



**NOBLE CAPITAL MARKETS NEWSLETTER**  
**METALS AND MINING**  
**QUARTERLY REVIEW Q3 2019**

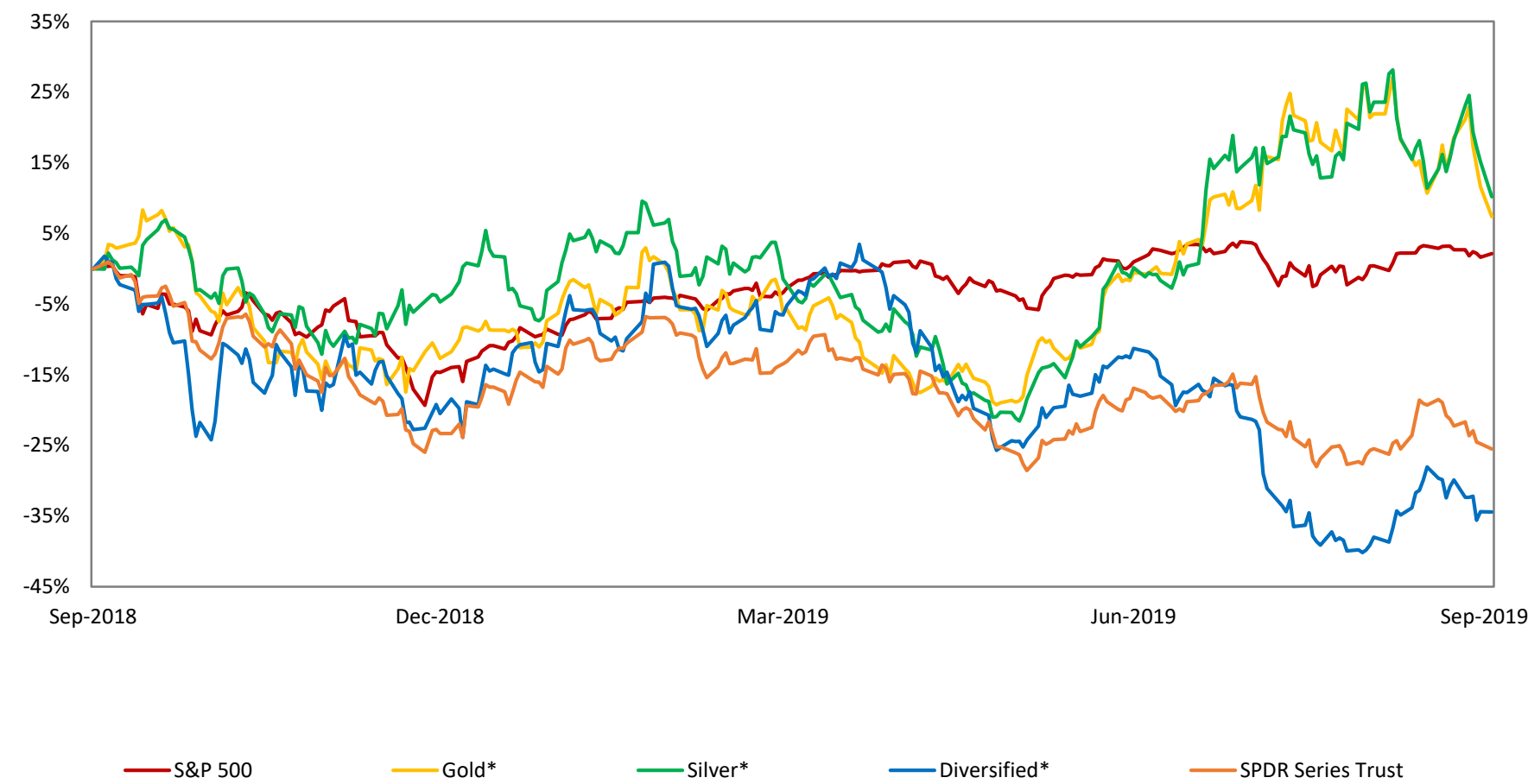
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# MINING SECTOR NEWSLETTER

## MINING SECTOR LTM EQUITY PERFORMANCE



\* Noble Proprietary Sector (index composed of companies in the comparable table)  
\*\* MINING Select Sector SPDR ETF (refer to disclosure section for more information)

Source: Capital IQ as of 09/30/2019

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# MINING – FUNDAMENTAL DATA

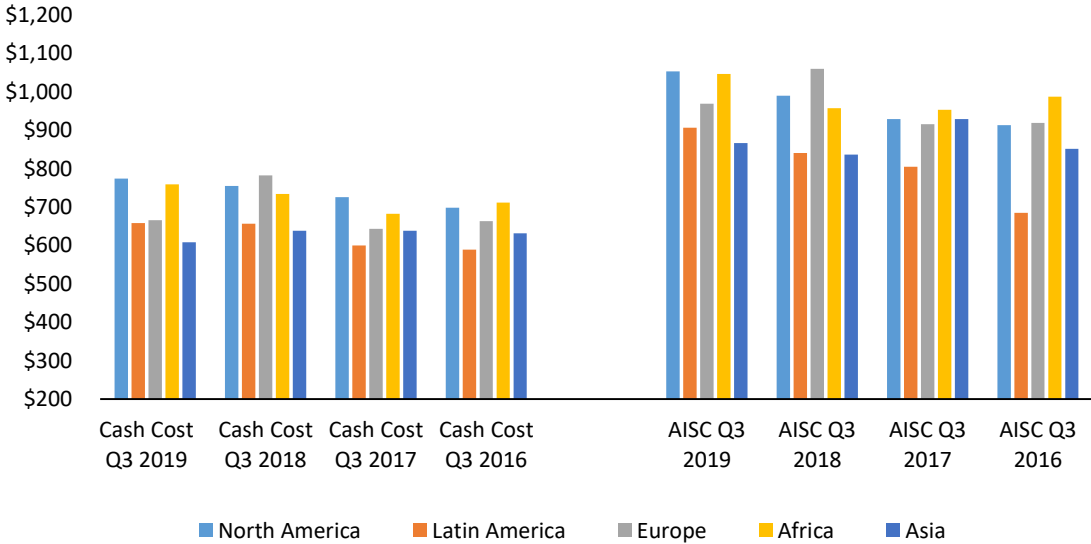
GOLD SPOT PRICE



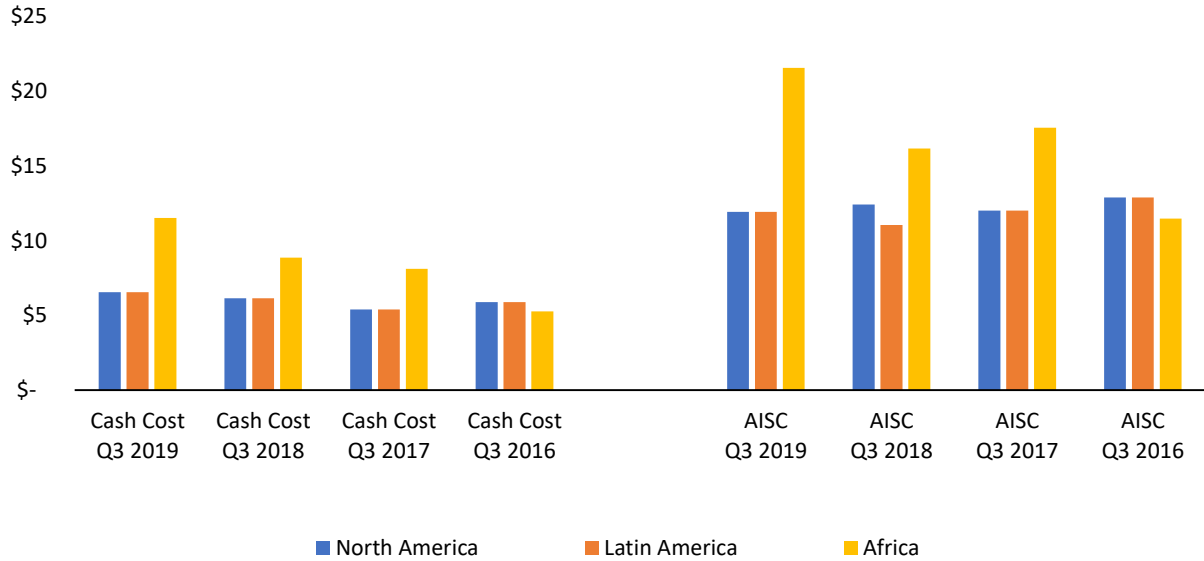
SILVER SPOT PRICE



GOLD CASH COSTS AND AISC BY REGION



SILVER CASH COSTS AND AISC BY REGION



Source: Capital IQ as of 09/30/2019



# METALS AND MINING INDUSTRY OUTLOOK

## Metals & Mining Third Quarter Review and Outlook

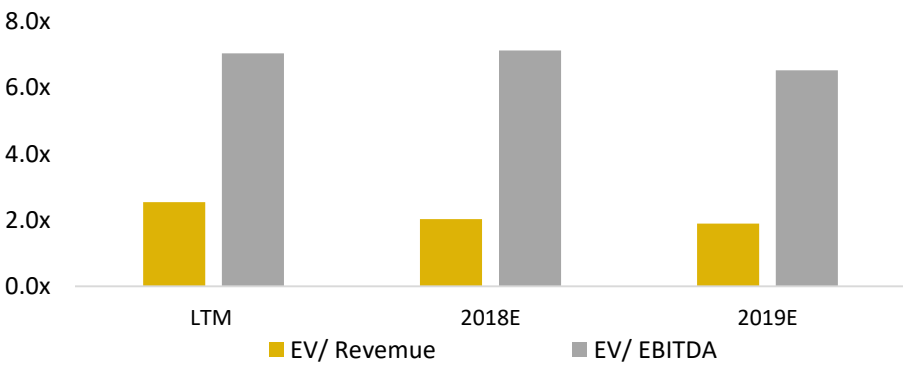
**Mining stocks underperformed the broader market.** Mining companies (as measured by the XME) declined 10.3% during the September quarter versus a 1.2% increase in the S&P500 Index. Year-to-date through September 30, the XME was down 2.8%, while the S&P500 Index appreciated 18.7%. During the third quarter, the price of gold increased 3.4%, while silver increased 11.6%. We note the Van Eck Vectors Gold Miners ETF (GDX) was up 4.5% during the third quarter and 26.7% year-to-date through September 30. The gold/silver ratio was 86.0x at the close of the quarter; down from 92.0x at the end of the second quarter.

**Precious metals outlook leans on monetary policy and macroeconomic factors.** In our view, monetary policy, geopolitical risk and trade, along with concerns about global economic growth and recession fears in the U.S., will drive movements in gold for the remainder of the year. Underscoring concerns about economic growth, an accommodating posture by the U.S. Federal Reserve and other Central Banks may strengthen gold’s appeal.

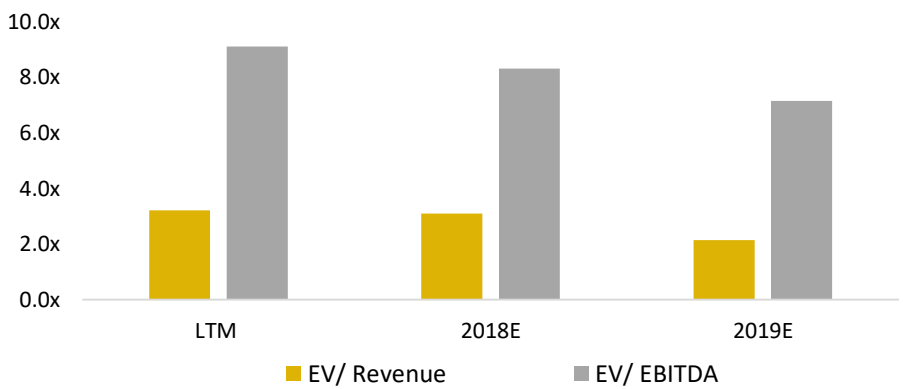
**Base metals linked to economic growth expectations.** With respect to base metals, issues around trade and economic growth will continue to influence demand expectations.

**Mining stocks offer diversification benefits.** In our view, mining stocks are an attractive way to gain exposure to metals given their leverage to strengthening metals prices. Precious metals equities may provide a hedge against volatility in the equity markets and offer diversification benefits.

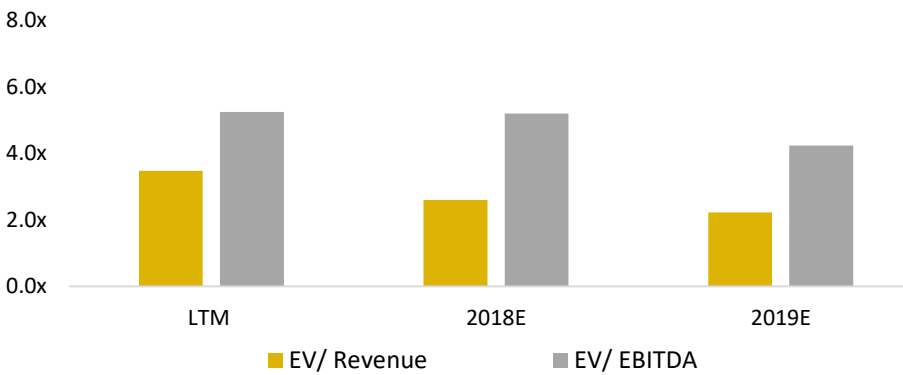
### GOLD



### SILVER



### DIVERSIFIED



Source: Capital IQ as of 09/30/2019 Mark Reichman





# GOLD MINING

## COMPARABLE TABLES

### Major Gold Miner Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	- LTM	- 2018E	- 2019E	- LTM	- 2018E	- 2019E	
Kinross Gold Corporation	TSX:K	(58%)	69%	\$4.61	64%	5,771	1,941	7,186	3,164	976	2.3x	2.3x	2.1x	7.4x	7.1x	5.4x	31%
B2Gold Corp.	TSX:BTO	23%	43%	\$3.26	61%	3,300	366	3,677	1,203	575	3.1x	3.0x	3.0x	6.4x	6.1x	5.7x	48%
Yamana Gold Inc.	TSX:YRI	43%	27%	\$3.17	63%	3,015	1,132	4,823	1,712	663	2.8x	2.7x	3.0x	7.3x	7.9x	6.3x	39%
Alamos Gold Inc.	TSX:AGI	(41%)	27%	\$5.82	57%	2,275	1	2,080	660	260	3.2x	3.2x	3.1x	8.0x	10.1x	7.1x	39%
Detour Gold Corporation	TSX:DGC	104%	82%	\$14.69	58%	2,596	211	2,603	791	258	3.3x	3.4x	3.1x	10.1x	9.3x	8.1x	33%
Eldorado Gold Corporation	TSX:ELD	(7%)	77%	\$7.75	58%	1,228	510	1,667	519	138	3.2x	3.6x	2.7x	NM	14.9x	6.8x	27%

Mean	3.0x	3.0x	2.8x	7.8x	9.2x	6.6x	36%
Median	3.1x	3.1x	3.0x	7.4x	8.6x	6.6x	36%

### Intermediate Gold Miner Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	- LTM	- 2018E	- 2019E	- LTM	- 2018E	- 2019E	
Wesdome Gold Mines Ltd.	TSX:WDO	9%	65%	\$4.51	58%	618	8	605	102	40	5.9x	5.1x	3.6x	NM	13.3x	7.1x	40%
Golden Star Resources Ltd.	TSX:GSC	(29%)	(22%)	\$2.88	44%	314	95	271	256	51	1.1x	1.0x	1.0x	5.3x	5.8x	4.5x	20%
Teranga Gold Corporation	TSX:TGZ	20%	33%	\$3.69	65%	397	175	529	323	60	1.6x	NM	1.6x	8.8x	NM	3.9x	19%
Premier Gold Mines Limited	TSX:PG	(9%)	4%	\$1.41	55%	297	19	290	93	(3)	3.1x	1.8x	1.9x	NM	NM	NM	NM
Argonaut Gold Inc.	TSX:AR	17%	43%	\$1.59	55%	285	14	275	223	29	1.2x	1.3x	1.0x	9.4x	3.9x	3.0x	13%
Corvus Gold Inc.	TSX:KOR	(2%)	(33%)	\$1.65	49%	185	-	182	-	(8)	NM	NM	NM	-24.0x	NM	NM	NM

Mean	2.6x	2.3x	1.8x	-0.1x	7.6x	4.6x	23%
Median	1.6x	1.6x	1.6x	7.1x	5.8x	4.2x	19%

Source: Capital IQ as of 09/30/2019



# GOLD MINING

## COMPARABLE TABLES

### Junior Gold Miner Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	- LTM	- 2018E	- 2019E	- LTM	- 2018E	- 2019E	
Asanko Gold Inc.	TSX:AKG	46%	18%	\$0.93	64%	210	-	203	31	(14)	6.6x	1.0x	0.6x	-14.0x	2.8x	5.2x	-47%
Guyana Goldfields Inc.	TSX:GUY	(10%)	(68%)	\$0.71	21%	124	4	89	182	24	0.5x	0.5x	0.5x	3.8x	1.9x	NM	13%
Contango Ore, Inc.	OTCPK:CTGO	(20%)	(33%)	\$14.00	56%	89	-	80	-	-	NM	NM	NM	NM	NM	NM	NM
Alio Gold Inc.	TSX:ALO	(20%)	(22%)	\$0.62	44%	52	8	44	115	(7)	0.4x	0.4x	0.4x	-6.2x	6.2x	4.6x	-6%
GoGold Resources Inc.	TSX:GGD	59%	83%	\$0.47	59%	87	-	78	21	(24)	3.8x	NM	NM	NM	NM	NM	-117%
Mako Mining Corp.	TSXV:MKO	80%	14%	\$0.16	68%	93	-	72	14	(11)	5.0x	NM	NM	NM	NM	NM	-78%

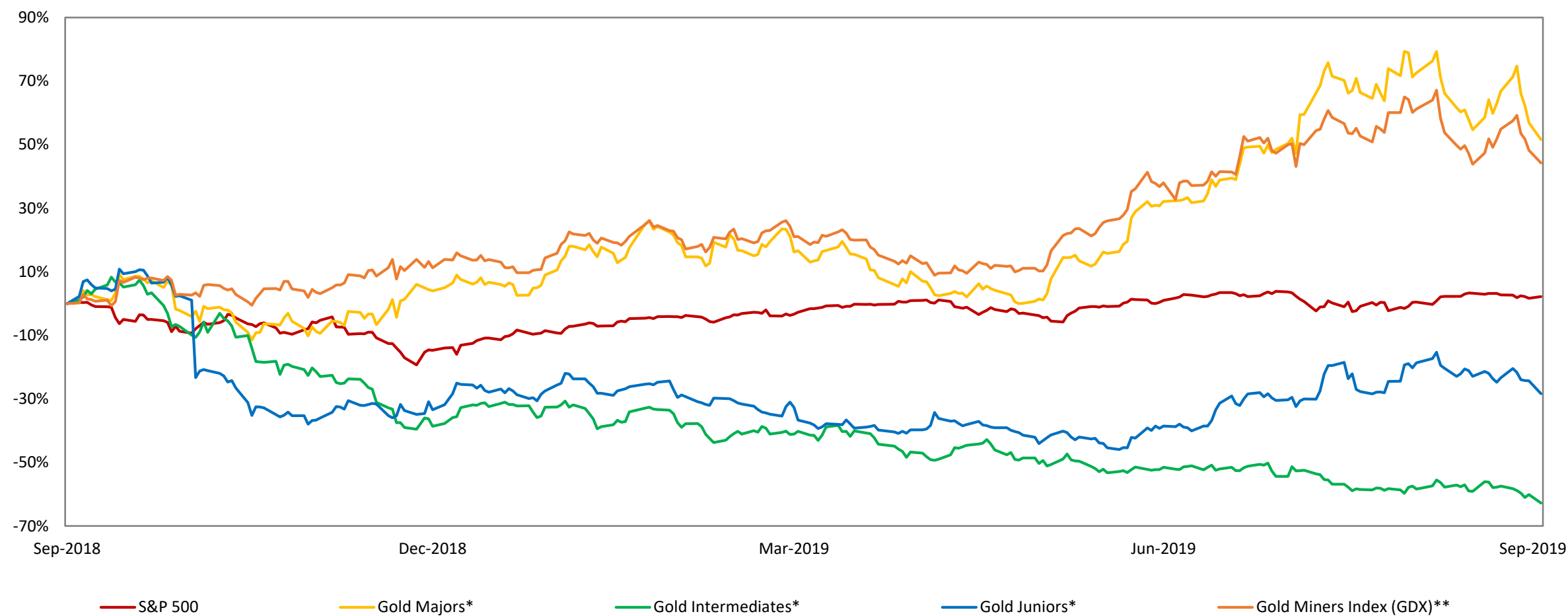
Mean	3.3x	0.6x	0.5x	-5.5x	3.6x	4.9x	(47)%
Median	3.8x	0.5x	0.5x	-6.2x	2.8x	4.9x	(47)%

Source: Capital IQ as of 09/30/2019



# GOLD MINING LTM EQUITY PERFORMANCE

(NOBLE INDEX SELECTION)



\* Noble Proprietary Sector (index composed of companies in the comparable table)  
\*\* SPDR Gold Shares (refer to disclosure section for more information)

Source: Capital IQ as of 09/30/2019





# SILVER MINING

## COMPARABLE TABLES

### Major Silver Miner Index

	TICKER	CHANGE IN		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN
		STOCK PRICE							REVENUES (\$M)	EBITDA (\$M)	-	-	-	-	-	-	
		3-MONTH	12-MONTH								LTM	2018E	2019E	LTM	2018E	2019E	
Pan American Silver Corp.	TSX:PAAS	21%	6%	\$15.67	60%	3,283	400	3,547	877	181	4.0x	4.4x	3.0x	NM	15.1x	9.6x	21%
SSR Mining Inc.	TSX:SSRM	6%	67%	\$14.51	62%	1,767	284	1,598	533	178	3.0x	2.9x	2.1x	9.0x	9.2x	5.3x	33%
First Majestic Silver Corp.	TSX:FR	15%	61%	\$9.10	59%	1,852	161	1,911	333	58	5.7x	4.6x	3.8x	NM	NM	12.9x	18%
Coeur Mining, Inc.	NYSE:CDE	11%	(10%)	\$4.81	80%	1,158	355	1,549	660	80	2.3x	2.4x	2.1x	NM	12.8x	11.3x	12%
Hecla Mining Company	NYSE:HL	(2%)	(37%)	\$1.76	57%	863	619	1,473	567	100	2.6x	2.5x	2.2x	14.7x	10.2x	9.4x	18%

Mean	3.5x	3.4x	2.6x	11.8x	11.8x	9.7x	20%
Median	3.0x	2.9x	2.2x	11.8x	11.5x	9.6x	18%

### Intermediate Silver Miner Index

	TICKER	CHANGE IN		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN
		STOCK PRICE							REVENUES (\$M)	EBITDA (\$M)	-	-	-	-	-	-	
		3-MONTH	12-MONTH								LTM	2018E	2019E	LTM	2018E	2019E	
MAG Silver Corp.	TSX:MAG	1%	32%	\$10.64	57%	919	1	807	-	(9)	NM	NM	NM	NM	NM	NM	NM
Fortuna Silver Mines Inc.	TSX:FVI	9%	(29%)	\$3.10	51%	496	86	505	246	97	2.1x	2.0x	1.9x	5.2x	4.6x	4.7x	39%
Silvercorp Metals Inc.	TSX:SVM	57%	59%	\$3.88	63%	660	3	611	171	78	3.6x	3.4x	3.5x	7.8x	6.5x	6.8x	46%
Endeavour Silver Corp.	TSX:EDR	8%	(3%)	\$2.24	52%	307	9	289	121	(3)	2.4x	1.5x	1.8x	NM	8.3x	NM	-2%
Great Panther Mining Limited	TSX:GPR	(17%)	(17%)	\$0.71	45%	221	52	275	147	8	1.9x	3.3x	1.0x	NM	NM	7.9x	5%

Mean	2.5x	2.5x	2.1x	6.5x	6.5x	6.5x	22%
Median	2.2x	2.7x	1.9x	6.5x	6.5x	6.8x	22%

Source: Capital IQ as of 09/30/2019



# SILVER MINING

## COMPARABLE TABLES

### Junior Silver Miner Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	- LTM	- 2018E	- 2019E	- LTM	- 2018E	- 2019E	
Americas Gold and Silver Corporation	TSX:USA	8%	6%	\$2.50	48%	206	16	216	63	(1)	3.4x	2.3x	2.2x	NM	24.1x	NM	-1%
Alexco Resource Corp.	TSX:AXU	52%	70%	\$1.74	47%	205	1	197	23	(5)	8.7x	17.4x	7.9x	NM	NM	NM	NM
Bear Creek Mining Corporation	TSXV:BCM	18%	45%	\$1.50	55%	154	1	125	-	(14)	NM	NM	NM	NM	NM	-6.5x	NM
Excellon Resources Inc.	TSX:EXN	(7%)	(5%)	\$0.70	47%	77	-	75	26	(4)	2.9x	2.2x	1.6x	NM	NM	-6.4x	NM
Avino Silver & Gold Mines Ltd.	TSX:ASM	4%	(5%)	\$0.59	55%	45	9	50	31	2	1.6x	1.1x	1.2x	30.2x	5.0x	190.1x	5%
Kootenay Silver Inc	TSXV:KTN	82%	87%	\$0.18	58%	50	-	45	-	(2)	NM	NM	NM	NM	NM	NM	NM
Mean											4.2x	5.8x	3.2x	30.2x	14.5x	59.1x	5%
Median											3.2x	2.3x	1.9x	30.2x	14.5x	-6.4x	5%

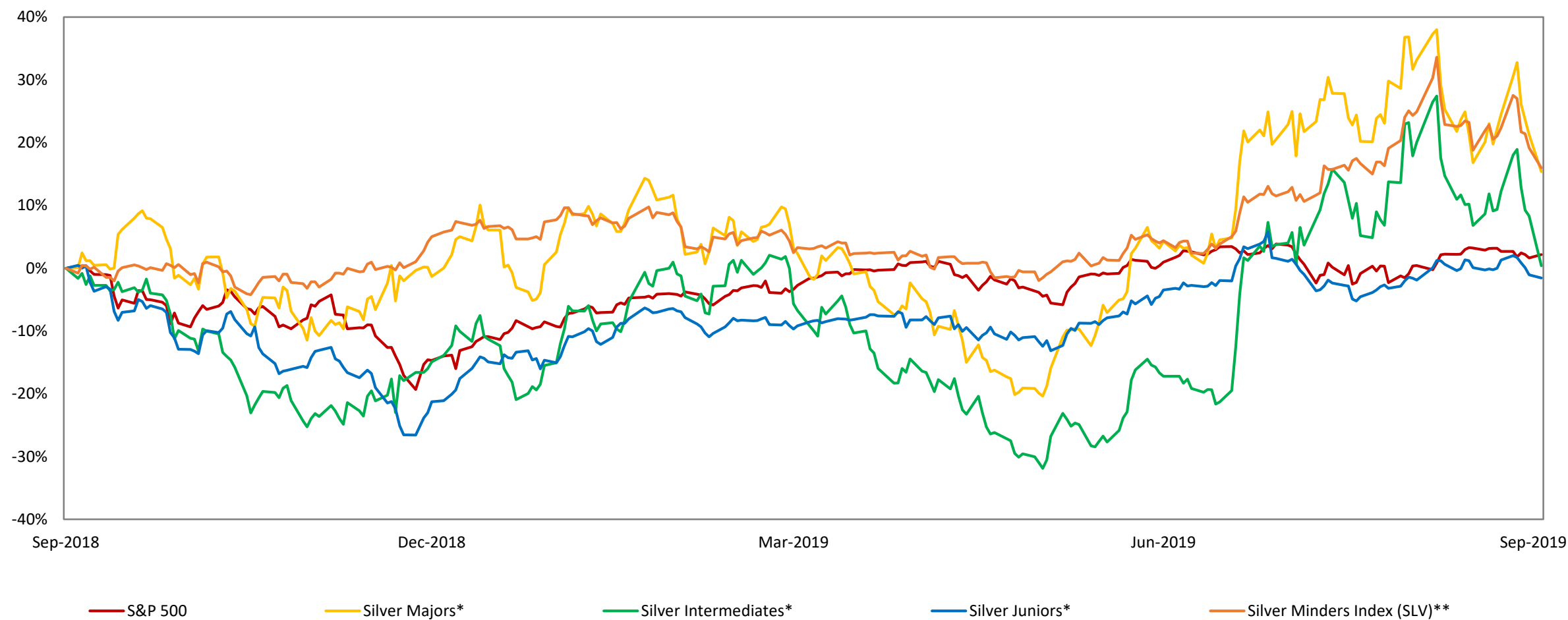
Source: Capital IQ as of 09/30/2019



# SILVER MINING

## LTM EQUITY PERFORMANCE

(NOBLE INDEX SELECTION)



\* Noble Proprietary Sector (index composed of companies in the comparable table)  
\*\* SPDR Gold Shares (refer to disclosure section for more information)

Source: Capital IQ as of 09/30/2019



## GOLD & SILVER LTM GLOBAL M&A ACTIVITY

Date	Buyer	Target	Transaction Value	EV/Revenue	EV/EBITDA
09/30/2019	TerraX Minerals Inc.	Gold Matter Corporation	1.3	-	-
08/23/2019	O3 Mining Inc.	Harricana River Mining Corporation Inc.	1.5	-	-
08/19/2019	Gandel Metals Pty Ltd	Alliance Resources Limited	5.3	295.5	-
08/14/2019	Benchmark Metals Inc.	PPM Phoenix Precious Metals Corp.	3.2	-	-
07/31/2019	Resolute Mining Limited	Toro Gold Limited	302.4	1.7	-
07/03/2019	Red River Resources Limited	Hillgrove Mines Pty Ltd.	3.2	-	-
07/02/2019	Chantrell Ventures Corp.; Certain Non-Core	Chalice Gold Mines (Quebec) Inc.	9.1	-	-
06/28/2019	-	Zoloto Seligdara OAO	9.5	-	-
06/27/2019	Public Joint Stock Company Rusolovo	Zoloto Seligdara OAO	9.5	-	-
06/26/2019	Arrow Minerals Limited	Boromo Gold Limited	2.0	-	-
06/14/2019	AEON Corporation	GeoProMining Investment (CYP) Limited	126.0	1.7	3.8
06/04/2019	-	Maverix Metals Inc.	39.3	13.5	18.9
06/03/2019	-	Maverix Metals Inc.	16.7	13.5	18.9
05/30/2019	Discovery Metals Corp.	Levon Resources Ltd.	10.9	-	-
05/22/2019	Bayshore Minerals Inc.	Gold Mountain Mining Corporation	7.5	-	-
05/22/2019	Santacruz Silver Mining Ltd.	Carrizal Mining, S.A. de C.V.	1.4	-	-
05/21/2019	Barrick Gold Corporation	Acacia Mining plc	427.2	1.7	19.3
05/14/2019	Nord Pacific Ltd.	Atlantic Gold Corporation	595.4	5.3	9.5
05/10/2019	-	Maverix Metals Inc.	12.0	-	-
05/02/2019	Monazita Resources Ltd.	Aura Minerals Inc.	7.4	0.6	2.1
04/11/2019	-	Red 5 Limited	21.4	1.1	10.7
04/04/2019	Santa Fe Gold Corporation	Bullard's Peak Corporation	3.1	-	-
03/11/2019	Desert Gold Ventures Inc.	Ashanti Gold Corp.	2.8	-	-
03/05/2019	Jiangxi Copper Company Limited	Shandong Humon Smelting Co., Ltd.	443.7	0.6	11.0
02/25/2019	Evolution Mining Limited	Tribune Resources Limited	29.6	0.4	0.9
02/08/2019	Tibet Huayu Mining Co., Ltd.	Harvest Mining PLC/Tigray Resources Inc.	1.2	-	-
01/14/2019	Newmont Mining Corporation	Goldcorp Inc.	13,084.5	4.3	40.1
12/28/2018	-	Cerro Grande Mining Corporation	0.3	-	3.9
11/22/2018	A.V.O.D. Kurutulmus Gıda ve Tarım Ürünleri	Avod Altın Madencilik Enerji Ins.San.ve Tic. A.S.	10.4	-	-
11/14/2018	Silver Lake Resources Limited	Doray Minerals Limited	123.6	1.0	2.6
11/14/2018	Pan American Silver Corp.	Tahoe Resources Inc.	1,390.9	2.7	13.2
10/25/2018	KG Mining (Bald Mountain) Inc.	The Bald Mountain Exploration Joint Venture	15.5	-	-
MEAN				24.5x	11.9x
MEDIAN				1.7x	10.7x

Source: Capital IQ as of 09/30/2019



# DIVERSIFIED MINING

## COMPARABLE TABLES

### Major Diversified Miner Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	- LTM	- 2018E	- 2019E	- LTM	- 2018E	- 2019E	
Teck Resources Limited	TSX:TECK.B	(30%)	(33%)	\$16.23	47%	9,050	4,407	12,864	9,462	3,108	1.4x	1.0x	1.1x	4.1x	2.3x	2.9x	33%
First Quantum Minerals Ltd.	TSX:FM	(12%)	(26%)	\$8.41	51%	5,761	9,729	15,410	3,837	1,567	4.0x	3.9x	3.8x	9.8x	8.9x	9.6x	41%
Lundin Mining Corporation	TSX:LUN	(15%)	(11%)	\$4.71	59%	3,457	368	3,308	1,732	543	1.9x	1.9x	1.7x	6.1x	5.2x	4.9x	31%
Turquoise Hill Resources Ltd.	TSX:TRQ	(62%)	(78%)	\$0.47	16%	942	4,210	2,323	1,328	474	1.7x	2.0x	2.1x	4.9x	5.9x	NM	36%
Hudbay Minerals Inc.	TSX:HBM	(33%)	(29%)	\$3.61	35%	943	1,059	1,506	1,336	498	1.1x	1.1x	1.2x	3.0x	2.6x	4.0x	37%
Nexa Resources S.A.	NYSE:NEXA	(2%)	(22%)	\$9.41	69%	1,246	1,457	2,284	2,330	410	1.0x	0.9x	1.0x	5.6x	3.8x	6.1x	18%

Mean	1.9x	1.8x	1.8x	5.6x	4.8x	5.5x	33%
Median	1.6x	1.5x	1.5x	5.2x	4.5x	4.9x	34%

### Intermediate Diversified Miner Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	- LTM	- 2018E	- 2019E	- LTM	- 2018E	- 2019E	
Energy Fuels Inc.	TSX:EFR	(38%)	(41%)	\$1.93	36%	187	18	181	8	(35)	22.1x	3.9x	23.5x	NM	NM	NM	NM
Imperial Metals Corporation	TSX:III	(16%)	7%	\$1.62	46%	209	667	854	258	15	3.3x	2.4x	NM	NM	NM	NM	6%
Sierra Metals Inc.	AMEX:SMTS	(16%)	(53%)	\$1.18	44%	194	99	285	208	56	1.4x	0.9x	0.9x	5.1x	2.3x	2.9x	27%
Capstone Mining Corp.	TSX:CS	(1%)	(27%)	\$0.45	56%	178	212	437	403	103	1.1x	1.0x	1.1x	4.3x	3.4x	4.1x	25%
Panoramic Resources Limited	ASX:PAN	(2%)	(49%)	\$0.20	36%	132	33	159	18	0	NM	7.5x	1.6x	NM	NM	4.7x	1%

Mean	7.0x	3.1x	6.8x	4.7x	2.8x	3.9x	15%
Median	2.3x	2.4x	1.3x	4.7x	2.8x	4.1x	16%

Source: Capital IQ as of 09/30/2019



# DIVERSIFIED MINING

## COMPARABLE TABLES

### Junior Diversified Miner Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	-	-	-	-	-	-	
											LTM	2018E	2019E	LTM	2018E	2019E	
Taseko Mines Limited	TSX:TKO	(20%)	(46%)	\$0.42	40%	104	281	350	262	57	1.3x	1.0x	1.1x	6.2x	4.0x	6.9x	22%
Western Copper and Gold Corporation	TSX:WRN	(0%)	(5%)	\$0.65	60%	70	-	66	-	-	NM	NM	NM	NM	NM	NM	NM
Tinka Resources Limited	TSXV:TK	(51%)	(58%)	\$0.12	30%	32	-	25	-	(2)	NM	NM	NM	NM	NM	NM	NM
Falco Resources Ltd.	TSXV:FPC	(21%)	(46%)	\$0.17	31%	35	8	40	-	(3)	NM	NM	NM	NM	NM	NM	NM
Atico Mining Corporation	TSXV:ATY	24%	(13%)	\$0.26	64%	26	2	27	55	18	0.5x	NM	0.4x	1.5x	NM	1.2x	32%
Tasman Resources Ltd	ASX:TAS	36%	16%	\$0.03	33%	18	1	25	2	(6)	15.1x	NM	NM	NM	NM	NM	NM

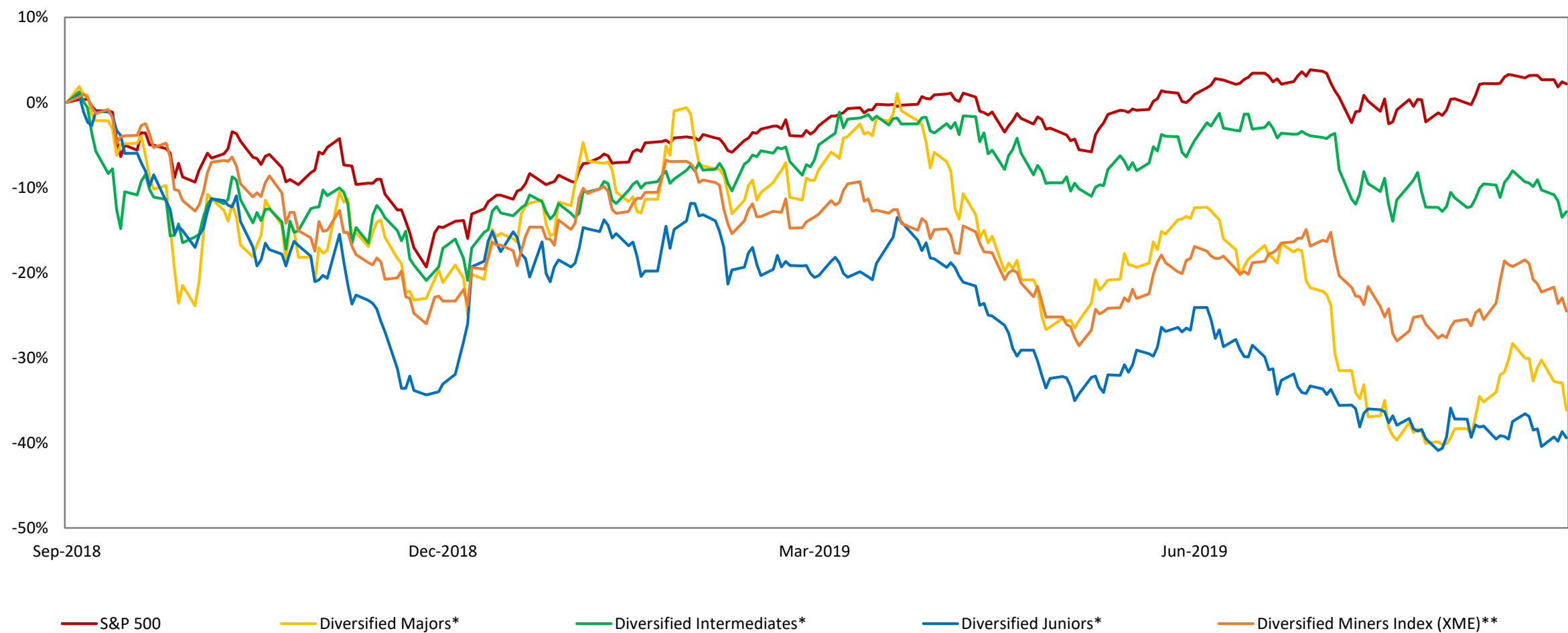
Mean	5.6x	1.0x	0.7x	3.8x	4.0x	4.1x	27%
Median	1.3x	1.0x	0.7x	3.8x	4.0x	4.1x	27%

Source: Capital IQ as of 09/30/2019



# DIVERSIFIED MINING LTM EQUITY PERFORMANCE

(NOBLE INDEX SELECTION)



\* Noble Proprietary Sector (index composed of companies in the comparable table)  
\*\* SPDR Gold Shares (refer to disclosure section for more information)

Source: Capital IQ as of 09/30/2019



## DIVERSIFIED MINING LTM GLOBAL M&A ACTIVITY

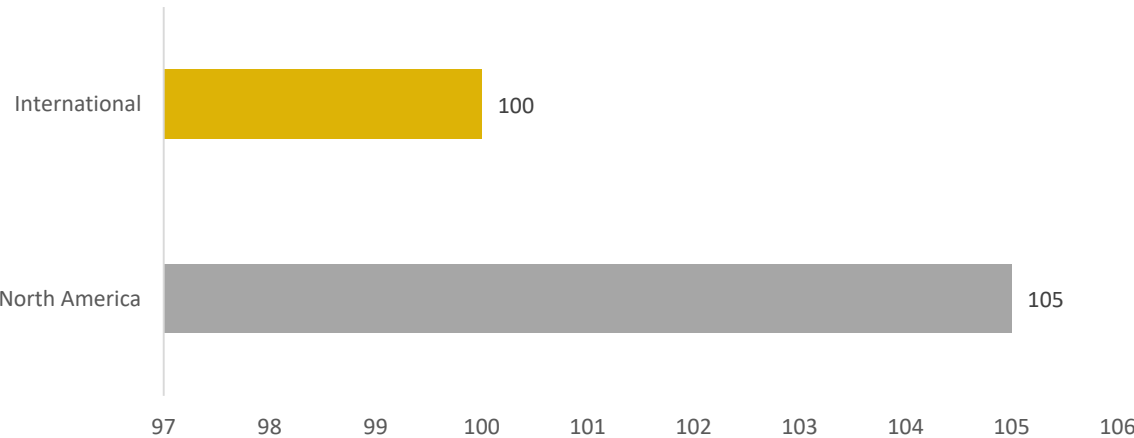
Date	Buyer	Target	Transaction Value	EV/Revenue	EV/EBITDA
09/25/2019	Qinghai Western Resources Co. Ltd.	Tibet Huayu Mining Co., Ltd.	99.2	7.6	27.5
09/12/2019	ANC Mineração Ltda.; GK Brasil Mineração Eireli	Guaporé Mineração Ltda.	13.0	-	-
08/30/2019	Tibet Aotecar Investment Co., Ltd.	Qinghai Hengxin Rongliye Technology Co., Ltd.	22.2	6.7	-
08/26/2019	Votorantim Metals Canada Inc.	Karmin Exploration Inc.	67.1	-	-
08/16/2019	-	Suzhou Vico Material Technology Co.,LTD	3.0	0.3	3.9
07/25/2019	Henan Shenhua Coal & Power Co.,Ltd	Shenlong Baoding New Material Co., Ltd.	30.4	-	-
07/24/2019	Yue Da Group (H.K.) Co., Limited	Baoshan Feilong Nonferrous Metal Co., Ltd.	29.5	-	-
07/08/2019	Atico Mining Corporation	Toachi Mining Inc.	6.9	-	-
07/02/2019	Jiangxi Xingjinye Environmental Protection Technology Group Co., Ltd.	Jiangxi Xinjinye Industrial Co., Ltd.	4.5	-	-
06/28/2019	Jinan Hi-tech Holding Group Co., Ltd.	Triton Minerals Limited	7.7	-	-
06/25/2019	Yongshan International Co., Ltd.	Altura Mining Limited	17.5	18.9	-
06/18/2019	Pala Investments Limited	Cobalt 27 Capital Corp.	480.5	-	-
06/05/2019	Bennelong Resource Capital Pty Ltd	Apollo Minerals Limited	1.0	64.5	-
06/03/2019	TPG Sixth Street Partners	Grupo FerroAtlántica, S.A.U.	175.2	-	-
05/29/2019	Hunan Caixin Changqin No. 1 Fund Partnership Enterprise (Limited Partnership)	Chenzhou City Jingui Silver Industry Co., Ltd.	45.1	0.8	13.8
05/22/2019	Shanghai Haitong Securities Asset Management Company Ltd	Tibet Huayu Mining Co., Ltd.	39.6	6.1	21.4
05/07/2019	Lepidico Limited	Desert Lion Energy Inc.	14.1	-	-
05/06/2019	Pala Investments Limited	Nevada Copper Corp.	9.3	-	-
05/02/2019	Wesfarmers Limited	Kidman Resources Limited	538.9	-	-
04/15/2019	AMCI Euro-Holdings BV	Jupiter Mines Limited	31.7	39.8	2.7
04/01/2019	Jervois Mining Limited	eCobalt Solutions Inc.	41.5	-	-
03/15/2019	Sichuan Jiangxi Copper Rare Earth Co., Ltd.	Liangshan Mining & Smelting Investment Holding Co., Ltd.	11.2	-	-
03/11/2019	CD Capital Asset Management Ltd.; CD Capital Natural Resources Fund III L.P.	Verdant Minerals Ltd	16.2	-	-
03/09/2019	Puyang Refractories Group Co., Ltd.	Tibet Changdu Xiangchen Magnesium Industry Co., Ltd.	89.4	-	-
02/27/2019	Xuchen International Co., Ltd.	Nzuri Copper Limited	82.8	-	-
01/29/2019	Chengyu Vanadium Titano Technology Ltd	Huili County Caitong Iron and Titanium Co., Ltd.	81.7	-	-
01/22/2019	Jervois Mining Limited	M2 Cobalt Corp.	12.6	-	-
01/15/2019	Pluspetrol Resources Corporation B.V.	LSC Lithium Corporation	85.1	-	-
01/01/2019	Cobalt 27 Capital Corp.	Highlands Pacific Limited	201.4	-	26.7
11/12/2018	Tantalex Resources Corporation	International Cobalt Corp.	11.6	-	-
11/08/2018	Yongxing Special Stainless Steel Co., Ltd. (nka:Yongxing Special Materials Technology Co.	Jiangxi Xuli Mining Co., Ltd.	28.4	7.0	-
10/10/2018	-	Largo Resources Ltd.	28.8	3.7	5.2
MEAN				15.5x	14.4x
MEDIAN				6.9x	13.8x

Source: Capital IQ as of 09/30/2019

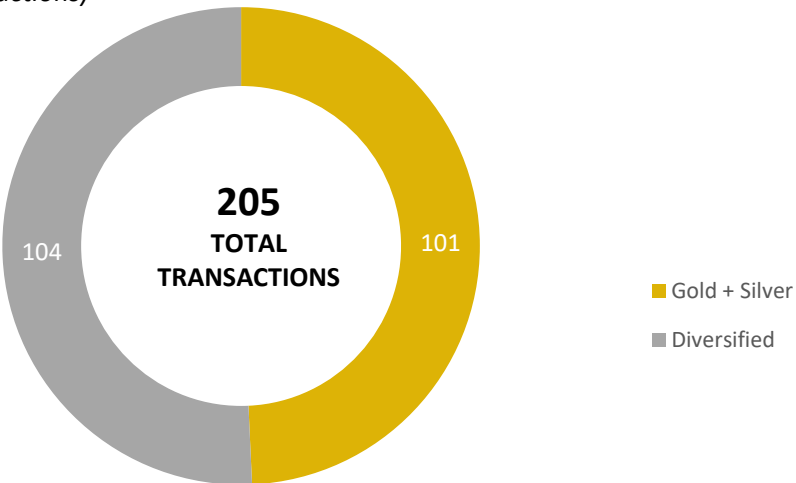


# LTM MINING INDUSTRY M&A SUMMARY

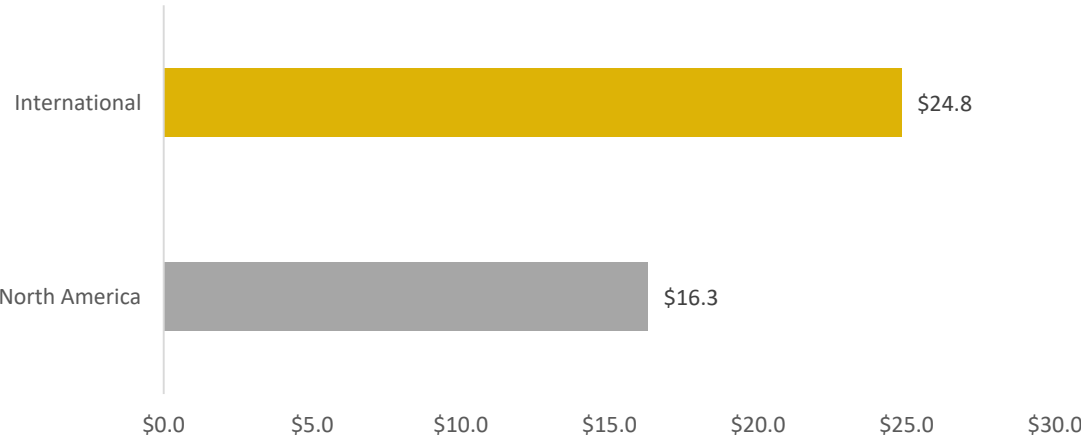
**NORTH AMERICA VS INTERNATIONAL**  
**TOTAL TRANSACTIONS** *(Number of transactions)*



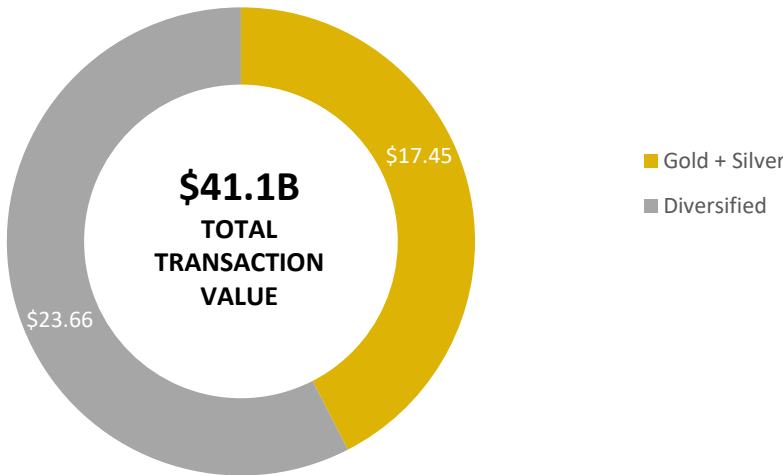
**DEAL VALUE PER SECTOR**  
*(Number of transactions)*



**NORTH AMERICA VS INTERNATIONAL**  
**TOTAL TRANSACTIONS** *(Values in \$B)*



**TOTAL TRANSACTION VALUE**  
*(Values in \$B)*



Source: Capital IQ as of 09/30/2019





## NOBLE QUARTERLY HIGHLIGHTS

### Lumina Gold Corp. (TSXV:LUM)

#### Industry: Metals and Mining – Gold

Lumina Gold Corp., an exploration stage company, engages in the acquisition, exploration, evaluation, and development of precious and base metals in Ecuador. The company primarily explores for gold and copper deposits. Its principal project is the Cangrejos project consisting of 10 mineral concessions covering an area of approximately 6,373 hectares located in El Oro Province, southwest Ecuador. The company was formerly known as Odin Mining and Exploration Ltd. and changed its name to Lumina Gold Corp. in November 2016.

#### 3<sup>rd</sup> Quarter News Highlight:

On September 4, 2019 Lumina Gold Corp. announced drill results from thirteen new holes from the metallurgical and pit slope geotechnical drilling program. The holes represented approximately 4,910 metres of drilling and were all on the Cangrejos deposit. Results showed on average, per 444 metres, 1.18 g/t gold and 0.09% copper from 4 metres below surface.



### Oceanus Resources Corporation (TSXV:OCN)

#### Industry: Metals and Mining – Diversified

Oceanus Resources Corporation engages in the exploration of mineral properties in Mexico. The company explores for gold, silver, copper, zinc, lead, and base metals. It holds a 100% interest in the El Tigre property that covers an area of 26,307 hectares located in Sonora, Mexico. The company has performed step-out drill holes to the south and north of the Main Deposit of El Tigre and found significant gold and silver values.

#### 3<sup>rd</sup> Quarter News Highlight:

On September 11, 2019 Oceanus Resources announced the commencement of the 2019 exploration program at its El Tigre Gold-Silver property located in Sonora, Mexico. The company's 43-101 for the property filed in 2017 indicated 661,000 GEOs (Gold Equivalent Ounces) at 0.77 g/t (21 g/t silver and 0.51 g/t gold) and inferred resources totaling 341,000 GEOs at 1.59 g/t (88 g/t silver and 0.52 g/t gold).



### Northern Vertex Mining Corp. (TSXV:NEE)

#### Industry: Metals and Mining – Gold

Northern Vertex Mining Corp. acquires, explores for, develops, and operates mineral properties in the United States and Canada. Its flagship project is the Moss mine gold-silver deposit covering a total area of 4,030.8 hectares located in Mohave County, Arizona. The company was formerly known as Northern Vertex Capital Inc. and changed its name to Northern Vertex Mining Corp. in February 2012.

#### 3<sup>rd</sup> Quarter News Highlight:

On September 12<sup>th</sup>, 2019 Northern Vertex announced gold and silver production totaling 3,431 GEOs (Gold Equivalent Ounces) at the company's flagship Moss Gold Mine in Northwest Arizona. The 3,431 GEOs was comprised of 3,091 ounces gold and 25,529 ounces silver.



Source: Company Press Releases

$$R + (e^2 + p^2) = \text{TF}$$

# NOBLE CAPITAL MARKETS

## NOBLE CAPITAL MARKETS

NOBLE CAPITAL MARKETS is a research-driven investment and merchant bank focused on small cap, emerging growth companies in the healthcare, technology, media and natural resources sectors. That's what we are. Who we are is what makes us different.

Our people are talented, dedicated, experienced professionals who come together with a common cause; advising on long-term client solutions by employing innovative, collaborative and responsive strategies. We're passionate and personable. We approach things from our clients' perspective.

We know that developing lasting relationships is reliant upon putting our clients' interests before ours. We understand the impact of our services. Insightful advisory and effective capital procurement can change lives. Empowering our clients to create employment, engineer technological and medical breakthroughs, producing products and services that lay the foundation for the future. For more than 30 years these have been our guiding principles. While much has changed over the three decades since we began, these core values and our reputation have not. Our clients must know what to expect from us. Then we can strive to exceed expectations.

## A SIMPLE FORMULA

### OUR VALUE PROPOSITION.

It starts with research with a fundamental belief that information guides the management process, NOBLE understands that there is no short-path to success. With this as a solid foundation, apply experience and execution delivered by people with passion. This is our formula to add value to your creation.

Research + Experience & Execution + People with Passion = Value

### FULL-SERVICE INVESTMENT BANK

- Established 1984.
- Private firm, employee owned.
- Built on commitment to provide value and support for our clients.

### FOCUSED INSTITUTIONAL SALES AND TRADING

- Seasoned sales and sales trading team.
- Long standing relationships with premier growth- focused investors.

### INVESTMENT BANKING COMMITMENT

- Proven track record.
- Senior level attention to every client and transaction.
- Ability to deliver complete "mind share" of NOBLE on all transactions.

### RESEARCH DRIVEN CAPITAL MARKETS PLATFORM

- Experience team of Research Analysts covering approximately 100 companies.
- Focus on Technology, Media, Healthcare and Natural Resources.
- Strong Institutional Sponsorship.



$$R + (e^2 + p^2) = \pi$$

## INVESTMENT BANKING

Our investment banking team, together with our well-recognized equity research analysts and the equity capital markets group, provide our clients with fundamental capital markets advisory and support - prior, during and most importantly, after a transaction. NOBLE's investment banking team works closely with the management and Board of our corporate clients in order to fully understand operational and financial objectives. With this knowledge our banking team will develop an efficient and effective advisory program which offers a variety of services including:

### EQUITY CAPITAL MARKETS

- Secondary and Follow-on Offerings
- Registered Direct Offerings
- Initial Public Offerings
- At the market Offerings (ATM's)
- PIPEs/Private Sale Offerings

### DEBT CAPITAL MARKETS

- Senior Debt
- Mezzanine
- Convertible Debt
- Bridge Financings

### ADVISORY SERVICES

- Merger & Acquisitions
- Fairness Opinions
- Valuation Services

## SELECT NATURAL RESOURCES TRANSACTIONS

**Gravitas**  
Resources Corporation  
(PRIVATE)

**\$4,200,000**

Private Placement  
Placement Agent

  
February 2019

**SAILFISH**  
ROYALTY CORP.  
(TSX-V: FISH)

**Restructuring Advisory**

Fairness Opinion

  
August 2018

**ORCHLIGHT**  
ENERGY  
(TRCH)

**Advisory**

Corporate Advisory

  
March 2018

**SIERRA**  
METALS

**\$55,000,000**

At-The-Market  
Offering (ATM)  
Agent

  
October 2017

**MARLIN**  
GOLD MINING LTD.  
(MLN)

**Advisory**

Corporate Advisory

  
February 2017

**SES**  
SYNTHESIS ENERGY SYSTEMS  
(SYMx)

**Advisory**

Corporate Advisory

  
January 2017

**AVINO SILVER & GOLD MINES LTD.**  
(ASM)

**\$800,000**

Private Placement of  
Registered Securities  
Sole Placement Agent

  
March 2016

$$R + (e^2 + p^2) = \gamma f$$

## VALUATION SERVICES

NOBLE's Valuation and Advisory Services team specializes in providing business and intangible asset valuations, fairness opinions, financial and strategic analysis, and transaction support services covering a broad spectrum of industries and situations from early stage, middle market and Fortune 500 companies and capital market constituents. NOBLE's team is made up of professionals with numerous accreditations and bring excellence in accounting, taxation, and financial due diligence to provide companies with valuation advice for a multitude of purposes.

**Valuation** – NOBLE's professionals have significant experience in the valuation of privately owned and public businesses across a wide range of industries. We perform an extensive analysis of the business as well as evaluate industry trends and various other factors in order to inform our clients as to the likely range of value they can expect. Our services are characterized by intellectual and analytical rigor and our conclusions are backed by thorough documentation.

Chief Accounting Officers, Corporate Controllers, CFOs, and Corporate Boards rely on Noble's experienced valuation professionals to produce sophisticated, supportable, and timely valuations to assist in complying with financial reporting requirements, including:

- Purchase price allocation and fresh start accounting
- Goodwill and long-lived asset impairment testing
- Tangible asset valuation
- Fair Value measurement of financial assets & liabilities

**Opinions** - Whether our clients are looking to fulfill their fiduciary duties, mitigate risk or determine corporate value, we are there throughout the transaction process to offer objective advice based on rigorous analysis. We work on behalf of boards of directors, investors, trustees and other corporate leaders to advise and provide opinions on a wide range of transactions.

We have advised Corporate Boards, special transaction committees, independent trustees, management and other fiduciaries of middle market public and private companies on the financial aspects of a transaction. Our independent advice withstands scrutiny from shareholders, bondholders, the SEC, IRS, or counterparties to a transaction

## MERCHANT BANKING

Our Principal Investment focus is primarily on private and small-cap public (\$10mill to \$50mill market caps) companies in industries within NOBLE's research verticals. Investments are made directly by NOBLE and its affiliates and may also involve syndicate participants. We work to identify those companies with game-changing or superior products and technologies that have management teams with proven track-records of success. NOBLE structures investments to meet a company's capital needs whether its growth capital, liquidity or debt repayment. Capital commitment ranges from \$200k to \$2million principal and \$2million above with syndicate.

The scope of our Merchant Banking activities includes:

- Targeting domestic companies within our areas of focus and expertise
- Analyzing a company's opportunities and assessing its risks within their respective industry
- Structuring, negotiating and executing the transaction
- Work in assessing the appropriate time and manner in which to harvest the investment

NOBLE's Merchant Banking Team works continuously with our portfolio companies to assist the management team and Board of Directors to create value and grow their businesses to facilitate long-term shareholder value. Through our extensive sector research coverage, institutional investor non-deal road shows, equity conferences and market making, we blend a powerful mix of capital markets acumen to procure success.

$$R + (e^2 + p^2) = \gamma F$$

## INVESTMENT BANKING TEAM

### Richard Giles, Managing Director

rgiles@noblecapitalmarkets.com – 617.692.9346

- Joined NOBLE in 2010 as Head of the Technology, Media & Telecommunications Investment Banking Group
- 25 years of investment banking experience.
- Executed more than 100 M&A and capital raising transactions totaling \$10+ billion
- Former head of Stifel Nicolaus' Technology Group.
- Former head of A.G. Edwards' Emerging Growth Group and member of Investment Committee for A.G. Edwards Capital
- A.B. Harvard College; M.B.A., Harvard Business School

### Francisco Penafiel, Managing Director

fpenafiel@noblecapitalmarkets.com – 561.994.5740

- Executed M&A and capital raising transactions totaling over \$1 billion dollars in value
- 7 years of sell side equity research experience, covering enterprise & infrastructure software, business services, media, communications, and banks
- 6 years of portfolio managing experience
- Manage the business development efforts in LATAM for NOBLE
- Engineering, IT & Statistics, Escuela Superior Politecnica (Guayaquil, Ecuador); M.S. Economics, Florida Atlantic University

### Juan Arvelo, Director

jarvelo@noblecapitalmarkets.com – 561.994.5731

- More than 18 years of corporate finance and capital markets experience, with a special focus on M&A, restructuring and capital raising transactions.
- Previous Director at Enkeros Investments and Activa Capital Markets
- Former CFO of LS Energia
- Main focus in the QSR, financial institutions and energy sectors
- Managed corporate finance and recoveries division at PricewaterhouseCoopers (PwC)
- B.S. Economics UCAB; M.S. Finance IESA; MBA Babson College

### Mark Suarez, Managing Director

msuarez@noblecapitalmarkets.com – 646.790.5875

- Prior experience holding senior positions at McQuilling Partners and Euro Pacific Capital
- Main focus in marine shipping and surface transportation
- B.Com McGill University with concentrations in Economics and Finance; M.S. in Economics University of Toronto
- Holds a CFA and various FINRA licenses

### Stephen McGee, Analyst Intern

smcgee@noblecapitalmarkets.com – (561) 994-5726

- Recently joined Noble and is assisting the IB team in a broad range of capacities
- Previously spent 6+ years in the MILB for various affiliated teams
- B.S. Hospitality Management FSU
- Level I CFA candidate

### Guranda Kurdgelashvili, Analyst

gk@noblecapitalmarkets.com – (561) 912-1734

- Joined Noble in December 2017 and moved to the IB team in May 2019
- Previously worked as an Investment Analyst for a Tech startup in Boca Raton, FL
- M.B.A specializing in Financial Valuation and Investment Management from Lynn University



$$R + (e^2 + p^2) = \pi$$

## SALES & TRADING

**David Lean**

**Director of Institutional Sales & Trading**

dlean@noblecapitalmarkets.com – 561.994.5737

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