.14	3	4.1x	3.3x	5.9x	4.8x	4.2x	3.9x	1.2x
Goldcorp Inc.	TSX:G	C\$ 13.99	869.5	US\$ 9,115	US\$ 166	(US\$ 190)	US\$ 2,336	US\$ 11,641	US\$ 1.17	US\$ 1.77	11	9.0x	5.9x	11.5x	7.6x	9.9x	6.1x	1.0x
IMMGOLD Corporation	TSX:IMG	C\$ 3.83	467.6	US\$ 1,342	US\$ 716	US\$ 873	US\$ 396	US\$ 865	US\$ 0.60	US\$ 0.77	13	4.8x	3.7x	3.1x	2.4x	2.7x	2.6x	0.5x
Kinross Gold Corporation	TSX:K	C\$ 4.19	1250.2	US\$ 3,925	US\$ 566	US\$ 1,197	US\$ 1,734	US\$ 4,463	US\$ 0.68	US\$ 0.76	17	4.6x	4.1x	5.2x	4.7x	4.4x	4.1x	0.9x
Kirkland Lake Gold Ltd.	TSX:KLL	C\$ 37.57	209.8	US\$ 9,906	US\$ 257	US\$ 162	-	US\$ 5,744	US\$ 2.27	US\$ 2.44	11	12.4x	11.5x	12.1x	11.2x	11.0x	9.7x	1.6x
Newcrest Mining Limited	ASX:NCM	C\$ 21.61	767.1	US\$ 12,421	US\$ 953	US\$ 1,021	US\$ 1,993	US\$ 13,393	US\$ 1.67	US\$ 1.70	7	9.7x	9.5x	10.4x	10.3x	9.2x	8.4x	1.1x
Newmont Mining Corporation	NYSE:NEM	C\$ 42.95	532.7	US\$ 17,141	US\$ 3,126	US\$ 3,884	US\$ 4,163	US\$ 17,420	US\$ 3.55	US\$ 4.00	9	9.1x	8.0x	9.2x	8.2x	7.6x	7.0x	1.2x
Northern Star Resources Limited	ASX:NST	C\$ 7.78	639.5	US\$ 3,728	US\$ 328	US\$ 265	-	US\$ 3,464	US\$ 0.40	US\$ 0.55	6	14.5x	10.6x	13.4x	9.8x	10.9x	7.9x	1.2x
OceanaGold Corporation	TSX:OGC	C\$ 4.56	618.6	US\$ 2,114	US\$ 70	US\$ 93	US\$ 150	US\$ 2,171	US\$ 0.56	US\$ 0.49	14	6.1x	7.0x	6.3x	7.2x	5.8x	6.0x	1.3x
Yamana Gold Inc.	TSX:YRI	C\$ 3.23	949.3	US\$ 2,298	US\$ 125	US\$ 7	US\$ 1,776	US\$ 4,067	US\$ 0.53	US\$ 0.58	15	4.6x	4.2x	8.1x	7.4x	6.4x	5.4x	0.9x
Group Average - Senior Producers												8.4x	7.4x	8.8x	7.7x	7.3x	6.5x	1.1x
Group Average - Senior Producers (excluding high/low)												8.3x	7.3x	8.7x	7.7x	7.3x	6.4x	1.1x
Intermediate Precious Metals Producers																		
Acacia Mining plc	LSE:ACA	C\$ 3.19	410.1	US\$ 982	US\$ 121	US\$ 131	-	US\$ 850	US\$ 0.36	US\$ 0.55	5	6.7x	4.4x	5.8x	3.8x	4.0x	3.8x	1.0x
Centerra Gold Inc.	TSX:CG	C\$ 6.66	292.0	US\$ 1,457	US\$ 195	US\$ 635	US\$ 292	US\$ 1,114	US\$ 1.12	US\$ 1.23	9	4.4x	4.0x	3.4x	3.1x	2.6x	2.4x	0.6x
Delour Gold Corporation	TSX:DGC	C\$ 12.29	175.4	US\$ 1,615	US\$ 156	US\$ 198	US\$ 249	US\$ 1,666	US\$ 1.60	US\$ 1.39	15	5.8x	6.6x	5.9x	6.9x	5.9x	7.0x	0.6x
Eldorado Gold Corporation	TSX:ELD	C\$ 3.58	158.3	US\$ 425	US\$ 388	US\$ 500	US\$ 595	US\$ 520	US\$ 0.50	US\$ 0.73	10	5.3x	3.7x	6.5x	4.5x	4.8x	3.4x	0.2x
Hecla Mining Company	NYSE:HL	C\$ 3.15	480.2	US\$ 1,133	US\$ 311	US\$ 66	US\$ 534	US\$ 1,601	US\$ 0.25	US\$ 0.34	7	9.5x	7.0x	13.4x	9.9x	10.6x	8.0x	1.1x
Highland Gold Mining Limited	AMH:HGM	C\$ 2.67	363.8	US\$ 728	US\$ 11	US\$ 44	US\$ 170	US\$ 854	US\$ 0.39	US\$ 0.35	2	5.1x	5.8x	6.0x	6.8x	5.3x	5.4x	0.8x
Pretec Resources Inc.	TSX:PRV	C\$ 9.22	183.5	US\$ 1,267	US\$ 190	(US\$ 468)	US\$ 140	US\$ 1,876	US\$ 1.02	US\$ 1.46	7	6.8x	4.7x	10.1x	7.0x	9.8x	6.4x	0.5x
Regis Resources Limited	ASX:RRL	C\$ 4.57	507.7	US\$ 1,738	US\$ 134	US\$ 138	-	US\$ 1,600	US\$ 0.35	US\$ 0.32	6	9.7x	10.8x	8.9x	10.0x	7.6x	7.5x	1.2x
Resolute Mining Limited	ASX:RSG	C\$ 1.07	757.5	US\$ 605	US\$ 48	US\$ 156	-	US\$ 450	US\$ 0.08	US\$ 0.11	3	9.8x	7.2x	7.3x	5.4x	9.5x	4.2x	0.6x
SEMAFO Inc.	TSX:SMF	C\$ 2.86	325.6	US\$ 698	US\$ 86	US\$ 83	US\$ 72	US\$ 687	US\$ 0.40	US\$ 0.74	8	5.3x	2.9x	5.2x	2.9x	5.9x	2.7x	0.7x
Tahoe Resources Inc.	TSX:THO	C\$ 4.64	313.3	US\$ 1,089	US\$ 48	US\$ 103	US\$ 100	US\$ 1,087	US\$ 0.31	US\$ 0.63	9	11.4x	5.6x	11.4x	5.5x	8.2x	4.0x	0.7x
Torex Gold Resources Inc.	TSX:TXG	C\$ 14.03	84.9	US\$ 893	US\$ 122	US\$ 57	US\$ 269	US\$ 1,105	US\$ 2.14	US\$ 2.65	5	4.9x	4.0x	6.1x	4.9x	5.9x	4.3x	0.8x
Group Average - Intermediate Producers												7.1x	5.6x	7.5x	5.9x	6.7x	4.9x	0.7x
Group Average - Intermediate Producers (excluding high/low)												6.9x	5.3x	7.3x	5.8x	6.7x	4.9x	0.7x
Junior Precious Metals Producers																		
Alacer Gold Corp.	TSX:ASR	C\$ 3.04	293.8	US\$ 669	US\$ 116	US\$ 103	US\$ 288	US\$ 854	US\$ 0.29	US\$ 0.66	8	7.9x	3.5x	10.1x	4.4x	27.6x	4.3x	0.7x
Alio Gold Inc.	TSX:ALO	C\$ 0.98	84.7	US\$ 62	US\$ 24	US\$ 92	US\$ 15	(US\$ 15)	US\$ 0.14	US\$ 0.35	6	5.4x	2.1x	-	-	-	-	0.3x
Argonaut Gold Inc.	TSX:AR	C\$ 1.55	177.8	US\$ 206	US\$ 21	US\$ 96	US\$ 8	US\$ 119	US\$ 0.36	US\$ 0.45	8	3.2x	2.6x	1.9x	1.5x	1.7x	1.3x	0.4x
Asanko Gold Inc.	TSX:AKG	C\$ 0.88	225.8	US\$ 149	US\$ 14	US\$ 11	-	US\$ 138	US\$ 0.29	US\$ 0.18	5	2.3x	3.7x	2.1x	3.5x	2.0x	3.2x	0.4x
Atlantic Gold Corporation	TSXV:AGB	C\$ 1.66	236.8	US\$ 295	US\$ 31	US\$ 27	US\$ 81	US\$ 349	US\$ 0.24	US\$ 0.25	8	5.3x	5.0x	6.2x	5.9x	6.4x	5.1x	0.6x
Avesoro Resources Inc.	TSX:ASO	C\$ 2.60	81.6	US\$ 159	US\$ 9	(US\$ 11)	US\$ 105	US\$ 274	US\$ 0.88	US\$ 0.79	2	2.2x	2.5x	3.8x	4.3x	2.8x	3.3x	0.7x
Dundee Precious Metals Inc.	TSX:DPM	C\$ 3.63	178.5	US\$ 486	US\$ 23	US\$ 35	US\$ 39	US\$ 489	US\$ 0.56	US\$ 0.63	2	4.9x	4.3x	4.9x	4.3x	5.1x	3.0x	0.6x
Golden Star Resources Ltd.	TSX:GSC	C\$ 4.41	108.8	US\$ 360	US\$ 18	(US\$ 91)	US\$ 77	US\$ 527	US\$ 0.24	US\$ 0.59	6	13.7x	5.6x	20.1x	8.1x	10.8x	4.9x	0.6x
Guyana Goldfields Inc.	TSX:GUY	C\$ 1.60	173.5	US\$ 208	US\$ 93	US\$ 116	US\$ 25	US\$ 117	US\$ 0.30	US\$ 0.52	5	4.0x	2.3x	2.3x	1.3x	2.3x	1.5x	0.3x
Jaguar Mining Inc.	TSX:JAG	C\$ 0.21	328.6	US\$ 50	US\$ 7	US\$ 2	US\$ 0	US\$ 49	US\$ 0.08	US\$ 0.12	2	1.9x	1.3x	1.9x	1.3x	1.7x	1.2x	0.2x
Leopold Mining Corporation	TSX:LMC	C\$ 1.99	284.7	US\$ 425	US\$ 47	US\$ 48	US\$ 209	US\$ 586	US\$ 0.31	US\$ 0.50	7	4.9x	3.0x	6.7x	4.1x	6.6x	3.4x	0.4x
New Gold Inc.	TSX:NGD	C\$ 1.40	578.7	US\$ 607	US\$ 129	US\$ 362	US\$ 940	US\$ 1,185	US\$ 0.45	US\$ 0.37	14	2.3x	2.9x	4.5x	5.6x	4.1x	4.4x	0.7x
Perseus Mining Limited	ASX:PRU	C\$ 0.36	1037.5	US\$ 280	US\$ 23	US\$ 48	US\$ 39	US\$ 271	US\$ 0.05	US\$ 0.11	5	5.0x	2.5x	4.8x	2.4x	4.2x	2.4x	0.6x
Premier Gold Mines Limited	TSX:PG	C\$ 1.59	203.1	US\$ 242	US\$ 57	US\$ 63	-	US\$ 179	US\$ 0.03	US\$ 0.21	4	44.5x	5.6x	33.0x	4.2x	14.4x	9.5x	0.4x
Primo Mining Corp.	TSX:P	C\$ 0.31	193.0	US\$ 44	US\$ 16	US\$ 25	US\$ 74	US\$ 93	-	-	0	-	-	-	-	-	-	-
RNC Minerals	TSX:RNX	C\$ 0.64	466.2	US\$ 224	US\$ 1	(US\$ 21)	US\$ 0	US\$ 245	US\$ 0.02	US\$ 0.06	1	21.8x	8.0x	23.9x	8.8x	10.2x	7.3x	0.8x
Roxgold Inc.	TSX:ROXG	C\$ 0.79	374.2	US\$ 222	US\$ 71	US\$ 69	US\$ 27	US\$ 180	US\$ 0.19	US\$ 0.24	7	3.1x	2.4x	2.5x	2.0x	2.1x	1.6x	0.6x
Superior Gold Inc.	TSXV:SGI	C\$ 0.70	95.8	US\$ 50	US\$ 22	US\$ 19	-	US\$ 31	US\$ 0.11	US\$ 0.28	9	4.9x	1.9x	3.0x	1.2x	4.8x	1.0x	0.4x
Teranga Gold Corporation	TSX:TGZ	C\$ 3.78	107.6	US\$ 305	US\$ 80	US\$ 92	US\$ 76	US\$ 289	US\$ 0.73	US\$ 0.57	3	3.9x	5.0x	3.7x	4.7x	-	3.0x	0.5x
TMAC Resources Inc.	TSX:TMR	C\$ 5.61	112.6	US\$ 473	US\$ 11	(US\$ 17)	US\$ 98	US\$ 589	US\$ 0.20	US\$ 1.05	7	21.3x	4.0x	26.4x	5.0x	21.0x	5.1x	0.6x
Westdome Gold Mines Ltd.	TSX:WDO	C\$ 4.36	135.0	US\$ 441	US\$ 24	US\$ 12	US\$ 98	US\$ 429	US\$ 0.22	US\$ 0.26	11	14.6x	12.7x	14.3x	12.3x	13.1x	9.7x	0.9x
Group Average - Junior Producers												8.9x	4.0x	9.3x	4			

Other Precious Metals Companies – Market and Valuation Statistics (Consensus Estimates)

Company	Symbol	Price	Shares O/S (millions)	Market Capitalization (millions)	Cash (millions)	Working Capital (millions)	Debt (millions)	Enterprise Value (millions)	2018E CFPS	2019E CFPS	Number of Estimates	P/CF Ratio		EV/CF Ratio		EV/EBITDA Ratio		P/NAV 2018E	
												2018E	2019E	2018E	2019E	2018E	2019E		
PGM Producers																			
Anglo American Platinum Limited	JSE:AMS	C\$ 57.88	262.2	US\$ 11,373	US\$ 675	US\$ 847	US\$ 609	US\$ 11,135	US\$ 2.97	US\$ 4.05	2	14.6x	10.7x	14.3x	10.5x	10.5x	9.2x	1.5x	
Impala Platinum Holdings Limited	JSE:MP	C\$ 3.60	702.3	US\$ 1,893	US\$ 270	US\$ 655	US\$ 487	US\$ 1,725	US\$ 0.20	US\$ 0.38	3	13.5x	7.0x	12.3x	6.4x	6.1x	4.2x	1.8x	
Lonmin Plc	LSE:LMI	C\$ 0.82	282.7	US\$ 173	US\$ 264	US\$ 247	-	(US\$ 74)	US\$ 0.19	US\$ 0.38	1	3.2x	1.6x	-	-	-	-	0.4x	
Group Average - PGM Producers												10.5x	6.4x	13.3x	8.4x	8.3x	6.7x	1.2x	
Silver Producers																			
Americas Silver Corporation	TSX:USA	C\$ 2.07	43.4	US\$ 67	US\$ 3	US\$ 3	US\$ 7	US\$ 71	US\$ 0.33	US\$ 0.29	2	4.7x	5.3x	4.9x	5.5x	11.7x	4.6x	0.4x	
Coeur Mining, Inc.	NYSE:CDE	C\$ 5.87	203.3	US\$ 894	US\$ 105	US\$ 140	US\$ 366	US\$ 1,120	US\$ 0.37	US\$ 0.75	5	11.8x	5.8x	14.7x	7.3x	9.4x	7.0x	1.1x	
Endeavour Silver Corp.	TSX:EDR	C\$ 2.61	130.8	US\$ 256	US\$ 29	US\$ 57	-	US\$ 198	US\$ 0.19	US\$ 0.22	5	10.2x	8.8x	7.9x	6.8x	7.7x	6.1x	0.9x	
First Majestic Silver Corp.	TSX:FR	C\$ 7.02	193.9	US\$ 1,020	US\$ 80	US\$ 128	US\$ 150	US\$ 1,042	US\$ 0.32	US\$ 0.54	3	16.3x	9.8x	16.6x	10.0x	22.5x	9.1x	1.2x	
Fortuna Silver Mines Inc.	TSX:FVI	C\$ 4.63	159.9	US\$ 555	US\$ 177	US\$ 183	US\$ 40	US\$ 411	US\$ 0.49	US\$ 0.65	6	7.1x	5.4x	5.2x	4.0x	3.7x	3.0x	0.9x	
Fresnillo PLC	LSE:FRES	C\$ 15.52	736.9	US\$ 8,570	US\$ 689	US\$ 1,240	US\$ 799	US\$ 8,129	US\$ 1.07	US\$ 1.10	5	10.9x	10.6x	10.3x	10.0x	8.0x	7.4x	1.1x	
Hecla Mining Company	NYSE:HL	C\$ 3.15	480.2	US\$ 1,133	US\$ 61	US\$ 66	US\$ 534	US\$ 1,601	US\$ 0.25	US\$ 0.34	7	9.5x	7.0x	13.4x	9.9x	10.6x	8.0x	1.1x	
Mandalay Resources Corporation	TSX:MND	C\$ 0.15	451.6	US\$ 49	US\$ 27	US\$ 5	US\$ 32	US\$ 76	US\$ 0.05	US\$ 0.06	1	2.2x	1.8x	3.4x	2.8x	-	2.3x	0.2x	
Pan American Silver Corp.	TSX:PAAS	C\$ 17.71	153.3	US\$ 2,035	US\$ 253	US\$ 444	US\$ 21	US\$ 1,612	US\$ 1.22	US\$ 1.64	8	10.9x	8.1x	8.6x	6.4x	6.8x	5.9x	1.0x	
SSR Mining Inc.	TSX:SSRM	C\$ 16.10	120.2	US\$ 1,451	US\$ 481	US\$ 649	US\$ 244	US\$ 1,045	US\$ 0.85	US\$ 1.48	5	14.2x	8.2x	10.2x	5.9x	7.9x	6.5x	1.1x	
Silvercorp Metals Inc.	TSX:SVM	C\$ 2.77	168.7	US\$ 350	US\$ 124	US\$ 99	-	US\$ 252	US\$ 0.46	US\$ 0.44	1	4.5x	4.7x	3.2x	3.4x	3.1x	3.1x	0.6x	
Group Average - Silver Producers												9.3x	6.8x	9.0x	6.5x	9.1x	5.7x	0.9x	
Group Average - Silver Producers (excluding high/low)												9.3x	7.0x	8.7x	6.6x	7.7x	5.7x	0.9x	
Diamond Producers																			
Lucara Diamond Corp.	TSX:LUC	C\$ 1.57	396.5	US\$ 466	US\$ 31	US\$ 70	-	US\$ 396	US\$ 0.15	US\$ 0.18	6	8.0x	6.6x	6.8x	5.6x	5.2x	4.2x	0.7x	
Mountain Province Diamonds Inc.	TSX:MPVD	C\$ 1.54	210.0	US\$ 242	US\$ 22	US\$ 71	US\$ 303	US\$ 474	US\$ 0.51	US\$ 0.43	3	2.3x	2.7x	4.5x	5.2x	4.2x	3.6x	0.5x	
Petra Diamonds Limited	LSE:PDL	C\$ 0.75	865.3	US\$ 487	US\$ 222	US\$ 148	US\$ 712	US\$ 1,051	US\$ 0.18	US\$ 0.19	3	3.1x	3.0x	6.7x	6.4x	5.1x	4.8x	0.9x	
Stornoway Diamond Corporation	TSX:SWY	C\$ 0.20	923.2	US\$ 138	US\$ 5	(US\$ 75)	US\$ 181	US\$ 394	(US\$ 0.02)	US\$ 0.05	3	-	3.0x	-	8.4x	-	6.3x	0.5x	
Group Average - Diamond Producers												4.5x	3.8x	6.0x	6.4x	4.8x	4.7x	0.6x	
Royalty Companies																			
Anglo Pacific Group plc	LSE:APF	C\$ 2.83	180.1	US\$ 381	US\$ 15	US\$ 22	US\$ 8	US\$ 367	US\$ 0.26	US\$ 0.29	3	8.1x	7.3x	7.8x	7.0x	6.4x	5.8x	0.9x	
Alliis Minerals Corporation	TSX:ALS	C\$ 11.01	42.9	US\$ 354	US\$ 36	US\$ 22	US\$ 78	US\$ 409	-	-	0	-	-	-	-	-	-	1.0x	
Franco-Nevada Corporation	TSX:FNV	C\$ 94.95	186.4	US\$ 13,259	US\$ 77	US\$ 150	-	US\$ 13,109	US\$ 2.59	US\$ 2.95	16	27.4x	24.1x	27.1x	23.9x	25.3x	22.4x	2.0x	
Maverix Metals Inc.	TSXV:MMX	C\$ 2.28	215.4	US\$ 368	US\$ 15	US\$ 21	US\$ 6	US\$ 353	US\$ 0.09	US\$ 0.11	5	19.4x	16.1x	18.6x	15.4x	17.6x	13.7x	1.3x	
Osisko Gold Royalties Ltd	TSX:OR	C\$ 11.74	155.6	US\$ 1,369	US\$ 114	US\$ 218	US\$ 325	US\$ 1,475	US\$ 0.39	US\$ 0.48	15	22.5x	18.5x	24.3x	19.9x	20.3x	18.0x	1.1x	
Royal Gold, Inc.	US:RGLD	C\$ 108.10	65.5	US\$ 5,306	US\$ 117	US\$ 122	US\$ 355	US\$ 5,539	US\$ 4.37	US\$ 4.41	12	18.5x	18.4x	19.4x	19.2x	16.2x	17.4x	1.8x	
Sandstorm Gold Ltd.	TSX:SSL	C\$ 6.14	182.7	US\$ 840	US\$ 20	US\$ 21	-	US\$ 819	US\$ 0.25	US\$ 0.29	9	18.6x	15.9x	18.1x	15.5x	18.7x	14.0x	1.1x	
Wheaton Precious Metals Corp.	TSX:WPM	C\$ 25.18	444.0	US\$ 8,377	US\$ 119	US\$ 108	US\$ 1,381	US\$ 9,650	US\$ 1.06	US\$ 1.18	15	17.7x	16.0x	20.4x	18.4x	19.3x	17.6x	1.3x	
Group Average - Royalty Companies												18.9x	16.6x	19.4x	17.0x	17.7x	15.6x	1.3x	
Group Average - Royalty Companies (excluding high/low)												19.4x	16.9x	20.2x	17.7x	18.4x	16.2x	1.3x	

All data sourced from Capital IQ

Source: Capital IQ and Haywood Securities



Senior Gold Producers – Reserves and Resources

Company	Symbol	Market Capitalization (millions)	Working Capital (millions)	Enterprise Value (millions)	Global Reserves & Resources					Reserves					Reserves EV/oz Au	Resources (M&I and Inferred)						Global		
					Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au	Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au		Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au	% Au Inferred	EV/oz Au	EV/oz AuEq	
Agnico Eagle Mines Limited	NYSE:AEM	US \$9,191	US \$896	US \$10,019	62.2	2.02	67.9	2.21	92%	21.3	2.54	22.4	2.68	95%	US \$471	40.9	1.83	45.5	2.03	90%	52%	US \$161	US \$147	
Alamos Gold Inc.	TSX:AGI	US \$1,522	US \$301	US \$1,223	22.3	1.28	23.0	1.32	97%	9.8	1.50	10.2	1.56	96%	US \$124	12.4	1.15	12.8	1.18	97%	40%	US \$55	US \$53	
AngloGold Ashanti Limited	JSE:ANG	US \$5,303	US \$519	US \$6,788	192.5	1.56	216.7	1.76	89%	45.1	1.20	47.1	1.25	96%	US \$150	147.4	1.81	169.6	2.08	87%	33%	US \$35	US \$31	
B2Gold Corp.	TSX:BTO	US \$2,820	US \$132	US \$3,146	24.4	0.86	29.8	1.05	82%	8.2	1.21	8.2	1.21	100%	US \$383	16.2	0.75	21.6	0.99	75%	53%	US \$129	US \$106	
Barrick Gold Corporation	TSX:ABX	US \$20,759	US \$2,554	US \$23,917	191.0	0.76	308.2	1.22	62%	77.4	1.11	102.6	1.47	75%	US \$309	113.6	0.62	205.6	1.13	55%	30%	US \$125	US \$78	
Centamin plc	LSE:CEY	US \$1,706	US \$337	US \$1,369	11.4	1.12	11.4	1.12	100%	4.0	1.02	4.0	1.02	100%	US \$342	7.4	1.18	7.4	1.18	100%	33%	US \$120	US \$120	
Compañía de Minas Buenaventura S.A.A.	NYSE:BVN	US \$3,840	US \$358	US \$4,131	23.7	0.31	78.2	1.02	30%	6.0	0.20	25.8	0.85	23%	US \$687	17.6	0.38	52.2	1.12	34%	23%	US \$174	US \$53	
Endeavour Mining Corporation	TSX:EDV	US \$1,723	US \$146	US \$2,121	15.1	1.84	15.1	1.84	100%	7.6	1.77	7.6	1.77	100%	US \$279	7.5	1.91	7.5	1.91	100%	35%	US \$140	US \$140	
Evolution Mining Limited	ASX:EVN	US \$4,471	US \$237	US \$4,451	13.8	0.91	16.6	1.10	83%	6.6	0.88	8.4	1.12	78%	US \$678	7.1	1.24	8.1	1.42	87%	36%	US \$323	US \$268	
Fresnillo PLC	LSE:FRES	US \$8,570	US \$1,240	US \$8,129	38.0	0.79	79.8	1.66	48%	9.6	0.76	20.3	1.62	47%	US \$851	28.1	0.79	59.2	1.67	48%	33%	US \$214	US \$102	
Gold Fields Limited	JSE:GFI	US \$3,084	US \$86	US \$4,889	108.2	2.27	123.1	2.58	88%	48.6	2.66	50.2	2.75	97%	US \$101	59.6	2.02	72.9	2.48	82%	42%	US \$45	US \$40	
Goldcorp Inc.	TSX:G	US \$9,115	US (\$190)	US \$12,274	113.3	0.65	191.9	1.10	59%	53.2	0.65	98.6	1.20	54%	US \$231	60.1	0.66	93.1	1.02	65%	37%	US \$108	US \$64	
IAMGOLD Corporation	TSX:IMG	US \$1,342	US \$873	US \$865	37.3	1.19	38.1	1.22	98%	16.6	1.17	16.6	1.17	100%	US \$52	20.7	1.21	21.4	1.26	97%	50%	US \$23	US \$23	
Kinross Gold Corporation	TSX:K	US \$3,925	US \$1,197	US \$4,463	64.0	0.67	65.1	0.68	98%	28.1	0.67	28.7	0.69	98%	US \$159	35.9	0.67	36.4	0.67	99%	20%	US \$70	US \$69	
Kirkland Lake Gold Ltd.	TSX:KL	US \$5,906	US \$162	US \$5,771	20.6	4.82	20.6	4.82	100%	4.8	10.93	4.8	10.93	100%	US \$1,202	15.8	4.12	15.8	4.12	100%	44%	US \$280	US \$280	
Newcrest Mining Limited	ASX:NCM	US \$12,421	US \$1,021	US \$13,393	123.4	0.58	214.0	1.00	58%	62.3	0.60	112.5	1.09	55%	US \$215	61.1	0.55	101.5	0.91	60%	17%	US \$109	US \$63	
Newmont Mining Corporation	NYSE:NEM	US \$17,141	US \$3,884	US \$17,428	111.5	0.80	147.2	1.06	76%	68.8	0.93	75.5	1.02	91%	US \$253	42.6	0.65	71.8	1.10	59%	32%	US \$156	US \$118	
Northern Star Resources Limited	ASX:NST	US \$3,728	US \$254	US \$3,487	16.1	2.94	28.4	5.21	57%	4.1	3.62	4.1	3.62	100%	US \$859	12.0	2.83	24.3	5.75	49%	53%	US \$217	US \$123	
OceanaGold Corporation	TSX:OGC	US \$2,114	US \$93	US \$2,201	13.0	1.60	14.1	1.73	93%	5.9	1.42	6.6	1.59	90%	US \$374	7.1	1.78	7.5	1.87	95%	43%	US \$169	US \$156	
Yamana Gold Inc.	TSX:YRI	US \$2,298	US \$7	US \$4,108	55.5	0.49	113.7	1.01	49%	19.3	0.35	53.5	0.98	36%	US \$213	36.2	0.63	60.2	1.04	60%	45%	US \$74	US \$36	
Group Average - Total					# Companies: 20										US \$397								US \$136	US \$103

Equivalency assumptions (US\$ / 01-24-19): \$1,281/oz Au, \$15.32/oz Ag, \$803/oz Pt, \$1,322/oz Pd, \$2.67/lb Cu, \$1.20/lb Zn, \$0.94/lb Pb, \$5.31/lb Ni, \$11.29/lb Mo, \$17.24/lb Co, \$0/t Sb, \$28.75/lb U3O8, \$9.58/lb Sn, \$93.00/t HCC, \$74.61/t 62% Fe

Source: SNL Financial retrieved on January 24, 2019



Intermediate Gold Producers – Reserves and Resources

Company	Symbol	Market Capitalization (millions)	Working Capital (millions)	Enterprise Value (millions)	Global Reserves & Resources					Reserves					Reserves EV/oz Au	Resources (M&I and Inferred)						Global	
					Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au	Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au		Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au	% Au Inferred	EV/oz Au	EV/oz AuEq
Acacia Mining plc	LSE:ACA	US \$982	US \$0	US \$1,039	25.7	3.66	27.7	3.96	93%	7.5	3.83	7.9	4.04	95%	US \$139	18.2	3.60	19.9	3.93	92%	63%	US \$40	US \$37
Centerra Gold Inc.	TSX:CG	US \$1,457	US \$635	US \$1,151	33.5	0.43	61.4	0.79	55%	16.5	0.67	22.1	0.89	75%	US \$70	17.0	0.32	39.3	0.74	43%	40%	US \$34	US \$19
China Gold International Resources Corp. Ltd.	TSX:CGG	US \$449	US \$87	US \$1,489	10.5	0.16	63.5	0.94	17%	4.6	0.27	22.9	1.35	20%	US \$325	6.0	0.12	40.6	0.80	15%	44%	US \$141	US \$23
Detour Gold Corporation	TSX:DGC	US \$1,615	US \$198	US \$1,666	20.8	0.96	20.8	0.96	100%	16.0	0.97	16.0	0.97	100%	US \$104	4.8	0.96	4.8	0.96	100%	23%	US \$80	US \$80
Eldorado Gold Corporation	TSX:ELD	US \$425	US \$500	US \$526	39.6	0.87	53.9	1.18	73%	16.5	1.37	23.3	1.93	71%	US \$32	23.1	0.69	30.6	0.92	75%	51%	US \$13	US \$10
Harmony Gold Mining Company Limited	JSE:HAR	US \$963	US \$43	US \$1,280	95.8	1.21	127.1	1.61	75%	24.5	0.68	36.4	1.02	67%	US \$52	71.3	1.65	90.7	2.10	79%	36%	US \$13	US \$10
Highland Gold Mining Limited	AIM:HGM	US \$728	US \$44	US \$857	17.2	2.99	17.2	2.99	100%	5.1	3.26	5.1	3.26	100%	US \$168	12.1	3.04	12.1	3.04	100%	19%	US \$50	US \$50
McEwen Mining Inc.	NYSE:MUX	US \$565	US \$38	US \$580	13.2	0.11	80.2	0.66	16%	0.8	1.46	0.9	1.69	86%	US \$773	12.5	0.10	79.3	0.66	16%	46%	US \$44	US \$7
Pretium Resources Inc.	TSX:PVG	US \$1,267	US (\$468)	US \$1,876	48.8	0.68	63.0	0.88	77%	8.7	14.63	9.1	15.27	96%	US \$216	40.1	0.56	54.0	0.76	74%	32%	US \$38	US \$30
Regis Resources Limited	ASX:RRL	US \$1,738	US \$132	US \$1,606	8.4	0.90	8.4	0.90	100%	3.8	1.07	3.8	1.07	100%	US \$426	4.6	0.79	4.6	0.79	100%	44%	US \$191	US \$191
Resolute Mining Limited	ASX:RSG	US \$605	US \$149	US \$491	12.6	1.55	12.6	1.55	100%	4.8	1.41	4.8	1.41	100%	US \$103	7.8	1.64	7.8	1.64	100%	41%	US \$39	US \$39
SEMAFO Inc.	TSX:SMF	US \$698	US \$83	US \$714	7.0	2.70	7.0	2.70	100%	2.9	3.37	2.9	3.37	100%	US \$249	4.2	2.37	4.2	2.37	100%	33%	US \$102	US \$102
Tahoe Resources Inc.	TSX:THO	US \$1,089	US \$103	US \$1,089	22.6	0.50	42.3	0.93	54%	3.7	0.56	8.1	1.23	46%	US \$293	18.9	0.49	34.2	0.88	55%	46%	US \$48	US \$26
Torex Gold Resources Inc	TSX:TXG	US \$893	US \$57	US \$1,105	8.4	2.67	11.4	3.63	74%	3.3	2.74	3.3	2.80	98%	US \$338	5.1	2.63	8.1	4.13	64%	85%	US \$131	US \$97
Group Average - Total					# Companies: 14										US \$235							US \$69	US \$51

Equivalency assumptions (US\$ / 01-24-19): \$1,281/oz Au, \$15.32/oz Ag, \$803/oz Pt, \$1,322/oz Pd, \$2.67/lb Cu, \$1.20/lb Zn, \$0.94/lb Pb, \$5.31/lb Ni, \$11.29/lb Mo, \$17.24/lb Co, \$0.1 Sb, \$28.75/lb U3O8, \$9.58/lb Sn, \$93.00/lb HCC, \$74.61/lb 62% Fe

Source: SNL Financial retrieved on January 24, 2019



Junior Gold Producers – Reserves and Resources

Company	Symbol	Market Capitalization (millions)	Working Capital (millions)	Enterprise Value (millions)	Global Reserves & Resources					Reserves					Reserves EV/oz Au	Resources (M&I and Inferred)						Global	
					Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au	Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au		Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au	% Au Inferred	EV/oz Au	EV/oz AuEq
Alacer Gold Corp.	TSX:ASR	US \$669	US \$103	US \$854	7.3	0.66	13.4	1.22	54%	3.7	2.17	5.0	2.96	73%	US \$234	3.6	0.39	8.4	0.90	43%	54%	US \$118	US \$64
Alio Gold Inc.	TSX:ALO	US \$62	US \$92	US (\$15)	7.4	0.53	7.9	0.57	93%	1.9	0.89	2.0	0.90	99%	-	5.4	0.46	5.9	0.51	91%	25%	-	-
Argonaut Gold Inc.	TSX:AR	US \$206	US \$96	US \$119	12.6	0.57	15.3	0.70	83%	4.5	0.62	5.2	0.72	87%	US \$26	8.1	0.55	10.1	0.69	80%	16%	US \$9	US \$8
Asanko Gold Inc.	TSX:AKG	US \$149	US \$11	US \$138	6.2	1.46	6.2	1.46	100%	4.7	1.57	4.7	1.57	100%	US \$30	1.6	1.22	1.6	1.22	100%	15%	US \$22	US \$22
Azimah Resources Limited	ASX:AZM	US \$17	US \$2	US \$15	0.9	1.55	0.9	1.55	100%	0.3	2.14	0.3	2.14	100%	US \$57	0.6	1.38	0.6	1.38	100%	47%	US \$17	US \$17
Beadell Resources Limited	ASX:BDR	US \$63	US (\$18)	US \$121	3.7	0.43	15.9	1.81	23%	1.5	1.83	1.5	1.83	100%	US \$82	2.3	0.28	14.4	1.81	16%	66%	US \$32	US \$8
Dundee Precious Metals Inc.	TSX:DPM	US \$486	US \$35	US \$489	9.7	0.39	18.7	0.75	52%	2.7	3.35	3.5	4.40	76%	US \$182	7.0	0.29	15.1	0.63	46%	55%	US \$50	US \$26
Fiore Gold Ltd.	TSX:VF	US \$25	US \$18	US \$7	3.8	0.93	3.8	0.93	100%	0.3	0.52	0.3	0.52	100%	US \$21	3.5	1.00	3.5	1.00	100%	26%	US \$2	US \$2
Golden Star Resources Ltd.	TSX:GSC	US \$360	US (\$91)	US \$529	10.9	3.21	10.9	3.21	100%	1.5	2.55	1.5	2.55	100%	US \$347	7.6	3.58	7.6	3.58	100%	72%	US \$48	US \$48
Goldgroup Mining Inc.	TSX:GGA	US \$7	US (\$3)	US \$11	0.3	0.96	0.7	2.04	47%	-	-	-	-	-	-	0.3	0.96	0.7	2.04	47%	35%	US \$31	US \$15
Guyana Goldfields Inc.	TSX:GUY	US \$208	US \$116	US \$117	8.4	2.95	8.4	2.95	100%	4.0	2.87	4.0	2.87	100%	US \$29	4.4	3.03	4.4	3.03	100%	47%	US \$14	US \$14
Jaguar Mining Inc.	TSX:JAG	US \$50	US \$2	US \$58	3.3	4.22	3.3	4.22	100%	0.3	3.94	0.3	3.94	100%	US \$182	3.0	4.25	3.0	4.25	100%	52%	US \$18	US \$18
Leagold Mining Corporation	TSX:LMC	US \$425	US \$48	US \$586	25.5	1.04	27.8	1.14	92%	5.6	1.34	5.9	1.40	96%	US \$104	19.9	8.75	21.9	9.65	91%	45%	US \$23	US \$21
Medusa Mining Limited	ASX:MML	US \$53	US \$12	US \$41	1.3	3.83	1.3	3.83	100%	0.3	6.69	0.3	6.69	100%	US \$126	1.0	4.07	1.0	4.07	100%	41%	US \$31	US \$31
Metanor Resources Inc.	TSX:MTO	US \$44	US (\$6)	US \$52	1.7	1.54	1.7	1.54	100%	0.2	7.38	0.2	7.38	100%	US \$258	1.5	1.40	1.5	1.40	100%	79%	US \$30	US \$30
Minera IRL Limited	BVL:MIRL	US \$9	US (\$79)	US \$89	2.5	2.17	2.5	2.17	100%	1.1	1.87	1.1	1.87	100%	US \$83	1.4	2.43	1.4	2.43	100%	76%	US \$35	US \$35
New Gold Inc.	TSX:NGD	US \$607	US \$362	US \$1,185	22.2	0.72	28.4	0.92	78%	14.8	0.79	17.7	0.94	84%	US \$80	7.4	0.62	10.7	0.90	69%	20%	US \$53	US \$42
Orosur Mining Inc.	TSX:OMI	US \$12	US (\$14)	US \$27	0.6	0.65	1.4	1.57	42%	0.1	1.42	0.1	1.42	100%	US \$218	0.5	0.57	1.3	1.58	36%	17%	US \$46	US \$19
Orvana Minerals Corp.	TSX:ORV	US \$16	US (\$10)	US \$33	2.2	3.90	2.8	5.07	77%	0.3	3.50	0.4	4.22	83%	US \$95	1.8	3.99	2.4	5.25	76%	47%	US \$15	US \$12
Perseus Mining Limited	ASX:PRU	US \$280	US \$46	US \$273	12.5	1.14	12.5	1.14	100%	4.7	1.45	4.7	1.45	100%	US \$58	7.8	1.02	7.8	1.02	100%	38%	US \$22	US \$22
Premier Gold Mines Limited	TSX:PG	US \$242	US \$63	US \$179	10.7	1.59	11.0	1.62	98%	3.0	1.22	3.1	1.24	99%	US \$60	7.7	1.80	7.9	1.84	98%	52%	US \$17	US \$16
Roxgold Inc.	TSX:ROXG	US \$222	US \$69	US \$190	1.2	16.71	1.2	16.71	100%	0.7	11.48	0.7	11.48	100%	US \$253	0.5	-	0.5	-	100%	80%	US \$156	US \$156
Shanta Gold Limited	AIM:SHG	US \$52	US \$20	US \$64	2.8	2.46	2.8	2.46	100%	0.5	4.40	0.5	4.40	100%	US \$125	2.3	2.24	2.3	2.24	100%	60%	US \$23	US \$23
TMAC Resources Inc.	TSX:TMR	US \$473	US (\$17)	US \$588	6.6	8.12	6.6	8.12	100%	3.6	7.72	3.6	7.72	100%	US \$163	3.0	8.66	3.0	8.66	100%	57%	US \$89	US \$89
Group Average - Total					# Companies: 24					US \$128					US \$39		US \$32						

Equivalency assumptions (US\$ / 01-24-19): \$1.281/oz Au, \$15.32/oz Ag, \$803/oz Pt, \$1,322/oz Pd, \$2.67/lb Cu, \$1.20/lb Zn, \$0.94/lb Pb, \$5.31/lb Ni, \$11.29/lb Mo, \$17.24/lb Co, \$01 Sb, \$28.75/lb U3O8, \$9.58/lb Sn, \$93.00/lb HCC, \$74.61/lb 62% Fe

Source: SNL Financial retrieved on January 24, 2019



Gold Development-Stage Companies (Engineering Study Complete) – Enterprise Value per Ounce

Company	Symbol	Market Capitalization (millions)	Working Capital (millions)	Enterprise Value (millions)	Global Reserves & Resources					Reserves					Reserves EV/oz Au	Resources (M&I and Inferred)					Global		
					Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au	Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au		Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au	% Au Inferred	EV/oz Au	EV/oz AuEq
African Gold Group, Inc.	TSXV:AGG	US \$7	US (\$1)	US \$8	2.0	1.01	2.0	1.01	100%	0.5	1.25	0.5	1.25	100%	US\$17	1.5	0.96	1.5	0.96	100%	59%	US \$4	US \$4
Almaden Minerals Ltd.	TSX:AMM	US \$79	US \$6	US \$74	2.4	0.42	4.7	0.82	52%	1.3	0.62	2.2	1.07	58%	US\$57	1.1	0.31	2.4	0.67	47%	40%	US \$30	US \$16
Amarillo Gold Corporation	TSXV:AGC	US \$24	US \$3	US \$21	2.1	1.22	2.1	1.22	100%	1.0	1.63	1.0	1.63	100%	US\$21	1.1	0.99	1.1	0.99	100%	57%	US \$10	US \$10
ATAC Resources Ltd.	TSXV:ATC	US \$29	US \$9	US \$20	2.4	3.45	2.4	3.46	100%	-	-	-	-	-	-	2.4	3.45	2.4	3.46	100%	79%	US \$8	US \$8
Atlantic Gold Corporation	TSXV:AGB	US \$295	US \$26	US \$356	1.4	1.32	1.4	1.32	100%	1.0	1.28	1.0	1.28	100%	US\$354	0.4	1.43	0.4	1.43	100%	73%	US \$252	US \$252
Avesoro Resources Inc.	TSX:ASO	US \$159	US (\$11)	US \$275	3.9	2.00	3.9	2.00	100%	1.2	2.24	1.2	2.24	100%	US\$233	2.7	1.91	2.7	1.91	100%	67%	US \$71	US \$71
Barkerville Gold Mines Ltd.	TSXV:BGM	US \$163	US \$11	US \$153	3.8	5.60	3.8	3.75	100%	-	-	-	-	-	-	3.8	5.60	3.8	5.60	100%	57%	US \$41	US \$41
Belo Sun Mining Corp.	TSXV:BSX	US \$117	US \$25	US \$92	6.8	1.04	6.8	1.04	100%	3.8	1.02	3.8	1.02	100%	US\$24	3.0	1.07	3.0	1.07	100%	52%	US \$14	US \$14
Bluestone Resources Inc.	TSXV:BSR	US \$76	US \$29	US \$47	1.3	10.09	1.3	10.51	96%	-	-	-	-	-	-	1.3	10.09	1.3	10.51	96%	4%	US \$36	US \$35
California Gold Mining Inc.	TSXV:CGM	US \$10	US \$0	US \$9	1.3	1.31	1.3	1.31	100%	-	-	-	-	-	-	1.3	1.31	1.3	1.31	100%	32%	US \$7	US \$7
Chaarat Gold Holdings Limited	AIM:CGH	US \$140	US (\$16)	US \$178	7.9	2.66	8.1	2.71	98%	0.5	0.91	0.5	0.93	99%	US\$379	7.5	3.02	7.6	3.08	98%	14%	US \$22	US \$22
Chalice Gold Mines Limited	ASX:CHN	US \$24	US \$29	US (\$5)	0.5	1.21	1.1	2.80	43%	-	-	-	-	-	-	0.5	1.21	1.1	2.80	43%	38%	-	-
Chesapeake Gold Corp.	TSXV:CKG	US \$72	US \$12	US \$60	19.5	0.51	29.6	0.78	66%	18.3	0.52	28.0	0.79	65%	US \$3	1.2	0.45	1.6	0.61	75%	53%	US \$3	US \$2
Columbus Gold Corp.	TSX:CGT	US \$28	US \$4	US \$24	2.2	1.42	2.2	1.42	100%	1.2	1.58	1.2	1.58	100%	US\$20	0.9	1.25	0.9	1.25	100%	47%	US \$11	US \$11
Continental Gold Inc.	TSX:CNL	US \$249	US \$73	US \$390	9.1	9.91	9.6	10.51	94%	3.7	8.41	3.8	8.70	97%	US\$105	5.4	-	5.8	-	93%	86%	US \$43	US \$41
Dacian Gold Limited	ASX:DCN	US \$373	US (\$34)	US \$476	3.3	2.31	3.3	2.31	100%	1.2	2.01	1.2	2.01	100%	US\$396	2.1	2.52	2.1	2.52	100%	53%	US \$143	US \$143
Equinox Gold Corp.	TSXV:EQX	US \$404	US (\$4)	US \$464	9.5	2.04	26.0	0.67	36%	4.5	0.65	4.5	0.65	100%	US\$102	4.9	0.16	21.5	0.68	23%	64%	US \$49	US \$18
Euro Sun Mining Inc.	TSX:ESM	US \$19	US (\$1)	US \$20	7.5	0.54	10.7	0.77	70%	-	-	-	-	-	-	7.5	0.54	10.7	0.77	70%	5%	US \$3	US \$2
Falco Resources Ltd.	TSXV:FPC	US \$50	US (\$23)	US \$89	5.9	1.60	9.6	2.61	61%	3.7	1.44	6.1	2.35	61%	US\$24	2.2	1.98	3.5	3.23	61%	47%	US \$15	US \$9
First Mining Corp.	TSX:FF	US \$134	US \$7	US \$127	11.8	1.48	12.1	1.52	97%	-	-	-	-	-	-	11.8	1.48	12.1	1.52	97%	38%	US \$11	US \$10
Gabriel Resources Ltd.	TSXV:GBU	US \$140	US \$7	US \$186	16.4	1.05	17.3	1.11	95%	8.1	1.46	8.6	1.54	95%	US\$23	8.3	0.83	8.7	0.87	95%	27%	US \$11	US \$11
Gold Road Resources Limited	ASX:GOR	US \$427	US \$169	US \$258	3.3	1.07	3.4	1.12	96%	1.9	1.20	1.9	1.20	100%	US\$138	1.4	0.94	1.5	1.03	91%	67%	US \$79	US \$76
Golden Queen Mining Co. Ltd.	TSX:GOM	US \$11	US (\$11)	US \$29	0.9	0.53	1.1	0.64	83%	0.5	0.66	0.6	0.79	83%	US\$60	0.4	0.43	0.5	0.52	83%	30%	US \$33	US \$27
Goldquest Mining Corp.	TSXV:GQC	US \$21	US \$14	US \$7	2.2	2.60	3.3	3.87	67%	0.8	3.72	1.1	5.02	74%	US\$9	1.4	2.19	2.0	3.22	68%	16%	US \$3	US \$2
Harle Gold Corp.	TSX:HRT	US \$171	US (\$27)	US \$236	1.5	7.40	1.5	7.40	100%	-	-	-	-	-	-	1.5	7.40	1.5	7.40	100%	52%	US \$160	US \$160
Hummingbird Resources PLC	AIM:HUM	US \$109	US (\$0)	US \$168	5.6	1.56	5.6	1.56	100%	0.6	3.14	0.6	3.14	100%	US\$296	5.1	1.48	5.1	1.48	100%	48%	US \$30	US \$30
IDM Mining Ltd.	TSXV:IDM	US \$23	US \$1	US \$22	0.8	7.72	0.8	7.97	97%	-	-	-	-	-	-	0.8	7.72	0.8	7.97	97%	8%	US \$29	US \$28
International Tower Hill Mines Ltd.	TSX:ITH	US \$97	US \$11	US \$86	12.6	0.68	12.6	0.68	100%	9.0	0.71	9.0	0.71	100%	US\$10	3.6	0.60	3.6	0.60	100%	31%	US \$7	US \$7
INV Metals Inc.	TSX:INV	US \$49	US \$5	US \$44	3.1	3.34	3.8	4.13	81%	1.9	4.98	2.1	5.72	87%	US\$24	1.2	2.23	1.7	3.05	73%	44%	US \$14	US \$12
K92 Mining Inc.	TSXV:KNT	US \$153	US (\$3)	US \$157	2.2	9.59	2.9	12.28	78%	-	-	-	-	-	-	2.2	9.59	2.9	12.28	78%	77%	US \$71	US \$55
KEFI Minerals Plc	AIM:KEFI	US \$13	US (\$5)	US \$19	0.4	3.56	0.4	3.56	100%	-	-	-	-	-	-	0.4	3.56	0.4	3.56	100%	92%	US \$48	US \$48
Lumina Gold Corp.	TSXV:LUM	US \$121	US \$3	US \$117	12.5	0.64	15.8	0.80	79%	-	-	-	-	-	-	12.5	0.64	15.8	0.80	79%	90%	US \$9	US \$7
Lundin Gold Inc.	TSX:LUG	US \$770	US \$290	US \$831	9.5	8.33	9.6	8.48	98%	4.9	9.16	4.9	9.16	100%	US\$168	4.5	7.58	4.5	7.58	100%	47%	US \$88	US \$86
Lupaka Gold Corp.	TSXV:LPK	US \$8	US (\$1)	US \$9	0.5	4.20	0.6	5.61	75%	-	-	-	-	-	-	0.5	4.20	0.6	5.61	75%	19%	US \$19	US \$14
Lydian International Limited	TSX:LYD	US \$96	US (\$296)	US \$392	4.8	0.69	5.1	0.73	94%	2.6	0.79	2.8	0.84	94%	US\$151	2.1	0.60	2.3	0.64	94%	60%	US \$83	US \$78
Metals Exploration plc	AIM:MTL	US \$34	US (\$58)	US \$133	1.7	1.62	2.1	2.00	81%	0.9	1.86	1.1	2.19	85%	US\$149	0.8	1.43	1.1	1.84	78%	82%	US \$77	US \$63
Midas Gold Corp.	TSX:MAX	US \$164	US \$34	US \$153	6.6	1.60	6.7	1.62	98%	-	-	-	-	-	-	6.6	1.60	6.7	1.62	98%	15%	US \$23	US \$23
Minera Alamos Inc.	TSXV:MAI	US \$23	US \$1	US \$22	0.8	1.64	1.0	1.99	83%	-	-	-	-	-	-	0.8	1.64	1.0	1.99	83%	18%	US \$26	US \$21
Moneta Porcupine Mines Inc.	TSX:ME	US \$22	US \$2	US \$20	4.3	1.17	4.3	1.17	100%	-	-	-	-	-	-	4.3	1.17	4.3	1.17	100%	75%	US \$5	US \$5
NovaGold Resources Inc.	TSX:NG	US \$1,139	US \$166	US \$1,070	28.7	0.96	43.5	1.45	66%	19.7	1.18	27.4	1.65	72%	US\$54	9.1	0.67	16.1	1.20	56%	58%	US \$37	US \$25
Orca Gold Inc.	TSXV:ORG	US \$65	US \$11	US \$54	2.7	1.28	2.7	1.30	98%	-	-	-	-	-	-	2.7	1.28	2.7	1.30	98%	20%	US \$20	US \$20
Orezone Gold Corporation	TSXV:ORE	US \$76	US \$37	US \$39	5.2	0.67	5.2	0.67	100%	1.0	0.64	1.0	0.64	100%	US\$37	4.2	0.68	4.2	0.68	100%	22%	US \$7	US \$7
Oria Mining Ltd.	TSX:OLA	US \$153	US \$15	US \$142	12.2	0.83	17.0	1.16	72%	0.5	0.77	0.5	0.82	94%	US\$292	11.7	0.84	16.5	1.17	71%	16%	US \$12	US \$8
Red Eagle Mining Corporation	TSX:R	US \$5	US (\$100)	US \$105	0.6	3.35	0.6	3.35	100%	0.4	5.19	0.4	5.19	100%	US\$259	0.2	1.98	0.2	1.98	100%	64%	US \$171	US \$171
RTG Mining Inc.	TSX:RTG	US \$50	US \$27	US \$23	0.4	1.64	0.8	3.57	46%	0.2	2.04	0.5	4.93	41%	US\$113	0.2	1.34	0.3	2.50	53%	84%	US \$62	US \$28
Rubicon Minerals Corporation	TSX:RMX	US \$65	US \$8	US \$68	1.0	6.09	1.0	6.09	100%	-	-	-	-	-	-	1.0	6.09	1.0	6.09	100%	73%	US \$66	US \$66
Sabina Gold & Silver Corp.	TSX:SBB	US \$274	US \$24	US \$251	7.2	6.21	7.2	6.21	100%	2.5	6.30	2.5	6.30	100%	US\$100	4.7	6.16	4.7	6.16	100%	40%	US \$35	US \$35
Sandspring Resources Ltd.	TSXV:SSP	US \$46	US \$3	US \$42	10.4	0.85	11.7	0.95	89%	4.1	1.00	4.5	1.11	90%	US\$10	6.3	0.77	7.0	0.86	90%	53%	US \$4	US \$4
Seabridge Gold Inc.	TSX:SEA	US \$778	US \$5	US \$773	112.2	0.48	212.4	0.91	53%	45.3	0.61	70.5	0.96	64%	US\$17	66.9	0.42	142.0	0.89	47%	79%	US \$7	US \$4
Shihayo Gold Limited	ASX:SIH	US \$21	US (\$2)	US \$25	1.1	2.62	1.1	2.62	100%	0.4	2.41	0.4	2.41	100%	US\$59	0.7	2.78	0.7	2.78	100%	42%	US \$23	US \$23
Sollitario Zinc Corp.	AMEX:XPL	US \$16	US \$13	US \$4	-	-	3.6	7.32	-	-	-	-	-	-	-	-	-	3.6	7.32	-	-	US \$1	US \$1
Terraco Gold Corp.	TSXV:TEN	US \$7	US (\$0)	US \$16	1.0	0.70	1.0	0.70	100%	-	-	-	-	-	-	1.0	0.70	1.0	0.70	100%	8%	US \$15	US \$15
Treasury Metals Inc.	TSX:TML	US \$34	US (\$3)	US \$37	1.6	1.88	1.8	2.22	84%	-	-	-	-	-	-	1.6	1.88	1.8	2.22	84%	24%	US \$20	US \$20
Vast Resources plc	AIM:VAST	US \$12	US (\$3)	US \$50	2.5	1.53	3.4	2.08	74%	0.6	1.83	1.0	3.13	59%	US\$86	1.9	1.54	2.4	1.91	81%	49%	US \$20	US \$15
Victoria Gold Corp.	TSXV:VIT	US \$283	US \$8	US \$282	4.5	0.65	4.6	0.66	99%	2.7	0.67	2.7	0.67	100%	US\$106	1.9	0.61	1.9	0.63	97%	30%	US \$62	US \$62
Group Average - Total					# Companies: 54										US \$115							US \$40	US \$36
Group Average - 0 - 20 million ounces					# Companies: 52																	US \$41	US \$38
Group Average - 20 - 50 million ounces					# Companies: 1																	US \$37	US \$15
Group Average - +50 million ounces					# Companies: 1																		

Gold Exploration-Stage Companies (Resource Only) – Enterprise Value per Ounce of Gold

Company	Symbol	Market Capitalization (millions)	Working Capital (millions)	Enterprise Value (millions)	Global Reserves & Resources					Reserves					Resources (M&I and Inferred)					Global		
					Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au	Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au	Au (Moz)	Au (g/t)	AuEq (Moz)	AuEq (g/t)	% Au	% Au Inferred	EV/oz Au	EV/oz AuEq
Alexandria Minerals Corporation	TSXV:AZX	US \$11	US (\$1)	US \$11	1.3	2.34	1.9	3.22	73%	-	-	-	-	-	1.3	2.34	1.9	3.22	73%	44%	US \$8	US \$6
Aurion Resources Ltd.	TSXV:AU	US \$45	US \$10	US \$34	0.8	0.70	0.8	0.70	100%	0.0	5.20	0.0	5.20	100%	0.8	0.70	0.8	0.70	100%	-	US \$42	US \$42
Auryn Resources Inc.	TSX:AUG	US \$91	US \$3	US \$87	2.3	5.56	2.6	6.30	88%	-	-	-	-	-	2.3	5.56	2.6	6.30	88%	72%	US \$38	US \$33
Balmoral Resources Ltd	TSX:BAR	US \$15	US \$4	US \$11	1.2	1.20	1.8	1.76	68%	-	-	-	-	-	1.2	1.20	1.8	1.76	68%	36%	US \$9	US \$6
Calibre Mining Corp.	TSXV:CXB	US \$17	US \$0	US \$17	2.3	1.18	3.0	1.57	75%	-	-	-	-	-	2.3	1.18	3.0	1.57	75%	99%	US \$7	US \$6
Cardinal Resources Limited	ASX:CDV	US \$105	US \$24	US \$103	7.0	1.13	7.0	1.13	100%	-	-	-	-	-	7.0	1.13	7.0	1.13	100%	7%	US \$15	US \$15
Condor Gold Plc	AIM:CNR	US \$23	US \$1	US \$22	3.1	3.68	3.1	3.74	98%	0.7	3.04	0.7	3.11	98%	2.4	3.91	2.4	3.97	98%	55%	US \$7	US \$7
Corvus Gold Inc.	TSX:KOR	US \$176	US \$4	US \$172	2.2	0.30	2.3	0.32	95%	-	-	-	-	-	2.2	0.30	2.3	0.32	95%	19%	US \$79	US \$75
Eastmain Resources Inc.	TSX:ER	US \$26	US \$4	US \$21	1.7	6.59	1.7	6.65	99%	-	-	-	-	-	1.7	6.59	1.7	6.65	99%	37%	US \$12	US \$12
Eco Oro Minerals Corp	CNSX:EOM	US \$14	US (\$18)	US \$29	3.5	4.38	3.7	4.59	95%	-	-	-	-	-	3.5	4.38	3.7	4.59	95%	37%	US \$8	US \$8
GobiMin Inc.	TSXV:GMN	US \$9	US \$19	US (\$9)	2.9	1.50	2.9	1.50	100%	-	-	-	-	-	2.9	1.50	2.9	1.50	100%	63%	-	-
Gold Standard Ventures Corp	TSX:GSV	US \$308	US \$22	US \$284	3.6	0.80	3.7	0.84	96%	-	-	-	-	-	3.6	0.80	3.7	0.84	96%	73%	US \$79	US \$76
Mako Mining Corp.	TSXV:MKO	US \$35	US (\$3)	US \$36	0.9	7.81	1.0	7.96	98%	-	-	-	-	-	0.9	7.81	1.0	7.96	98%	84%	US \$39	US \$38
Granada Gold Mine Inc.	TSXV:GGM	US \$9	US (\$4)	US \$10	5.0	1.23	5.1	1.24	99%	-	-	-	-	-	5.0	1.23	5.1	1.24	99%	69%	US \$2	US \$2
Integra Resources Corp.	TSXV:ITR	US \$47	US (\$3)	US \$48	2.3	0.46	3.6	0.72	64%	-	-	-	-	-	2.3	0.46	3.6	0.72	64%	100%	US \$21	US \$13
Kasbah Resources Limited	ASX:KAS	US \$8	US (\$1)	US \$8	0.2	0.55	1.8	4.35	13%	-	-	0.7	4.25	-	0.2	0.93	1.1	4.42	21%	-	US \$34	US \$4
Liberty Gold Corp.	TSX:LGD	US \$55	US \$1	US \$61	1.6 *	0.66	1.6	0.66	100%	-	-	-	-	-	1.6 *	0.66	1.6	0.66	100%	24%	US \$39	US \$39
Lincoln Mining Corporation	TSXV:LMG	US \$1	US (\$1)	US \$1	0.1	1.91	0.1	1.91	100%	-	-	-	-	-	0.1	1.91	0.1	1.91	100%	5%	US \$18	US \$18
Lion One Metals Limited	TSXV:LIO	US \$31	US \$13	US \$20	0.7	0.09	14.7	1.89	5%	-	-	-	-	-	0.7	0.09	14.7	1.89	5%	60%	US \$26	US \$1
Marathon Gold Corporation	TSX:MOZ	US \$104	US \$4	US \$100	3.2	1.99	3.2	1.99	100%	-	-	-	-	-	3.2	1.99	3.2	1.99	100%	34%	US \$31	US \$31
Monarques Gold Corporation	TSX:MQR	US \$36	US \$4	US \$34	3.8	2.93	3.8	2.93	100%	0.2	6.70	0.2	6.70	100%	3.6	2.89	3.6	2.89	100%	16%	US \$9	US \$9
New Pacific Metals Corp.	TSXV:NPAG	US \$184	US \$20	US \$163	0.5	6.12	0.6	7.21	85%	-	-	-	-	-	0.5	6.12	0.6	7.21	85%	45%	US \$323	US \$274
Nighthawk Gold Corp.	TSX:NHK	US \$53	US \$12	US \$41	2.9	1.70	2.9	1.70	100%	-	-	-	-	-	2.9	1.70	2.9	1.70	100%	90%	US \$14	US \$14
Northern Empire Resources Corp.	TSXV:NM	US \$65	US \$8	US \$57	1.0	1.26	1.0	1.26	100%	-	-	-	-	-	1.0	1.26	1.0	1.26	100%	3%	US \$60	US \$60
Novo Resources Corp.	TSXV:NVO	US \$280	US \$34	US \$241	0.9	2.83	1.0	3.11	91%	-	-	-	-	-	0.9	2.83	1.0	3.11	91%	52%	US \$268	US \$244
Orex Minerals Inc.	TSXV:REX	US \$6	US \$2	US \$5	0.1	0.33	0.5	2.78	12%	-	-	-	-	-	0.1	0.33	0.5	2.78	12%	47%	US \$73	US \$9
Osisko Mining Inc.	TSX:OSK	US \$484	US \$81	US \$408	7.6	2.40	7.6	2.40	100%	-	-	-	-	-	7.6	2.40	7.6	2.40	100%	53%	US \$54	US \$54
Osprey Gold Development Ltd.	TSXV:OS	US \$2	US \$0	US \$1	0.4	3.56	0.4	3.56	100%	-	-	-	-	-	0.4	3.56	0.4	3.56	100%	92%	US \$3	US \$3
Puma Exploration Inc.	TSXV:PUMA	US \$5	US (\$0)	US \$5	0.0	0.27	0.7	4.64	6%	-	-	-	-	-	0.0	0.27	0.7	4.64	6%	12%	US \$125	US \$7
Pure Gold Mining Inc.	TSXV:PGM	US \$138	US \$7	US \$130	2.0	8.57	2.0	8.57	100%	-	-	-	-	-	2.0	8.57	2.0	8.57	100%	15%	US \$64	US \$64
Red Pine Exploration Inc.	TSXV:RPX	US \$15	US \$1	US \$14	0.7	1.75	0.7	1.75	100%	-	-	-	-	-	0.7	1.75	0.7	1.75	100%	96%	US \$21	US \$21
Redstar Gold Corp.	TSXV:RGC	US \$6	US \$2	US \$4	0.5	2.94	0.7	3.74	79%	-	-	-	-	-	0.5	2.94	0.7	3.74	79%	7%	US \$7	US \$5
Regulus Resources Inc.	TSXV:REG	US \$87	US \$15	US \$73	5.7	0.37	17.9	1.16	32%	-	-	-	-	-	5.7	0.37	17.9	1.16	32%	89%	US \$13	US \$4
Reunion Gold Corporation	TSXV:RGD	US \$38	US \$4	US \$33	0.7	2.10	0.7	2.10	100%	-	-	-	-	-	0.7	2.10	0.7	2.10	100%	-	US \$48	US \$48
Revival Gold Inc.	TSXV:RVG	US \$24	US \$2	US \$22	2.0	0.62	2.0	0.62	100%	-	-	-	-	-	2.0	0.62	2.0	0.62	100%	39%	US \$11	US \$11
Rupert Resources Ltd.	TSXV:RUP	US \$88	US \$1	US \$87	1.1	2.16	1.1	2.16	100%	-	-	-	-	-	1.1	2.16	1.1	2.16	100%	83%	US \$82	US \$82
Sarama Resources Ltd	TSXV:SWA	US \$7	US \$1	US \$6	1.1	1.75	1.1	1.75	100%	-	-	-	-	-	1.1	1.75	1.1	1.75	100%	78%	US \$5	US \$5
SolGold plc	TSX:SOLG	US \$862	US \$35	US \$823	10.7	0.36	31.1	1.04	34%	-	-	-	-	-	10.7	0.36	31.1	1.04	34%	52%	US \$77	US \$26
Spanish Mountain Gold Ltd.	TSXV:SPA	US \$14	US \$1	US \$12	8.0	0.33	8.2	0.34	98%	-	-	-	-	-	8.0	0.33	8.2	0.34	98%	51%	US \$2	US \$2
Teras Resources Inc.	TSXV:TRA	US \$7	US \$0	US \$7	1.1	0.48	1.3	0.55	88%	-	-	-	-	-	1.1	0.48	1.3	0.55	88%	10%	US \$6	US \$5
TriMetals Mining Inc.	TSX:TMI	US \$7	US (\$0)	US \$8	1.9	0.07	14.9	0.57	13%	-	-	-	-	-	1.9	0.07	14.9	0.57	13%	40%	US \$4	US \$1
Vendetta Mining Corp.	TSXV:VTT	US \$17	US (\$0)	US \$17	-	-	1.7	4.46	-	-	-	-	-	-	-	-	1.0	2.64	-	-	US \$10	US \$10
West Kirkland Mining Inc.	TSXV:WKM	US \$18	US (\$0)	US \$19	0.8	0.46	0.9	0.54	84%	0.6	0.58	0.7	0.67	86%	0.2	0.30	0.3	0.37	81%	45%	US \$24	US \$20
Group Average - Total					# Companies: 43															US \$43	US \$33	

Equivalency assumptions (US\$ / 01-24-19): \$1,281/oz Au, \$15.32/oz Ag, \$803/oz Pt, \$1,322/oz Pd, \$2.67/lb Cu, \$1.20/lb Zn, \$0.94/lb Pb, \$5.31/lb Ni, \$11.29/lb Mo, \$17.24/lb Co, \$0/lb Sb, \$28.75/lb U3O8, \$9.58/lb Sn, \$93.00/lb HCC, \$74.61/lb 62% Fe
 Source: SNL Financial retrieved on January 24, 2019

*Includes only Liberty's Goldstrike and Kinsley Mountain Projects



Silver – Enterprise Value per Ounce of Silver

Company	Symbol	Market Capitalization (millions)	Working Capital (millions)	Enterprise Value (millions)	Global Reserves & Resources					Reserves					Reserves EV/oz Ag	Resources (M&I and Inferred)					Global			
					Ag (Moz)	Ag (g/t)	AgEq (Moz)	AgEq (g/t)	% Ag	Ag (Moz)	Ag (g/t)	AgEq (Moz)	AgEq (g/t)	% Ag		Ag (Moz)	Ag (g/t)	AgEq (Moz)	AgEq (g/t)	% Ag	% Ag Inferred	EV/oz Ag	EV/oz AgEq	
Alexco Resource Corp.	TSX:AXR	US \$95	US \$10	US \$86	86	357	155	644	55%	-	-	-	-	-	-	-	86	357	155	644	55%	21%	US \$1.00	US \$0.55
Americas Silver Corporation	TSX:USA	US \$67	US \$3	US \$71	136	151	347	384	39%	28	164	76	442	37%	US \$2.51	108	148	271	371	40%	37%	US \$0.52	US \$0.20	
Athena Silver Corporation	OTCPK:AHNR	US \$1	US (\$3)	US \$4	43	67	43	67	100%	-	-	-	-	-	-	43	67	43	67	100%	-	US \$0.08	US \$0.08	
Bear Creek Mining Corporation	TSXV:BCM	US \$94	US \$41	US \$53	496	42	1,122	95	44%	288	51	653	115	44%	US \$0.18	208	34	470	77	44%	33%	US \$0.11	US \$0.05	
Coeur Mining, Inc.	NYSE:CDE	US \$894	US \$140	US \$1,183	673	26	1,445	56	47%	165	18	412	44	40%	US \$7.19	509	31	1,035	63	49%	21%	US \$1.76	US \$0.82	
Defiance Silver Corp.	TSXV:DEF	US \$18	US (\$1)	US \$20	17	182	18	193	94%	-	-	-	-	-	-	17	182	18	193	94%	100%	US \$1.17	US \$1.11	
Dolly Varden Silver Corporation	TSXV:DV	US \$17	US \$3	US \$14	43	333	43	333	100%	-	-	-	-	-	-	43	333	43	333	100%	25%	US \$0.34	US \$0.34	
Endeavour Silver Corp.	TSX:EDR	US \$256	US \$57	US \$198	156	193	270	334	58%	33	198	60	353	56%	US \$5.92	123	192	210	329	58%	70%	US \$1.27	US \$0.73	
First Majestic Silver Corp.	TSX:FR	US \$1,020	US \$128	US \$1,042	401	161	741	298	54%	133	180	227	307	58%	US \$7.86	263	153	503	291	52%	77%	US \$2.60	US \$1.41	
Fortuna Silver Mines Inc.	TSX:FVI	US \$555	US \$183	US \$413	90	15	502	86	18%	45	15	266	87	17%	US \$9.23	46	16	236	84	19%	87%	US \$4.57	US \$0.82	
Golden Minerals Company	AMEX:AUMN	US \$28	US \$4	US \$24	68	372	98	538	69%	-	-	-	-	-	-	68	372	98	538	69%	8%	US \$0.35	US \$0.25	
Hecla Mining Company	NYSE:HL	US \$1,133	US \$66	US \$1,616	751	68	2,549	230	29%	177	221	588	735	30%	US \$9.13	574	56	1,960	191	29%	78%	US \$2.15	US \$0.63	
Investigator Resources Limited	ASX:IVR	US \$6	US \$2	US \$4	42	140	49	165	85%	-	-	-	-	-	-	42	140	49	165	85%	45%	US \$0.10	US \$0.08	
Kootenay Silver Inc	TSXV:KTN	US \$20	US \$2	US \$17	76	62	124	101	61%	-	-	-	-	-	-	76	62	124	101	61%	19%	US \$0.23	US \$0.14	
MacPhersons Resources Limited	ASX:MRP	US \$19	US \$2	US \$18	20	22	87	95	23%	8	178	16	349	51%	US \$2.13	12	14	71	81	17%	29%	US \$0.87	US \$0.20	
MAG Silver Corp.	TSX:MAG	US \$677	US \$142	US \$535	170	70	678	278	25%	-	-	-	-	-	-	170	70	678	278	25%	55%	US \$3.14	US \$0.79	
Mandalay Resources Corporation	TSX:MND	US \$49	US \$5	US \$78	63	31	305	149	21%	8	19	72	175	11%	US \$9.94	56	39	233	163	24%	19%	US \$1.22	US \$0.25	
Minco Silver Corporation	TSX:MSV	US \$21	US \$23	US (\$2)	162	158	267	261	61%	50	189	63	240	79%	-	112	148	204	268	55%	52%	-	-	
Mineworx Technologies Ltd.	TSXV:MWX	US \$30	US \$2	US \$28	22	9	422	168	5%	-	-	-	-	-	-	22	9	422	168	5%	-	US \$1.25	US \$0.07	
Pan American Silver Corp.	TSX:PAAS	US \$2,035	US \$444	US \$1,620	1,446	91	2,249	141	64%	291	93	504	162	58%	US \$5.57	1,157	90	1,751	137	66%	24%	US \$1.12	US \$0.72	
Silver Bear Resources Plc	TSX:SBR	US \$76	US \$16	US \$177	60	704	61	710	99%	22	809	22	809	100%	US \$7.94	38	655	39	663	99%	63%	US \$2.93	US \$2.91	
Silver Bull Resources, Inc.	OTCPK:SVBL	US \$29	US \$2	US \$27	27	48	149	261	18%	-	-	-	-	-	-	27	48	149	261	18%	0%	US \$0.99	US \$0.18	
SilverCrest Metals Inc.	TSXV:SIL	US \$279	US \$10	US \$269	38	257	72	490	52%	-	-	-	-	-	-	38	257	72	490	52%	90%	US \$7.16	US \$3.75	
Silvercorp Metals Inc.	TSX:SVM	US \$350	US \$99	US \$256	213	121	582	332	37%	84	202	179	432	47%	US \$3.04	129	96	402	301	32%	66%	US \$1.20	US \$0.44	
Group Average - Total					# Companies: 24					US \$5.89						US \$1.57					US \$0.72			

Equivalency assumptions (US\$ /01-24-19): \$1,281/oz Au, \$15.32/oz Ag, \$803/oz Pt, \$1,322/oz Pd, \$2.67/lb Cu, \$1.20/lb Zn, \$0.94/lb Pb, \$5.31/lb Ni, \$11.29/lb Mo, \$17.24/lb Co, \$0/t Sb, \$28.75/lb U3O8, \$9.58/lb Sn, \$93.00/t HCC, \$74.61/t 62% Fe

Source: SNL Financial retrieved on January 24, 2019



Comparables Tables – Base Metals

Base Metal Companies – Market and Valuation Statistics (Consensus Estimates)

As of January 24, 2019		Symbol	Price	1-Day %	7-Day %	YTD (%)	Shares O/S (millions)	Market Capitalization (US\$ millions)	Cash (US\$ millions)	Working Capital (US\$ millions)	Debt (US\$ millions)	Enterprise Value (US\$ millions)	2017 CFPS	2018E CFPS	2019E CFPS	P/CF Ratio 2018E	P/CF Ratio 2019E	EV/CF Ratio 2018E	EV/CF Ratio 2019E	EV/EBITDA Ratio 2018E	EV/EBITDA Ratio 2019E
Large-Cap Base Metals Producers																					
ANGLO AMERICAN PLC	LSE:AAL	GBP 1792.4	(0.5)	0.1	2.6	1293	\$30,159	\$7,800	\$7,382	\$11,971	\$39,272	\$6.02	\$5.01	\$5.53	4.7x	4.2x	6.1x	5.5x	4.5x	4.6x	
ANTOFAGASTA PLC	LSE:ANTO	GBP 797.8	(0.4)	(3.1)	1.9	986	\$10,238	\$1,084	\$2,068	\$2,709	\$13,002	\$2.23	\$1.51	\$1.81	6.9x	5.8x	8.7x	7.3x	6.0x	5.1x	
BHP GROUP LTD	ASX:BHP	AUD 32.62	(0.0)	(0.8)	(0.6)	2946	\$111,395	\$15,871	\$21,141	\$26,805	\$127,444	\$3.47	\$3.36	\$3.20	6.9x	7.2x	12.9x	13.5x	5.2x	5.8x	
FIRST QUANTUM MINERALS LTD	TSX:FM	CAD 12.51	(0.1)	(2.7)	13.3	689	\$6,457	\$1,296	\$1,121	\$6,871	\$13,774	\$1.34	\$2.51	\$2.53	3.7x	3.7x	8.0x	7.9x	8.1x	6.1x	
FREEPORT-MCMORAN INC	NYSE:FCX	USD 10.7	(13.1)	(10.0)	3.8	1449	\$15,505	\$4,217	\$7,401	\$11,141	\$30,319	\$2.67	\$3.12	\$1.89	3.4x	5.7x	6.7x	11.1x	4.5x	7.5x	
GLENCORE PLC	LSE:GLEN	GBP 288.15	0.5	(0.7)	(1.1)	13964	\$52,376	\$2,124	\$5,312	\$33,934	\$83,781	\$0.41	\$0.84	\$0.88	4.5x	4.3x	7.1x	6.8x	5.0x	5.0x	
KGHM POLSKA MIEDZ SA	WSE:KGH	PLN 91.6	0.8	0.1	3.1	200	\$4,822	\$169	\$618	\$2,060	\$6,798	\$3.85	\$4.63	\$6.12	5.2x	4.0x	7.3x	5.6x	5.2x	4.6x	
RIO TINTO PLC	LSE:RIO	GBP 3765	0.1	(3.4)	0.9	1273	\$83,262	\$10,550	\$7,823	\$15,176	\$95,443	\$7.77	\$7.36	\$7.43	6.7x	6.6x	10.2x	10.1x	5.3x	6.0x	
TECK RESOURCES LTD-CLS B	TSX:TCK.B	CAD 29.63	0.9	(2.8)	0.8	567	\$12,755	\$760	\$1,706	\$5,084	\$15,756	\$6.15	\$5.81	\$5.90	3.8x	3.8x	4.8x	4.7x	3.6x	3.9x	
TUROUOISE HILL RESOURCES LTD	TSX:TRO	CAD 2.09	0.0	(0.5)	(7.1)	2012	\$3,149	\$1,445	\$2,662	\$4,159	\$4,899	\$0.06	\$0.10	\$0.05	15.0x	34.0x	23.4x	52.9x	13.1x	13.3x	
VALE SA-SP ADR	NYSE:VALE	USD 14.86	0.7	5.3	12.7	5284	\$78,527	\$4,323	\$5,840	\$22,460	\$90,045	-	\$2.40	\$2.34	6.2x	6.4x	7.1x	7.3x	5.4x	5.4x	
BOLIDEN AB	SSE:BOL	SEK 214.55	(0.2)	1.2	11.8	274	\$6,451	\$307	\$728	\$653	\$6,777	\$5.46	\$4.54	\$4.36	5.2x	5.5x	5.5x	5.7x	4.5x	5.0x	
SOUTHERN COPPER CORP	NYSE:SCCO	USD 31.06	(0.4)	(1.0)	0.9	773	\$24,011	\$1,005	\$2,002	\$5,957	\$28,811	\$2.56	\$2.96	\$3.16	10.5x	9.8x	12.6x	11.8x	8.0x	7.6x	
Group Average - Large-Cap Producers																6.1x	7.8x	9.3x	12.1x	6.0x	6.1x
Group Average - Large-Cap Producers (excluding high/low)																5.4x	5.3x	8.2x	8.3x	5.5x	5.5x
Mid Tier Base Metals Producers																					
HUDBAY MINERALS INC	TSX:HBM	CAD 7.3	(0.7)	(2.3)	13.0	261	\$1,428	\$356	\$251	\$1,064	\$2,023	\$2.00	\$1.62	\$1.47	3.4x	3.7x	4.8x	5.3x	3.4x	4.0x	
KAZ MINERALS PLC	LSE:KAZ	GBP 512	(0.8)	(4.4)	(3.8)	471	\$3,136	\$1,821	\$1,400	\$3,877	\$5,202	\$1.72	\$1.62	\$1.55	4.1x	4.3x	6.8x	7.1x	4.3x	4.5x	
LUNDIN MINING CORP	TSX:LUN	CAD 5.51	(1.4)	(8.9)	(2.3)	733	\$3,026	\$1,567	\$1,708	\$450	\$2,438	\$1.15	\$0.70	\$0.78	5.9x	5.3x	4.8x	4.3x	3.7x	3.5x	
MMG LTD	SEHK:1208	HKD 2.76	1.1	(16.6)	(18.1)	8052	\$2,833	\$936	\$194	\$9,193	\$12,132	\$0.25	\$0.18	\$0.22	2.0x	1.6x	8.4x	6.7x	7.3x	6.1x	
OZ MINERALS LTD	ASX:OZL	AUD 9.47	3.4	5.1	7.6	324	\$2,174	\$570	\$720	\$0	\$1,840	\$0.88	\$0.77	\$0.82	8.7x	8.3x	7.3x	7.0x	4.9x	5.6x	
VEDANTA RESOURCES PLC	LSE:VED	GBP #N/A	#N/A	#N/A	#N/A	285	#N/A	\$1,281	(\$2,457)	\$15,194	#N/A	\$5.97	\$9.98	\$15.37	-	-	-	-	-	-	
Group Average - Mid Tier Producers																4.8x	4.6x	6.4x	6.1x	4.7x	4.7x
Group Average - Mid Tier Producers (excluding high/low)																4.5x	4.4x	6.3x	6.3x	4.3x	4.7x
Small Cap Base Metals Producers																					
AMERGO RESOURCES LTD	TSX:ARG	CAD 0.91	0.0	(8.1)	2.2	177	\$121	\$28	(\$5)	\$63	\$169	\$0.19	\$0.14	\$0.26	4.9x	2.6x	6.8x	3.7x	-	-	
ATALAYA MINING PLC	TSX:AYM	CAD 4.03	0.8	0.8	10.4	137	\$414	\$52	\$27	\$0	\$366	\$0.26	\$0.16	\$0.18	19.1x	16.7x	16.7x	14.5x	6.1x	5.1x	
CAPSTONE MINING CORP	TSX:CS	CAD 0.6	3.4	(1.6)	(1.6)	400	\$179	\$116	\$189	\$271	\$468	\$0.26	\$0.27	\$0.26	1.7x	1.7x	4.3x	4.5x	3.6x	3.7x	
COPPER MOUNTAIN MINING CORP	TSX:CMC	CAD 0.84	1.2	(5.6)	16.7	188	\$118	\$36	\$6	\$245	\$361	\$0.26	\$0.26	\$0.32	2.4x	1.9x	7.3x	5.9x	7.2x	4.6x	
IMPERIAL METALS CORP	TSX:II	CAD 1.75	0.6	4.8	11.5	121	\$158	\$41	(\$190)	\$713	\$855	\$0.21	(\$0.04)	\$0.24	-	5.5x	-	29.5x	31.9x	10.4x	
WESTERN AREAS LTD	AU:WSA	AUD 2.13	2.4	0.0	6.5	273	\$413	\$112	\$119	\$1	\$302	\$0.22	\$0.21	\$0.24	7.5x	6.3x	5.3x	4.6x	5.1x	4.7x	
SHERITT INTERNATIONAL CORP	TSX:S	CAD 0.405	(1.2)	(3.6)	(10.0)	397	\$120	\$148	\$268	\$658	\$498	(\$0.04)	(\$0.01)	\$0.03	-	11.6x	-	48.2x	4.2x	4.5x	
NEVSIJUN RESOURCES LTD	TSX:NSJ	CAD 5.97	0.0	(0.2)	(0.3)	303	\$1,352	\$125	\$162	\$0	\$1,404	(\$0.07)	\$0.21	\$0.19	21.3x	23.2x	22.1x	24.0x	18.7x	16.7x	
TASEKO MINES LTD	TSX:TKO	CAD 0.76	2.7	(2.6)	16.9	228	\$130	\$64	\$67	\$263	\$358	\$0.57	\$0.28	\$0.37	2.0x	1.6x	5.6x	4.3x	5.0x	3.8x	
TREVALMINING CORP	TSX:TV	CAD 0.34	4.6	(2.9)	(18.1)	830	\$211	\$94	\$144	\$161	\$279	\$0.21	\$0.16	\$0.16	1.6x	1.6x	2.1x	2.1x	1.7x	1.7x	
Group Average - Small Cap Producers																7.5x	7.3x	-	14.1x	9.3x	6.1x
Group Average - Small Cap Producers (excluding high/low)																6.2x	6.0x	-	11.4x	7.1x	5.3x

CS/US\$ FX Rate: 91.34



Copper Non-Producers – Enterprise Value per Pound of Copper Equivalent

Company	Symbol	Price	Shares O/S (million)	Market Capitalization (million)	Working Capital (million)	LTD Value (million)	Enterprise Value (million)	Primary / Secondary Metal	Copper Ratio*** (% Contained)	Reserves & Resources* - Attributable		EV/lb CuEq** (US\$)	
										Reserve (CuEq** Mlb)	R&R (Total) (CuEq** Mlb)	Reserve	Total
Abacus Mining & Exploration Corporation	TSXV:AME	C\$ 0.08	48.2	US\$ 3	US\$ (0.1)	US\$ 11.9	US\$ 15	Cu / Au	70%	763	953	\$0.020	\$0.016
Candente Copper Corp.	TSX:DNT	C\$ 0.05	180.6	US\$ 7	US\$ (1.0)	US\$ 0.0	US\$ 8	Cu / Au	89%	-	12,547	-	\$0.001
Copper Fox Metals Inc.	TSXV:CUU	C\$ 0.12	449.0	US\$ 39	US\$ 1.2	US\$ 0.0	US\$ 37	Cu / Au	70%	2,307	5,478	\$0.016	\$0.007
Coro Mining Corp.	TSX:COP	C\$ 0.06	1455.4	US\$ 60	US\$ 4.9	US\$ 0.8	US\$ 56	Cu / -	100%	-	590	-	\$0.095
Excelsior Mining Corp.	TSX:MIN	C\$ 0.80	238.6	US\$ 143	US\$ 18.2	US\$ 0.0	US\$ 125	Cu / -	100%	5,128	8,016	\$0.024	\$0.016
Filo Mining Corp.	TSXV:FIL	C\$ 2.20	72.6	US\$ 120	US\$ 3.8	US\$ 0.0	US\$ 116	Cu / Au	53%	-	7,913	-	\$0.015
Foran Mining Corporation	TSXV:FOM	C\$ 0.33	128.0	US\$ 32	US\$ 3.8	US\$ 0.0	US\$ 28	Cu / Zn	44%	-	1,842	-	\$0.015
Getty Copper Inc.	TSXV:GTC	C\$ 0.03	108.4	US\$ 2	US\$ (0.6)	US\$ 0.8	US\$ 3	Cu / Mo	98%	776	1,216	\$0.004	\$0.003
Highland Copper Company Inc.	TSXV:HI	C\$ 0.10	472.9	US\$ 34	US\$ (3.0)	US\$ 6.7	US\$ 43	Cu / Ag	99%	1,680	4,490	\$0.026	\$0.010
Indico Resources Ltd.	TSXV:IDI	C\$ 0.01	147.0	US\$ 1	US\$ (4.2)	US\$ 0.0	US\$ 5	Cu / -	100%	-	122	-	\$0.039
Los Andes Copper Ltd.	TSXV:LA	C\$ 0.24	271.7	US\$ 49	US\$ 5.5	US\$ 0.0	US\$ 43	Cu / Mo	93%	-	11,818	-	\$0.004
Nevada Copper Corp.	TSX:NCU	C\$ 0.46	661.9	US\$ 228	US\$ 133.8	US\$ 86.6	US\$ 181	Cu / Au	91%	5,529	7,742	\$0.033	\$0.023
NGEx Resources Inc.	TSX:NGO	C\$ 1.00	227.9	US\$ 171	US\$ 2.2	US\$ 0.0	US\$ 169	Cu / Au	76%	-	26,471	-	\$0.006
Northern Dynasty Minerals Ltd.	TSX:NDM	C\$ 0.93	312.7	US\$ 218	US\$ 10.4	US\$ 0.0	US\$ 207	Cu / Au	57%	-	142,498	-	\$0.001
NorthIsle Copper and Gold Inc.	TSXV:NCX	C\$ 0.09	117.2	US\$ 8	US\$ 0.2	US\$ 0.0	US\$ 8	Cu / Au	53%	-	4,633	-	\$0.002
Osisko Metals Incorporated	TSXV:OM	C\$ 0.50	139.5	US\$ 52	US\$ 12.8	US\$ 0.0	US\$ 39	Zn / Pb	3%	-	146	-	\$0.271
Panoro Minerals Ltd.	TSXV:PML	C\$ 0.21	263.8	US\$ 41	US\$ (3.2)	US\$ 2.0	US\$ 46	Cu / Au	77%	-	10,306	-	\$0.004
Philippine Metals Inc.	TSXV:PHI	C\$ 0.05	16.4	US\$ 1	US\$ 0.0	US\$ 0.0	US\$ 1	Cu / -	100%	-	331	-	\$0.002
PolyMet Mining Corp.	TSX:POM	C\$ 1.04	320.7	US\$ 250	US\$ (185.3)	US\$ 0.0	US\$ 435	Cu / Ni	46%	3,415	10,789	\$0.127	\$0.040
Quaterra Resources Inc.	TSXV:QTA	C\$ 0.06	201.4	US\$ 8	US\$ (0.2)	US\$ 0.7	US\$ 9	Cu / -	100%	-	3,894	-	\$0.002
Regulus Resources Inc.	TSXV:REG	C\$ 1.27	91.0	US\$ 87	US\$ 15.1	US\$ 0.0	US\$ 71	Cu / Au	51%	-	8,308	-	\$0.009
Serengeti Resources Inc.	TSXV:SIR	C\$ 0.36	92.5	US\$ 25	US\$ 0.3	US\$ 0.0	US\$ 25	Cu / Au	63%	-	1,311	-	\$0.019
St. Augustine Gold and Copper Limited	TSX:SAU	C\$ 0.02	726.8	US\$ 8	US\$ (4.4)	US\$ 0.0	US\$ 13	Cu / Au	56%	4,437	6,842	\$0.003	\$0.002
Trilogy Metals Inc.	AMEX:TMQ	C\$ 2.79	131.6	US\$ 275	US\$ 6.4	US\$ 0.0	US\$ 269	Cu / Zn	77%	-	5,776	-	\$0.047
Western Copper and Gold Corporation	TSX:WRN	C\$ 0.85	100.8	US\$ 64	US\$ 3.9	US\$ 0.0	US\$ 60	Cu / Au	57%	8,232	17,606	\$0.007	\$0.003
Group Average - Total											\$0.029	\$0.026	

*All reserve and resource data sourced from SNL, additional data sourced from Capital IQ.

**CuEq = copper equivalent. Calculated based on Haywood's formal long-term metal price forecasts.

***Copper Ratio = value of in situ copper / total value of in situ metals.



Nickel Non-Producers – Enterprise Value per Pound of Nickel Equivalent

Company	Symbol	Price	Shares O/S (million)	Market Capitalization (million)	Working Capital (million)	LTD Value (million)	Enterprise Value (million)	Primary / Secondary Metal	Nickel Ratio*** (% Contained)	Reserves & Resources* - Attributable		EV/lb NiEq** (US\$)	
										Reserve (NiEq** Mlb)	R&R (Total) (NiEq** Mlb)	Reserve	Total
Asian Mineral Resources Limited	TSXV:ASN	C\$ 0.35	8.7	US\$ 2	US\$ (1.9)	US\$ 0.0	US\$ 4	Ni / Cu	76%	92	92	\$0.046	\$0.046
CaNickel Mining Limited	TSXV:CML	C\$ 0.10	37.5	US\$ 3	US\$ (80.2)	US\$ 0.0	US\$ 83	Ni / -	100%	83	397	\$1.005	\$0.209
FPX Nickel Corp.	TSXV:FPX	C\$ 0.17	146.0	US\$ 19	US\$ 1.2	US\$ 5.6	US\$ 23	Ni / -	100%	-	5,569	-	\$0.004
Giga Metals Corporation	TSXV:GIGA	C\$ 0.26	43.1	US\$ 8	US\$ 8	US\$ 0.0	US\$ 23	Ni / Co	85%	-	6,890	-	\$0.000
Gossan Resources Limited	TSXV:GSS	C\$ 0.08	33.6	US\$ 2	US\$ 0.1	US\$ 0.0	US\$ 2	Ni / Cu	54%	-	73	-	\$0.026
Hannan Metals Ltd.	TSXV:HAN	C\$ 0.09	47.7	US\$ 3	US\$ 0.7	US\$ 0.3	US\$ 3	Ni / Cu	78%	-	2,539	-	\$0.001
Nautilus Minerals Inc.	TSX:NUS	C\$ 0.05	683.0	US\$ 26	US\$ (56.7)	US\$ 0.0	US\$ 82	Ni / Cu	52%	-	41,741	-	\$0.002
New Era Minerals Inc.	TSXV:NEM	C\$ 0.05	103.4	US\$ 4	US\$ (0.9)	US\$ 0.9	US\$ 6	Ni / -	100%	-	454	-	\$0.012
Pure Nickel Inc.	TSXV:NIC	C\$ 0.01	68.1	US\$ 1	US\$ (0.3)	US\$ 0.0	US\$ 1	Ni / Cu	59%	-	173	-	\$0.005
RNC Minerals	TSX:RXN	C\$ 0.64	466.2	US\$ 224	US\$ (21.2)	US\$ 0.3	US\$ 245	Ni / Co	87%	3,855	7,143	\$0.064	\$0.034
Sama Resources Inc.	TSXV:SME	C\$ 0.31	189.9	US\$ 44	US\$ 5.3	US\$ 0.0	US\$ 39	Ni / Cu	49%	-	286	-	\$0.136
Strongbow Exploration Inc.	TSXV:SBW	C\$ 0.10	86.8	US\$ 7	US\$ 3.6	US\$ 4.4	US\$ 7	Ni / Sn	53%	-	678	-	\$0.011
Group Average - Total												\$0.371	\$0.041

*All reserve and resource data sourced from SNL, additional data sourced from Capital IQ.

**NiEq = nickel equivalent. Calculated based on Haywood's formal long-term metal price forecasts.

***Nickel Ratio = value of in situ nickel / total value of in situ metals.

Zinc Non-Producers – Enterprise Value per Pound of Zinc Equivalent

Company	Symbol	Price	Shares O/S (million)	Market Capitalization (million)	Working Capital (million)	LTD Value (million)	Enterprise Value (million)	Primary / Secondary Metal	Zinc Ratio*** (% Contained)	Reserves & Resources* - Attributable		EV/lb ZnEq** (US\$)	
										Reserve (ZnEq** Mlb)	R&R (Total) (ZnEq** Mlb)	Reserve	Total
Ascendant Resources Inc.	TSX:ASND	C\$ 0.44	77.1	US\$ 25	US\$ 0.8	US\$ 0.0	US\$ 25	Zn / Pb	72%	320	1,405	\$0.077	\$0.018
Commander Resources Ltd.	TSXV:CMD	C\$ 0.09	35.3	US\$ 2	US\$ 2.7	US\$ 0.0	US\$ (0)	Zn / Cu	56%	-	25	-	-
El Nino Ventures Inc.	TSXV:ELN	C\$ 0.04	61.6	US\$ 2	US\$ 1.2	US\$ 0.0	US\$ 0	Zn / Cu	60%	-	530	-	\$0.001
Firestone Ventures Inc.	TSXV:FV	C\$ 0.07	53.7	US\$ 3	US\$ (0.2)	US\$ 0.0	US\$ 3	Zn / Pb	77%	-	428	-	\$0.007
Fireweed Zinc Ltd.	TSXV:FWZ	C\$ 0.87	31.7	US\$ 21	US\$ 2.1	US\$ 0.0	US\$ 19	Zn / Pb	65%	-	6,988	-	\$0.003
InZinc Mining Ltd.	TSXV:IZN	C\$ 0.05	108.9	US\$ 4	US\$ 0.6	US\$ 0.0	US\$ 3	Zn / Cu	71%	-	4,098	-	\$0.001
Karmin Exploration Inc.	TSXV:KAR	C\$ 0.72	77.0	US\$ 42	US\$ (1.8)	US\$ 0.0	US\$ 43	Zn / Pb	54%	-	2,430	-	\$0.018
Osisko Metals Incorporated	TSXV:OM	C\$ 0.50	139.5	US\$ 52	US\$ 12.8	US\$ 0.0	US\$ 39	Zn / Pb	71%	-	301	-	\$0.131
Rathdowney Resources Ltd.	TSXV:RTH	C\$ 0.10	161.7	US\$ 12	US\$ (4.1)	US\$ 0.0	US\$ 16	Zn / Pb	83%	-	3,590	-	\$0.005
ScoZinc Mining Ltd.	TSXV:SZM	C\$ 0.49	5.3	US\$ 2	US\$ 0.1	US\$ 0.0	US\$ 2	Zn / Pb	68%	-	1,485	-	\$0.001
Titan Mining Corporation	TSX:TI	C\$ 1.05	102.0	US\$ 80	US\$ (7.8)	US\$ 0.0	US\$ 88	Zn / -	100%	-	1,182	-	\$0.074
Trevali Mining Corporation	TSX:TV	C\$ 0.34	829.7	US\$ 211	US\$ 175.4	US\$ 144.7	US\$ 181	Zn / Pb	69%	1,667	14,479	\$0.108	\$0.012
Wolfden Resources Corporation	TSXV:WLF	C\$ 0.23	116.9	US\$ 20	US\$ 1.6	US\$ 0.0	US\$ 19	Zn / Au	37%	-	3,242	-	\$0.006
Group Average - Total												\$0.093	\$0.023

*All reserve and resource data sourced from SNL, additional data sourced from Capital IQ.

**ZnEq = Zinc equivalent. Calculated based on Haywood's formal long-term metal price forecasts.

***Zinc Ratio = value of in situ zinc / total value of in situ metals.



Performance of Companies from the last Junior Exploration Report

Junior Exploration Names	Ticker	Close Price (C\$)	Market Capitalization (C\$M)	Cash as of Sept. Junior X Report (C\$M)	Weekly Performance	QTD Performance	QTD Performance vs. TSXV Index
Ascot Resources Ltd.	TSXV:AOT	0.99	172.63	14.17	0.0%	(25.0)%	(31.4)%
Aurion Resources Ltd.	TSXV:AU	0.86	59.67	19.00	(6.5)%	(21.1)%	(27.5)%
Chakana Copper Corp.	TSXV:PERU	0.35	28.21	11.00	(10.3)%	(16.7)%	(23.0)%
Evrin Resources Corp.	TSXV:EVM	0.32	27.03	15.60	0.0%	(4.5)%	(10.8)%
Fireweed Zinc Ltd.	TSXV:FWZ	0.87	27.58	3.00	(3.3)%	0.0%	(6.4)%
Juggernaut Exploration Ltd.	TSXV:JUGR	0.07	6.79	2.80	(6.7)%	(51.7)%	(58.1)%
Kutcho Copper Corp.	TSXV:KC	0.33	18.86	13.24	20.0%	10.0%	3.6%
Oklo Resources Limited	ASX:OKU	0.24	83.16	17.10	(7.8)%	(6.0)%	(12.4)%
Osisko Metals Incorporated	TSXV:OM	0.50	69.77	30.00	0.0%	(3.8)%	(10.2)%
Pan Global Resources Inc.	TSXV:PGZ	0.10	9.43	3.40	(9.1)%	(13.0)%	(19.4)%
Reunion Gold Corporation	TSXV:RGD	0.16	51.29	8.00	(3.0)%	(11.1)%	(17.5)%
Sable Resources Ltd.	TSXV:SAE	0.19	26.54	2.80	0.0%	(5.0)%	(11.4)%
Skeena Resources Limited	TSXV:SKE	0.29	27.89	2.52	(8.1)%	(5.0)%	(11.4)%
Other Companies in the News							
No other news for the week							

Source: Haywood Securities



Key Catalysts for Companies Featured in the Last Junior Exploration Report

Company Junior Exploration Names	Ticker	Catalysts
Ascot Resources Ltd.	TSXV:AOT	<ul style="list-style-type: none"> • Following Q1/18's NI 43-101 resource, drilling is underway for a follow up resource estimate with additional targets between Premier and Big Missouri planned • Engineering studies underway
Aurion Resources Ltd.	TSXV:AU	<ul style="list-style-type: none"> • 15,000 metre drill program to commence H2/18
Chakana Copper Corp.	TSXV:PERU	<ul style="list-style-type: none"> • Results from Phase 2 - 20,000 metre drill program – ongoing • Awaiting approval of Semi-detailed Environmental Impact Study that will allow an additional 160 platforms throughout the original Condor option area – H2/18 • Initial mineral resource estimate – Q1/19
Evrin Resources Corp.	TSXV:EVM	<ul style="list-style-type: none"> • Phase 3 Mapping, trenching, soil and rock chip sampling, and ground geophysics work at Cuale – Q3/18 • Receipt of drilling permits – Q4/18 (mid-October) • 3,000 metre (~20 hole) drilling program – Q4/18
Fireweed Zinc Ltd.	TSXV:FWZ	<ul style="list-style-type: none"> • In 2019, the company plans to advance the district potential and de-risk the project with more drilling. Key targets include Jason South zone and the End Zone area. Gravity surveys will also be undertaken.
Juggernaut Exploration Ltd.	TSXV:JUGR	<ul style="list-style-type: none"> • Results from inaugural drill program started on Midas at the 2.1 by 1.6 km King Solomon Gold Zone- ongoing • Results from inaugural drill program started on Empire Property- ongoing • Results from an ongoing, extensive, systematic sampling program, which includes grab, chip, and channel samples - ongoing
Kutcho Copper Corp.	TSXV:KC	<ul style="list-style-type: none"> • Results from 12,000 metre expansion drill program at Kutcho-anticipated completion mid-October 2018 • Delivery of feasibility study anticipated Q2-Q3 2019 • Construction decision estimated Q1-Q3 2021
Oklo Resources Limited	ASX:OKU	<ul style="list-style-type: none"> • Phase 2 results and follow-up AC, DD and RC drilling program at Seko – Q3/18 • Dandoko Gold Corridor metallurgical test work, AC, RC and DD drilling – H2/18 • South and West Mali regional targets geochemistry, auger and AC drilling program – H2/18
Osisko Metals Incorporated	TSXV:OM	<ul style="list-style-type: none"> • Updated open-pit resource for Pine Point - H2 2018 • Economic study on Pine Point - mid-2019
Pan Global Resources Inc.	TSXV:PGZ	<ul style="list-style-type: none"> • Results from Phase 1 ~14 drill holes (3,000 m) testing Cu and Pb-Zn-Ag targets- Started late Q2 • Phase 2 follow-up drilling Q3-Q4 2018
Reunion Gold Corporation	TSXV:RGD	<ul style="list-style-type: none"> • Boulanger drill program to follow up on historically drilled mineralization – H2/18 • Start of drilling and geophysics at Dorlin – Q3/18 • Start of drilling at Waiamu – Q3/18 • Dorlin resource update– end of Q3/18
Sable Resources Ltd.	TSXV:SAE	<ul style="list-style-type: none"> • Results from further drilling of 12 hole program at Margarita Project- ongoing • Results from drilling at its Don Julio project in Argentina - Q4/18
Skeena Resources Limited	TSXV:SKE	<ul style="list-style-type: none"> • Maiden resource estimate for Eskay Creek -Sept. 2018 • Maiden resource estimate for Snip -Q1/19 • Results from 5,000 metres of surface drilling at Eskay Creek- ongoing

Source: Haywood Securities



Important Information and Legal Disclosures

This report may be distributed in the following states: nil. Otherwise, this report may only be distributed into those states with an institutional buyer state securities registration exemption.

Analyst Certification

We, Mick Carew, Geordie Mark, Kerry Smith, Pierre Vaillancourt, Colin Healey, hereby certify that the views expressed in this report (which includes the rating assigned to the issuer's shares as well as the analytical substance and tone of the report) accurately reflect my/our personal views about the subject securities and the issuer. No part of my/our compensation was, is, or will be directly or indirectly related to the specific recommendations.

Important Disclosures

Of the companies included in the report the following Important Disclosures apply:

Ticker	Company	1	2	3	4	5	6	7	8
TSX:AGI	Alamos Gold Inc.			X					
TSX:AKG	Asanko Gold Inc.			X					
TSXV:AGB	Atlantic Gold Corp.			X					
TSX:BTO	B2Gold Corp.	X		X					
TSXV:BGIM	Barkerville Gold Mines Ltd.			X	X				
TSX:ABX	Barrick Gold Corporation			X					
TSXV:BSR	Bluestone Resources Inc.	X	X	X			X		
TSX:CS	Capstone Mining Corp.			X					
TSXV:KBLT	Cobalt 27 Capital Corp.	X			X	X			
TSX:CMMC	Copper Mountain Mining Corp.			X		X	X		
TSX:DML	Denison Mines Corp.			X	X		X		
TSX:DGC	Detour Gold Corporation	X		X					
TSX:ELD	Eldorado Gold Corporation	X		X					
TSX:EDV	Endeavour Mining Corp.	X		X					
TSX:EFR	Energy Fuels Inc.			X					
TSXV:EQX	Equinox Gold Corp.	X		X	X	X			
TSXV:FPC	Falco Resources Ltd.			X					
TSXV:FIL	Filo Mining Corp.		X	X	X				
TSXV:GQC	GoldQuest Mining Corp.	X							
ASX:GOR	Gold Road Resources Limited			X					
TSX:HRT	Harte Gold Corp.			X	X				
TSX:HBM	Hudbay Minerals, Inc.			X					
TSX:LGD	Liberty Gold Corp.	X		X	X				
TSX:LUC	Lucara Diamond Corp.		X	X					
TSXV:LUM	Lumina Gold Corp.		X	X	X	X			
TSX:LUG	Lundin Gold Inc.			X					
TSX:LUN	Lundin Mining Corporation			X					
TSX:MOZ	Marathon Gold Corp.	X		X	X				
TSX:MAX	Midas Gold Corp.		X	X					
TSX:MPVD	Mountain Province Diamonds Inc.	X	X	X					
TSX:NXE	NexGen Energy Ltd.	X		X			X		
TSX:NCU	Nevada Copper Corp.			X	X				
TSX:NHK	Nighthawk Gold Corp.	X		X					
TSX:OGC	OceanaGold Corporation			X					
TSX:OR	Osisko Gold Royalties Ltd.			X					
TSX:OSK	Osisko Mining Corp.			X	X				



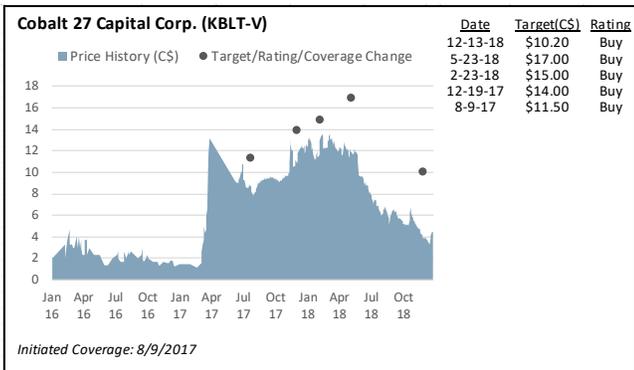
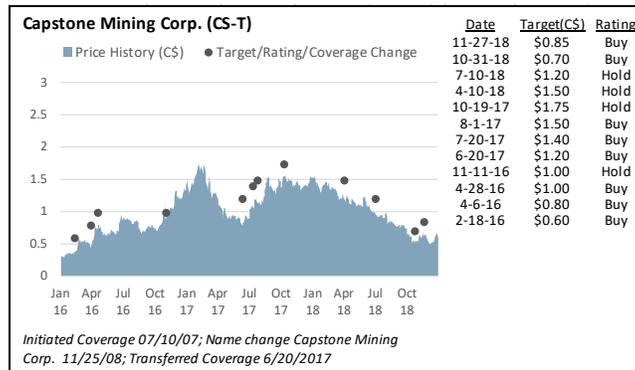
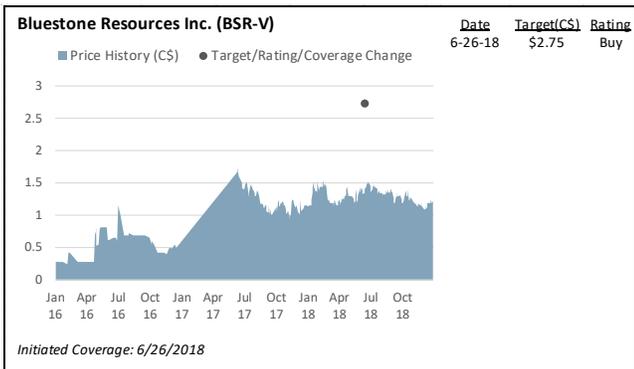
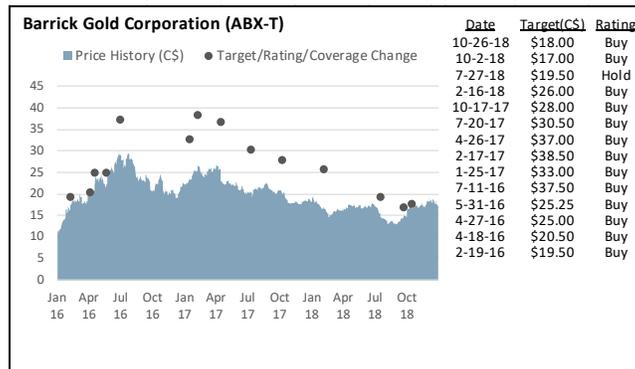
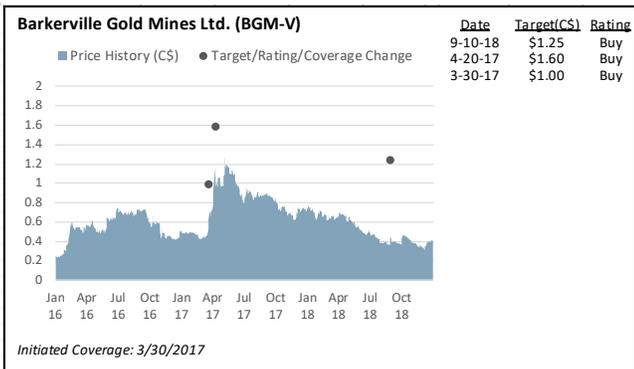
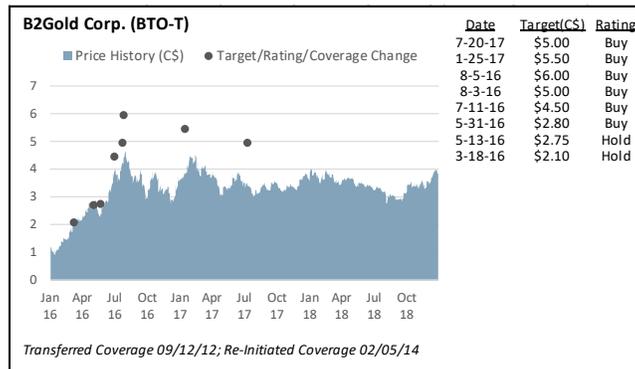
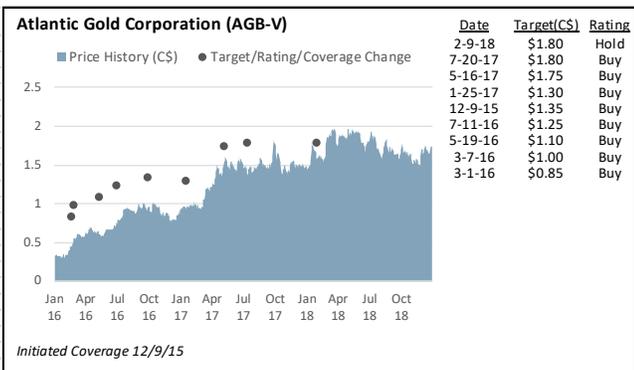
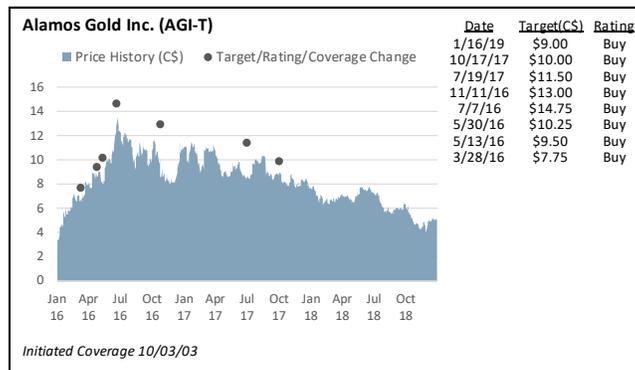
TSXV:PLU	Plateau Energy Metals Inc.		X	X	X	X	X		
TSXV:PGM	Pure Gold Mining Inc.	X	X	X	X				
TSXV:ROG	Roxgold Inc.	X		X					
TSX:RNX	RNC Minerals	X		X	X		X		
TSX:SBB	Sabina Gold and Silver Corp.			X		X			
TSXV:SGI	Superior Gold Inc.								
TSX:SMF	SEMAFO Inc.			X					
TSX:STGO	Steppe Gold Ltd.		X	X	X				
TSX:THO	Tahoe Resources Inc.			X					
TSX:TML	Treasury Metals Inc.			X					
TSX:TV	Trevali Mining Corp.	X		X					
TSXV:TLG	Trolius Gold Corp.			X	X				
AMEX:UEC	Uranium Energy Corp.			X	X				
TSX:U	Uranium Participation Corporation	X			X				
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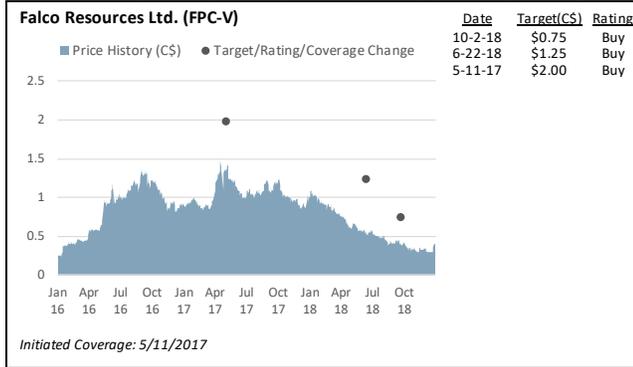
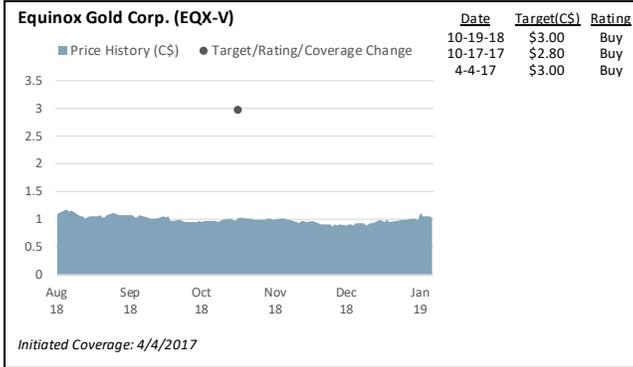
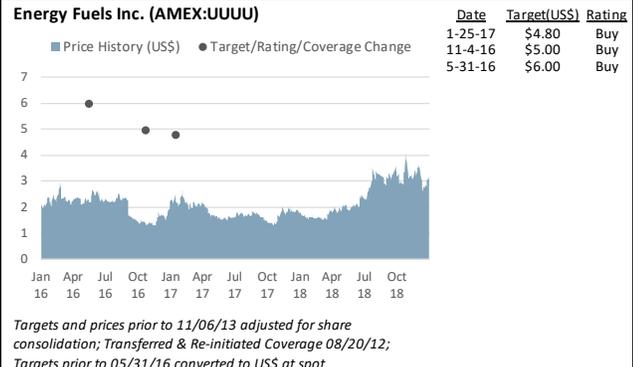
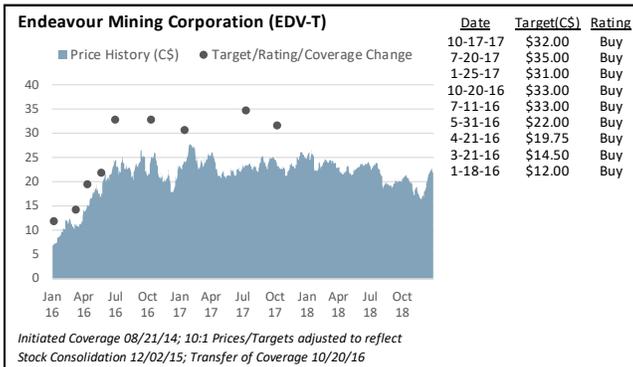
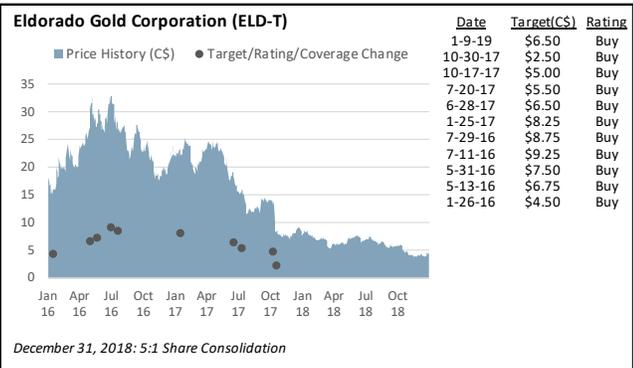
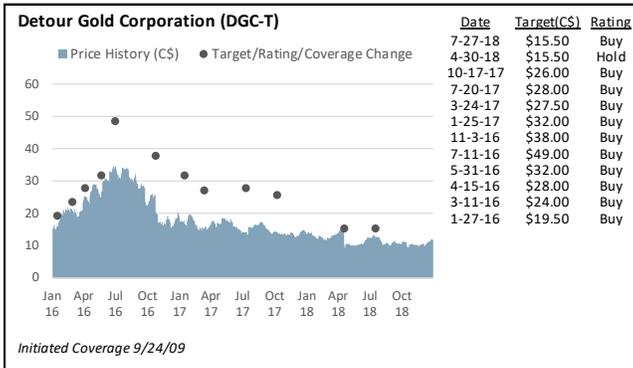
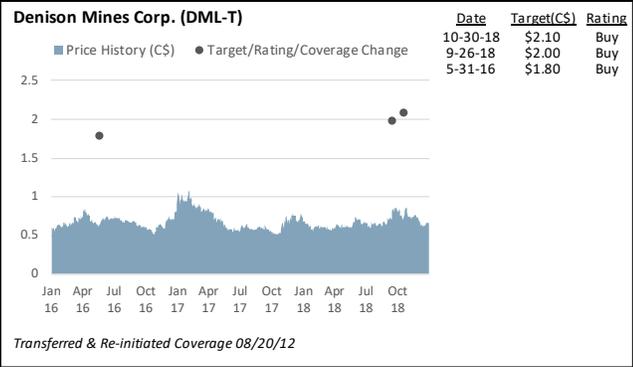
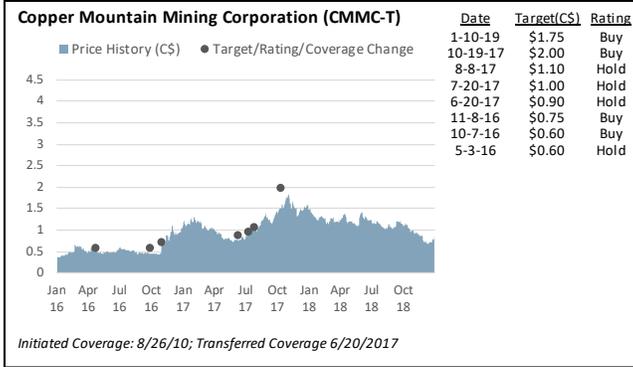
Distribution of Ratings (as of January 25, 2019)

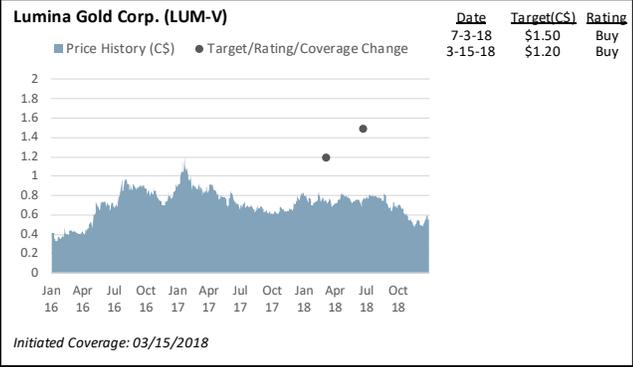
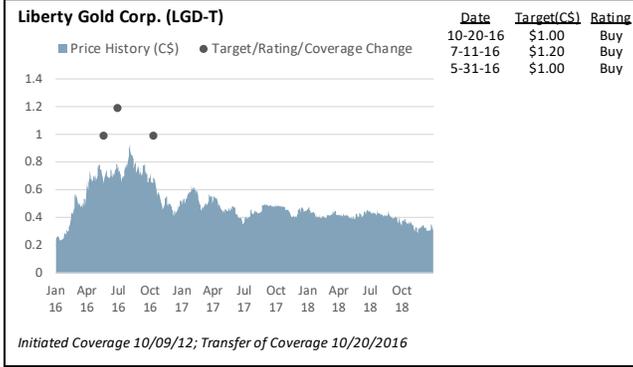
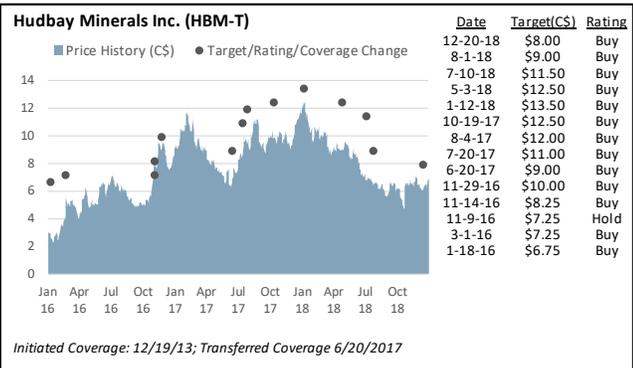
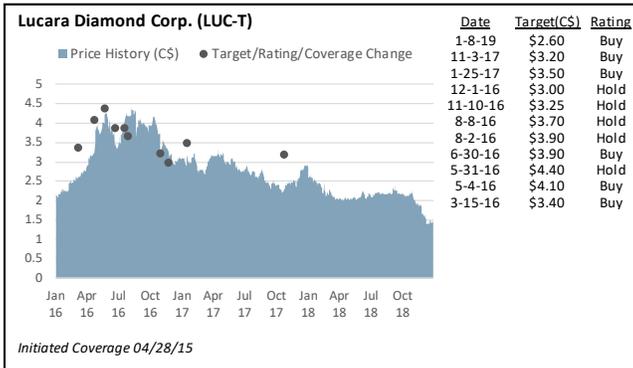
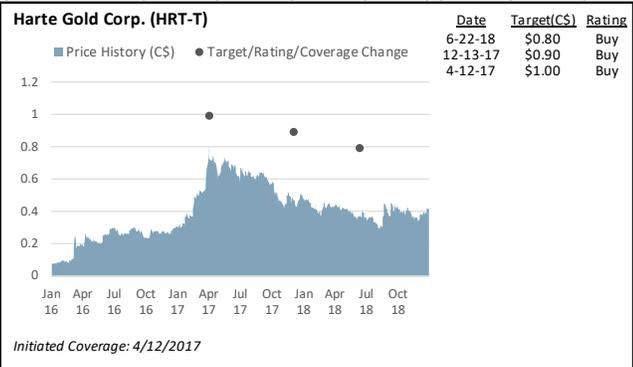
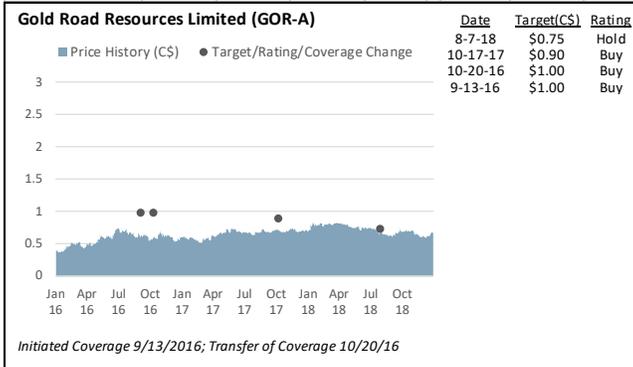
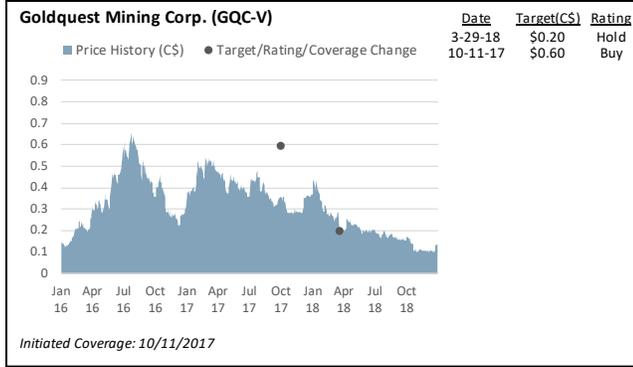
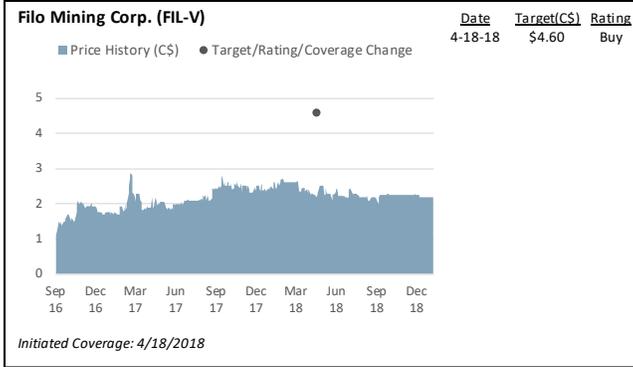
	%	#	IB Clients (TTM)
Buy	75.8%	72	96.0%
Hold	10.5%	10	4.0%
Sell	1.1%	1	0.0%
Tender	2.1%	2	0.0%
UR (Buy)	0.0%	0	0.0%
UR (Hold)	0.0%	0	0.0%
UR (Sell)	0.0%	0	0.0%
Dropped (TTM)	10.5%	10	0.0%

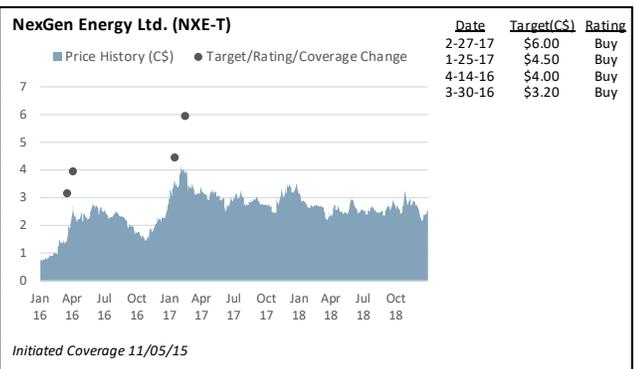
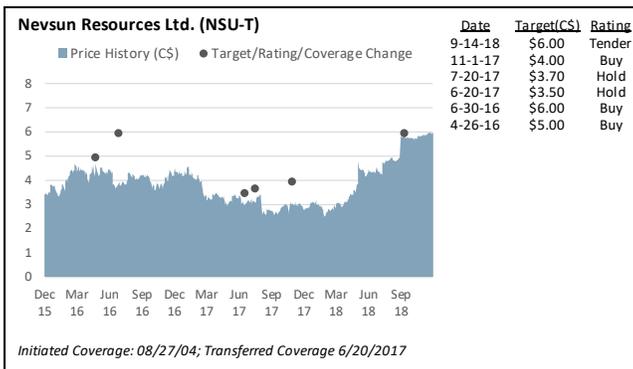
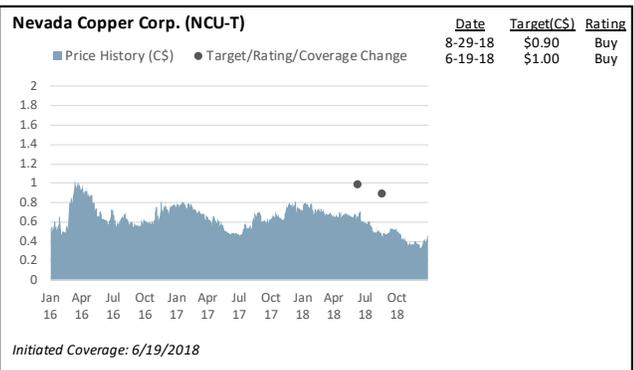
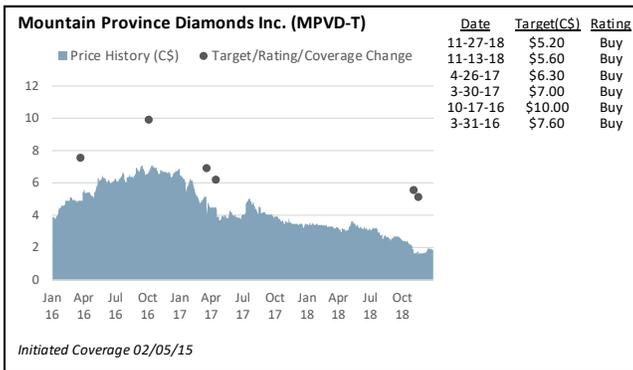
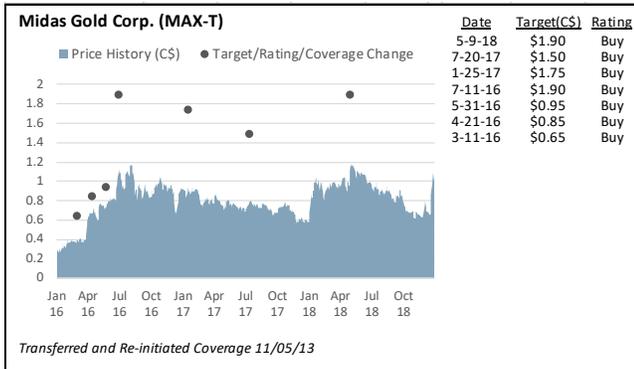
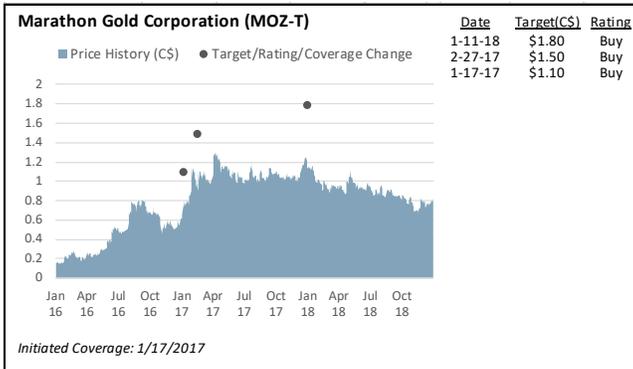
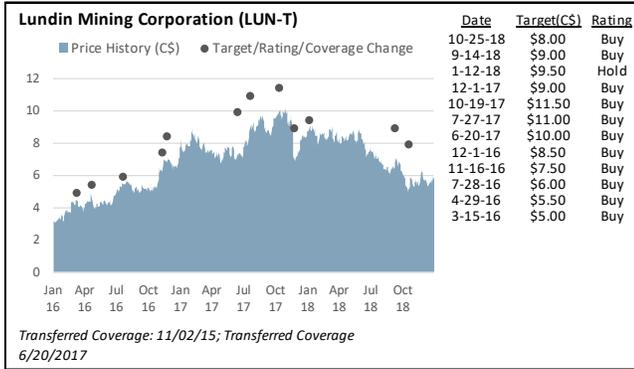
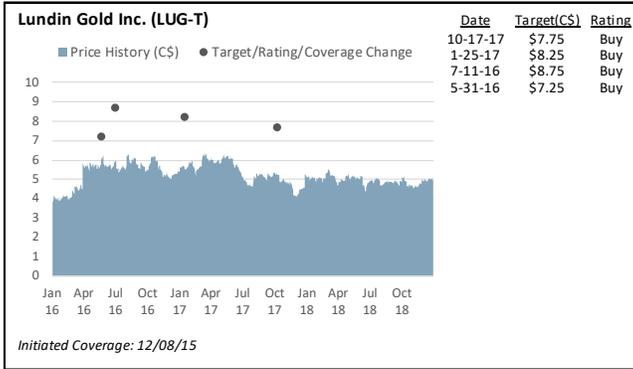


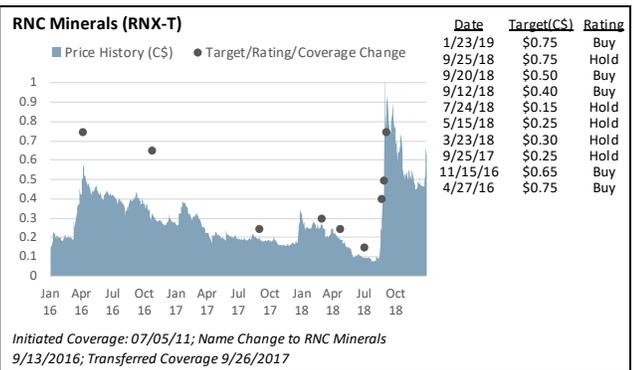
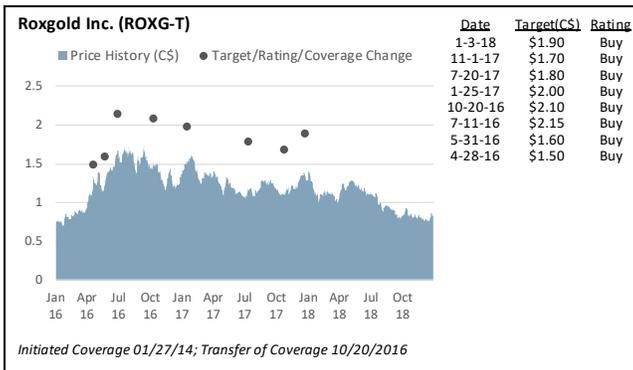
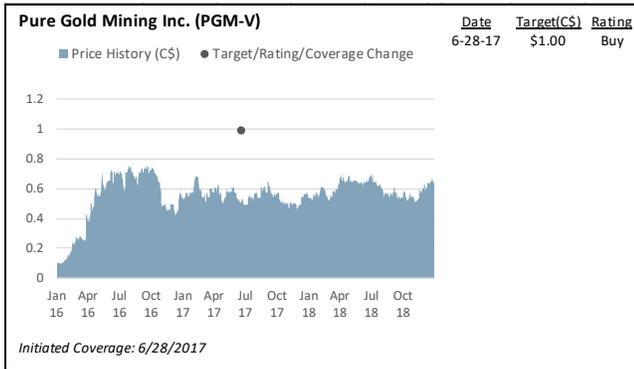
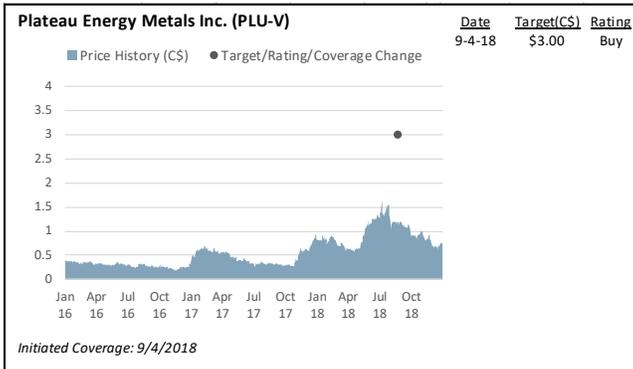
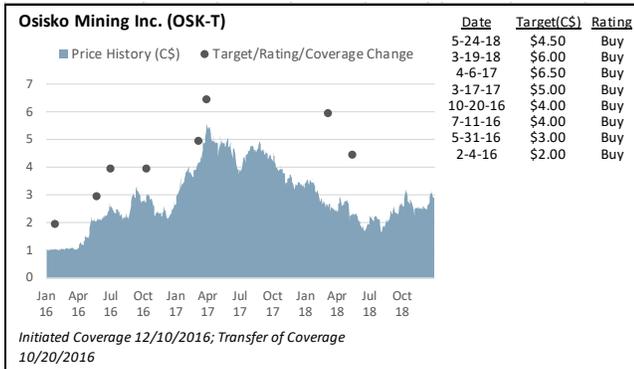
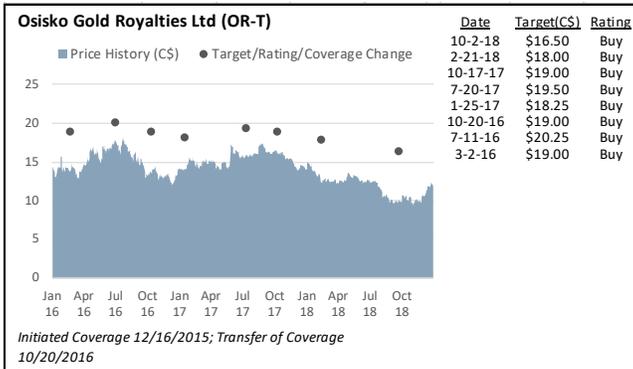
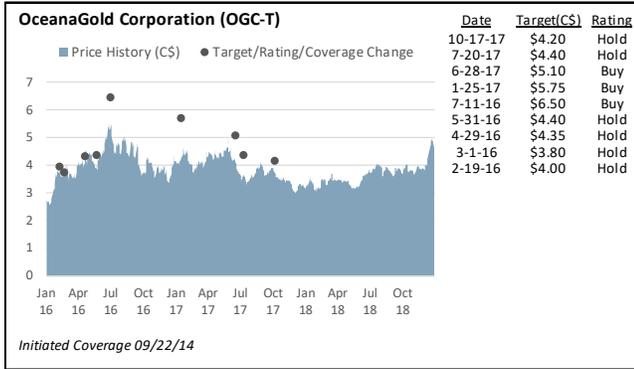
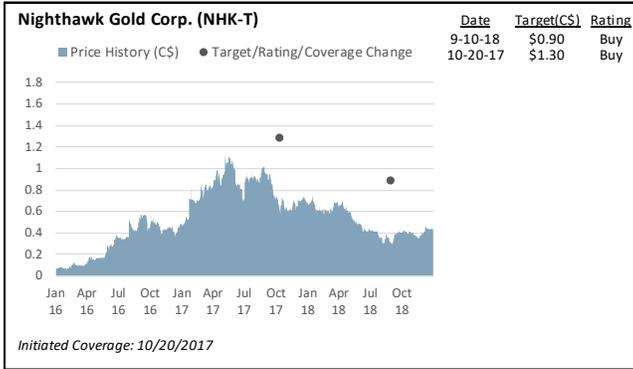
Price Chart, Rating and Target Price History (as of January 25, 2019)

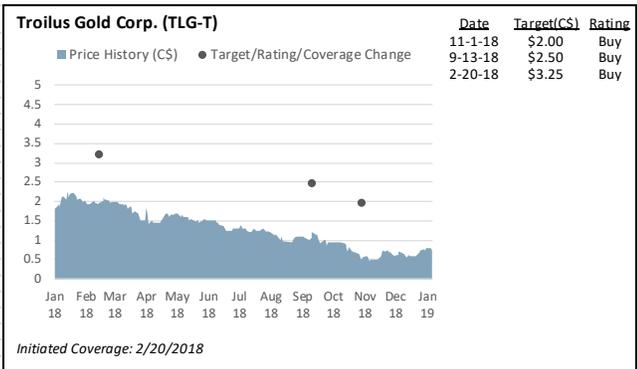
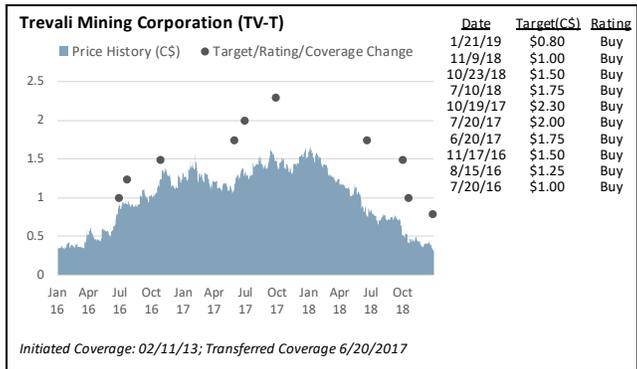
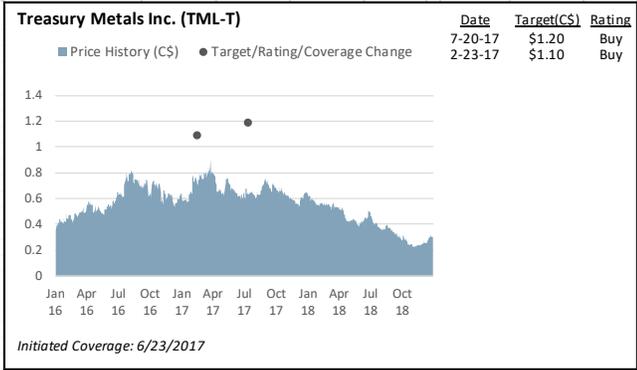
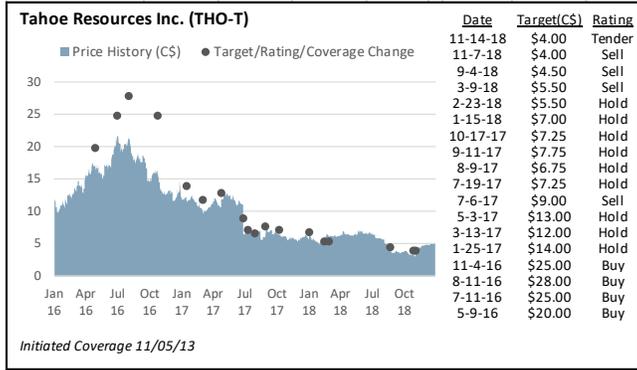
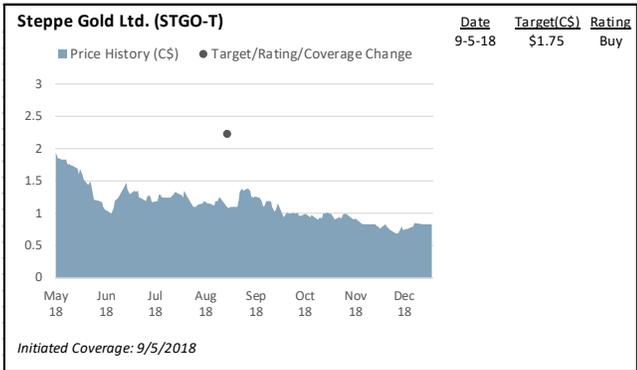
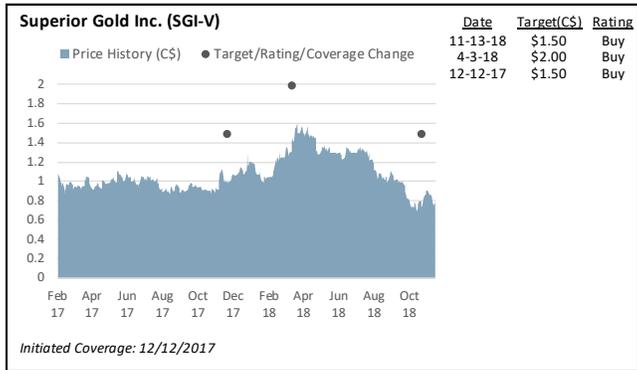
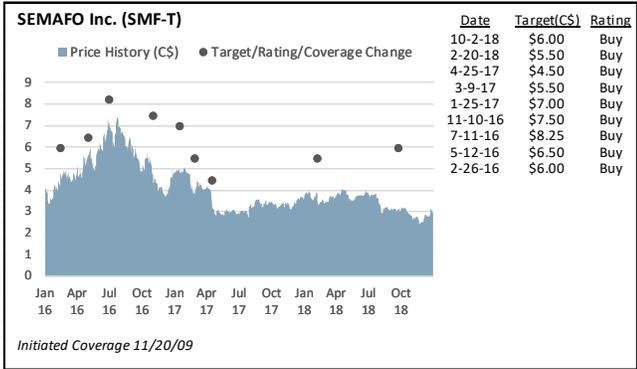
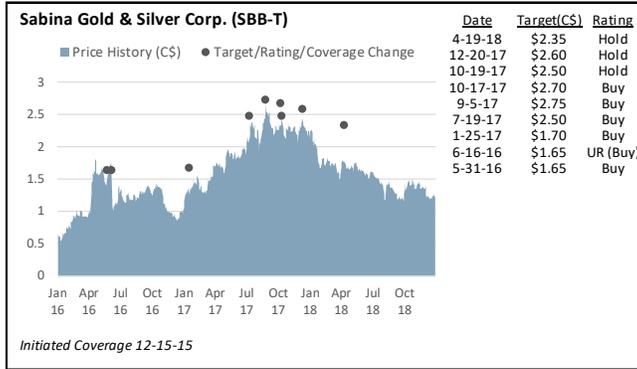


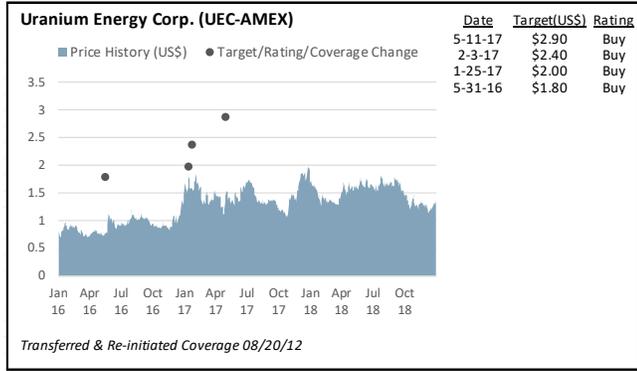
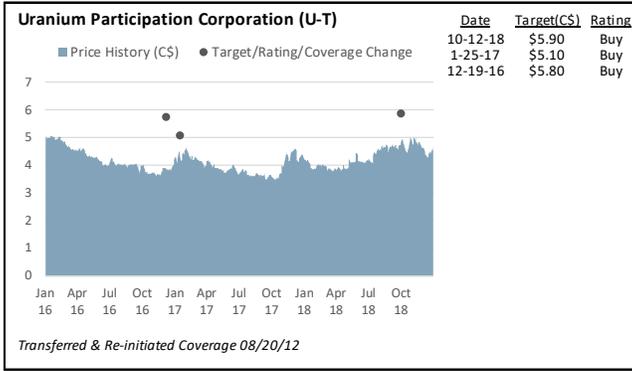












B: Buy; H: Hold; S: Sell; T: Tender; UR: Under Review

Source: Capital IQ and Haywood Securities

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