

Junior Mine 2011

Volatility, the new “business as usual”

*Review and analysis of the
Top 100 mining companies
on the TSXV*



Photo credit: MiHR

Each year PwC analyses the Top 100 mining companies listed on the TSX Venture Exchange (TSXV), based on market capitalization as at June 30.

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Top 100

Based on market capitalization as at June 30, 2011,
here are the Top 100 mining companies listed on the TSXV.

1	Copper Fox Metals Inc.	(TSXV:CUU)	61	Andina Minerals Inc.	(TSXV:ADM)
2	Rainy River Resources Ltd.	(TSXV:RR)	62	Prodigy Gold Inc.	(TSXV:PDG)
3	ATAC Resources Ltd.	(TSXV:ATC)	63	Maudore Minerals Ltd.	(TSXV:MAO)
4	Canaco Resources Inc.	(TSXV:CAN)	64	Hana Mining Ltd.	(TSXV:HMG)
5	Trelawney Mining and Exploration Inc.	(TSXV:TRR)	65	Century Iron Mines Corporation	(TSXV:FER)
6	Exploration Orbite V.S.P.A. Inc.	(TSXV:ORT.A)	66	Century Mining Corp.	(TSXV:CMM)
7	Chesapeake Gold Corp.	(TSXV:CKG)	67	Barkerville Gold Mines Ltd.	(TSXV:BGM)
8	Lucara Diamond Corp.	(TSXV:LUC)	68	Noront Resources Ltd.	(TSXV:NOT)
9	New Millennium Iron Corp	(TSXV:NML)	69	Eurasian Minerals Inc.	(TSXV:EMX)
10	Iberian Minerals Corp.	(TSXV:IZN)	70	Batero Gold Corp.	(TSXV:BAT)
11	Dia Bras Explorations Inc.	(TSXV:DIB)	71	Macarthur Minerals Limited	(TSXV:MMS)
12	Sandstorm Gold Ltd.	(TSXV:SSL)	72	IMPACT Silver Corp.	(TSXV:IPT)
13	Orko Silver Corp.	(TSXV:OK)	73	Silvercrest Mines Inc.	(TSXV:SVL)
14	Bear Creek Mining Corp.	(TSXV:BCM)	74	Rusoro Mining Ltd.	(TSXV:RML)
15	Rio Alto Mining Limited	(TSXV:RIO)	75	New Pacific Metals Corp.	(TSXV:NUX)
16	Levon Resources Ltd.	(TSXV:LVN)	76	Sandstorm Metals & Energy Ltd.	(TSXV:SND)
17	Anooraq Resources Corporation	(TSXV:ARQ)	77	Silver Quest Resources Ltd.	(TSXV:SQI)
18	Strategic Metals Ltd.	(TSXV:SMD)	78	Afferro Mining Inc.	(TSXV:AFF)
19	Luna Gold Corp.	(TSXV:LGC)	79	Brazilian Gold Corporation	(TSXV:BGC)
20	Great Western Minerals Group, Ltd.	(TSXV:GWG)	80	Majestic Gold Corp.	(TSXV:MJS)
21	Reunion Gold Corporation	(TSXV:RGD)	81	Avanti Mining Inc.	(TSXV:AVT)
22	Gold Canyon Resources Inc.	(TSXV:GCU)	82	PMI Gold Corporation	(TSXV:PMV)
23	Alderon Resource Corp.	(TSXV:ADV)	83	CB Gold Inc.	(TSXV:CBJ)
24	East Asia Minerals Corporation	(TSXV:EAS)	84	Galway Resources Ltd.	(TSXV:GWY)
25	Kaminak Gold Corp.	(TSXV:KAM)	85	Monument Mining Limited.	(TSXV:MMY)
26	Corsa Coal Corp.	(TSXV:CSO)	86	Magellan Minerals Limited	(TSXV:MNM)
27	St Elias Mines Ltd.	(TSXV:SLI)	87	Golden Band Resources Inc.	(TSXV:GBN)
28	Lumina Copper Corp.	(TSXV:LCC)	88	Tintina Resources Inc.	(TSXV:TAU)
29	Sandspring Resources Ltd.	(TSXV:SSP)	89	Ucore Rare Metals Inc.	(TSXV:UCU)
30	Belo Sun Mining Corp	(TSXV:BSX)	90	Mansfield Minerals Inc.	(TSXV:MDR)
31	Verde Potash Plc	(TSXV:NPK)	91	Pacific Booker Minerals Inc.	(TSXV:BKM)
32	Atacama Pacific Gold Corporation	(TSXV:ATM)	92	Archon Minerals Ltd.	(TSXV:ACS)
33	Aurcana Corporation	(TSXV:AUN)	93	Pershimco Resources Inc.	(TSXV:PRO)
34	Midway Gold Corp.	(TSXV:MDW)	94	Commerce Resources Corp.	(TSXV:CCE)
35	Wildcat Silver Corporation	(OTCPK:WLDV.F)	95	Sunridge Gold Corp.	(TSXV:SGC)
36	Tasman Metals Ltd.	(TSXV:TSM)	96	First Point Minerals Corp.	(TSXV:FPX)
37	Newstrike Capital Inc.	(TSXV:NES)	97	PNG Gold Corporation	(TSXV:PGK)
38	Sunward Resources Ltd	(TSXV:SWD)	98	Colonial Coal International Corp.	(TSXV:CAD)
39	Stans Energy Corp.	(TSXV:HRE)	99	Lithium One Inc.	(TSXV:LI)
40	Cerro Resources NL	(ASX:CJO)	100	Advanced Explorations Inc.	(TSXV:AXI)
41	Great Quest Metals Ltd.	(TSXV:GQ)			
42	Quaterra Resources Inc.	(TSXV:QTA)			
43	Callinan Royalties Corporation	(TSXV:CAA)			
44	Ryan Gold Corp	(TSXV:RYG)			
45	Victoria Gold Corp.	(TSXV:VIT)			
46	Southern Arc Minerals Inc.	(TSXV:SA)			
47	Mirasol Resources Ltd.	(TSXV:MRZ)			
48	Avala Resources Ltd.	(TSXV:AVZ)			
49	Anfield Nickel Corp.	(TSXV:ANF)			
50	Energold Drilling Corp.	(TSXV:EGD)			
51	Largo Resources Ltd.	(TSXV:LGO)			
52	Grayd Resource Corp.	(TSXV:GYD)			
53	U.S. Silver Corporation	(TSXV:USA)			
54	North Country Gold Corp.	(TSXV:NCG)			
55	Samex Mining Corp.	(TSXV:SXG)			
56	Titanium Corp. Inc.	(TSXV:TIC)			
57	Adriana Resources Inc.	(TSXV:ADI)			
58	Arian Silver Corporation	(AIM:AGQ)			
59	Atacama Minerals Corp.	(TSXV:AAM)			
60	Loncor Resources Inc.	(AMEX:LON)			

PwC's point of view

The game has changed; high volatility has become business as usual. Junior mining companies exist in a headline driven market and recently the headlines have been taking the markets on quite a ride. Can we declare 2011 a success for junior mines? Well, that would depend on the month, week and often the day you look at the markets.

In line with our point of view expressed in PwC's *Mine 2011* publication, released early June, we believe the "game has changed". High market volatility has become "business as usual". Daily swings of one percent on the TSXV and one hundred points on the TSX are no longer anomalies; instead, the market is moving in waves of extreme increases and decreases. In October 2011, the TSXV moved up or down 1 percent in a day 60% of the time.

Junior Mine 2011 looks at the Top 100 mining companies listed on the TSXV, as at June 30, 2011. As at June 30, the TSXV mining sector market capitalization, compared to 2010, increased by 72% to \$64.9 billion. Of this, the market capitalization of the Top 100 was \$20.6 billion. However, if you compare this total to a moment in time after June 30, 2011, the collective market capitalization of these same companies dipped to as low as \$13.45 billion and peaked as high as \$22.80 billion.

Why do we believe market volatility has become part of the new game, as opposed to a fleeting trend? Until the underlying factors driving market volatility are addressed, we do not expect stability to wash over the markets. Key drivers of volatility include sovereign debt and deficit issues, currency swings, pace and reliability of earnings growth and caustic political environments.

Where does this leave juniors? Are they at the stage where they should be worried? Well, in *Junior Mine 2011* the story for the period ended June 30 appears very positive for mining companies. But this success has to be interpreted with the understanding that only weeks after June 30, the market changed and began to ride the wave of extreme volatility. During this volatility, junior mining companies need to keep their focus on both the short-term and the long-term. Knee-jerk reactions to the short-term could result in decisions that negatively impact the growth strategy of junior mining companies in the long run.

The good news for juniors is that larger mining companies have reduced exploration expenditures so, in essence, have outsourced their exploration activity to the juniors. Investing less of their money in exploration means the major mining companies must acquire junior mining companies. Acquisitions will play a key role in mid-sized and senior mining companies' expansion plans. Another positive factor is that Chinese companies are continuing to invest in mining businesses. This demonstrates that North Americans (outside of the mining industries) are much more worried about the state of China's economy than Chinese companies are. The factors above should contribute to a strong junior mining sector and reward those that continue to invest. The issue, however, is when will the market rebound? The junior mining sector needs to raise cash to fund its properties, so needs a sustained rebound.

While history does not always repeat itself, it can be a good tool to reference – especially when evaluating the potential impact of changes in the markets. For example, in this publication we highlight how the TSXV's performance seems to have a strong correlation to mining company IPO activity and capital raises.

Realizing the game has changed will help mining executives put into place the proper measures and strategies that will propel long-term growth for their company, while not compromising the short-term.



John Gravelle,
Mining Leader for the Americas
PwC



Photo credit: MiHR

Almost half of the mining companies on TSX are graduates of TSXV and they account for a market capitalization just shy of \$90 billion.

As I see it

John McCoach, President, TSX Venture Exchange

TSX Venture Exchange and Toronto Stock Exchange continue to dominate the world's public equity market for mining companies. It's a position we are proud of, and one which we seek to grow.

Combined, our exchanges are the #1 venue for new listings in mining and we've held this position for over five years in a row. TSXV and TSX now list over half of the world's public mining companies. Last year alone, a third of all public equity capital raised for mining companies was raised by issuers on our markets. Of this capital, we saw equal amounts raised for TSXV- and TSX-listed companies, with over \$4 billion raised on each market in 2010.

Given my role at TSXV and the focus of this publication, I'd like to share some thoughts specific to the venture market for mining in Canada from our perspective at the exchange. To begin, I would be remiss not to acknowledge that while I maintain our marketplace is healthy and vibrant, it is not immune from the ebbs and flows of global markets. Market capitalization is down significantly year-to-date across all sectors, including mining, but there are some more positive indicators to consider.

While our mining sector market capitalization is down from the record levels of 2010, we continue to show levels far above pre-2010 levels. The market has retained much of its increased valuation. Liquidity is relatively high, mining stocks are seeing greater volume than in previous years, and we continue to see many new listings in the mining sector including another 118 so far in 2011.

Perhaps most significant is the strength in financings. So far this year, mining financings on TSXV have far exceeded numbers for the same period in 2010. Just over \$2.8 billion was raised in the nine months ended September 2010; that same period showed financings of over \$5.1 billion this year. At this rate we may see a record year for mining financing on TSXV that will exceed the almost \$5.3 billion raised in 2010.

This capital is funding projects by TSXV-listed mining companies all around the world. Beyond the nearly 4,000 in Canada alone, there are roughly 2,800 projects underway in regions beyond our nation's borders. The U.S. has the most projects next to Canada, followed by South America, Mexico, Africa and Asia. We also see activity in the regions of Europe, Australia, Central America and Russia.

When you consider these numbers, the capital, and the potential economic impact, it's staggering. In Canada alone there are over 300,000 Canadians employed in the mining sector and most often, they're working with a TSXV- or TSX-listed company. The contribution of the mining sector to the nation's GDP is an important one, as are the contributions made by the mining sector in terms of taxes and royalties paid to the government each year.

Switching tracks, I'd like to point to another indicator of our market's vibrancy. An aspect of our marketplace that we are most proud of: the uniquely successful two-tier system which supports the graduation of companies from TSXV to TSX.

18 mining companies have graduated to TSX so far this year, a number that is just shy of the 22 graduates in all of 2010. Graduations are a measure of our market's success as an incubator for growing companies and the rate at which these companies move along the continuum from small explorers to big producers.

Their success is lasting: almost half of the mining companies on TSX are graduates of TSXV and they account for a market capitalization just shy of \$90 billion. Two of these companies – Silver Wheaton Corp. (SLW) and First Quantum Minerals Ltd. (FM) – are included in the S&P/TSX 60 Index and nine of the ten largest TSXV mining graduates are in the S&P/TSX Composite Index.

These companies are success stories of venture mining sector, but so too are the companies on TSXV today who continue to grow, provide jobs, support local communities, and bring opportunity to the market.

John McCoach

President, TSX Venture Exchange

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Financial highlights

The financial highlights for the 100 companies included in our analysis are summarized below.

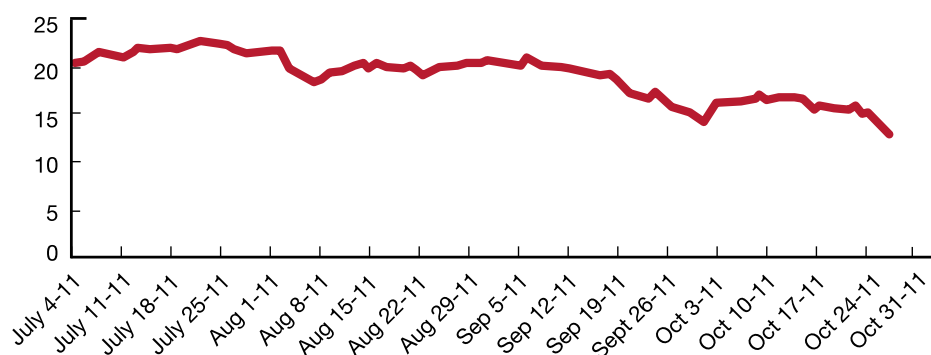
CAD (\$'000)	Total		
	2011	2010	Change
Income Statement			
Revenue	990,329	799,812	24%
EBITDA	(788,257)	(766,028)	3%
Net loss for the year	(864,115)	(850,494)	2%
Balance Sheet			
Cash & ST Investments	2,265,869	1,404,914	61%
Property, plant and equipment (net)	6,024,757	5,930,682	2%
Total liabilities	2,580,170	2,742,622	-6%
Shareholder's Equity	6,555,911	5,362,812	22%
Cash Flow Statement			
Net cash used in operating activities	(287,741)	(329,495)	-13%
Cash used in investing activities	(1,439,525)	(1,171,014)	23%
Cash provided by financing activities	2,845,436	2,205,258	29%

Source: Aggregated highlight financial information compiled by PricewaterhouseCoopers LLP based on public SEDAR filings primarily annual reports

So what's happened post June 30, 2011...

Cumulative Top 100 Market Cap—July 1 to October 31, 2011

Market capitalization (billions)



By October 31, 2011, 7 of the top 100 companies, as at June 30, 2011 have moved up to the TSX. For consistency purposes, their market cap while trading on the TSX were used in the accumulated data

Highlight reel of the Top 100

In 2011, the number of mining companies in the Top 100 with market capitalizations of more than \$200 million jumped to 36 companies from 12 companies in 2010. This significant increase establishes a new record high for market capitalization since our inaugural Junior Mine publication in 2006. Here are the key highlights:

- Mining sector represents 57% of TSXV market capitalization
- TSXV mining sector market capitalization increased by 72% to \$64.9 billion in 2011
- Total market capitalization of the Top 100 as at June 30, 2011, was \$20.6 billion, up 62% from the same time last year. But from July 1, 2011 to October 31, 2011, total market capitalization of the Top 100 has dropped 35%
- Average market capitalization of the Top 100 increased to \$206 million from \$127 million in 2010
- Total market capitalization of the Top 5 mining companies on the TSXV was \$3.6 billion. Four of the Top 5 increased their market capitalization by at least 390% in 2011
- The company with the highest market capitalization, Copper Fox Minerals, had a market capitalization of \$790 million, compared to Advanced Explorations Inc, ranked 100, which had a market capitalization of \$81 million
- Copper Fox Minerals' market capitalization is \$476 million less than last year's top mining company, San Gold Corporation
- Only 45 mining companies from 2010's Top 100 remain on 2011's Top 100 list

57%

Mining sector represents 57% of TSXV market capitalization

72%

TSXV mining sector market capitalization increased by 72% to \$64.9 billion in 2011

\$206 M

Average market capitalization of the Top 100 increased to \$206 million from \$127 million in 2010

Famous explorers: Christopher Columbus, Marco Polo, Junior Mines

Explorers take the lead; fifty-eight of the Top 100 are predominately in the exploration phase. In 2011, exploration and capital spending increased 30% to \$1.2 billion. But, how will recent changes to equity financing, specifically IPO's and capital raises, impact future exploration spending?

In recent history, the TSXV experienced a significant dip, well more like fell off a cliff, dropping from an index level in excess of 2,700 in mid 2008, to a value in the low 700s by late fall 2008. What happened to IPO's and capital raises during this plunge? In Q4 2008, Canadian markets saw zero mining IPOs, down from 5 in Q3 2008 and 19 in Q2 2008. As for capital raises, in Q4 2008, only 11 Canadian mining companies took to the market looking for funding, down from 24 companies in Q4 2007.

Not surprising, TSXV performance seems to have a strong correlation to mining company IPO activity and capital raises. TSXV's dip in Q3 2011 has had a similar impact on IPO's and capital raise, as 2008's TSXV drop in values. Q3 2011 saw zero mining related IPOs on Canadian stock exchanges, which is a decline from 14 in Q2 2011 and 10 in Q1 2011. In a similar vein to 2008, capital raises in Q3 2011 saw the fewest number of companies (16) coming to market looking for funding since Q4 2008.

No funding, no exploration? If the decline in IPOs and capital raises were to continue beyond Q1 2012, we would expect to see a significant decline in

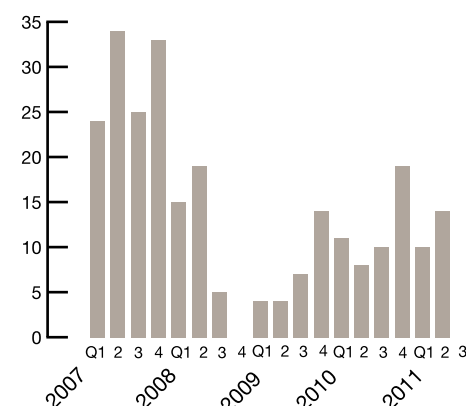
exploration spending in next year's Junior Mine, as companies shift to survival mode and reduce any non-essential spending in the hopes of riding out the storm.

Of the Top 100's total market capitalization, 61% is attributed to exploration companies. Accounting for \$12.5 billion in market capitalization, this is almost double the market capitalization of last year's exploration companies in the Top 100. Why, are exploration companies so attractive to investors?

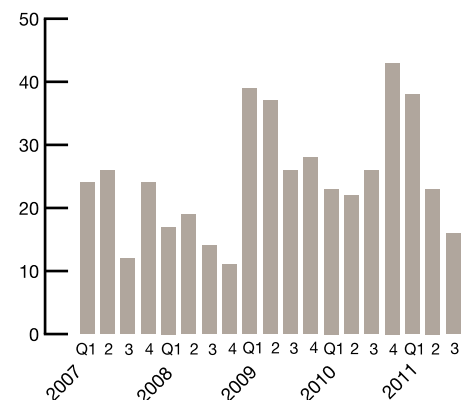
It is the "what if factor". Exploration companies bank on investors' feeling of hope; hope that they will be the next company to make a huge deposit discovery. As land becomes scarcer and the potential for landing a huge discovery continues to decrease, the value of a company, in making a major discovery, increases.

Once a company is in the production phase its market capitalization begins to stabilize. Compared to exploration companies, production companies are seen as less "risky". Because of this, production companies do not see surges in total market capitalization like that of exploration companies.

Number of IPOs in Canada



Number of Capital Raises in Canada



Also, 53% of exploration companies in the Top 100 are exploring for gold, compared to only 46% of development companies and 44% of production companies who have gold as their primary commodity. Gold is everywhere in the media, being hailed a "safe haven" in this time of low confidence in major fiat currencies. The price of gold has increased over the course of this year. Yes, it experienced a bit of a rebalancing at the end of September 2011, but we expect the price of gold to continue to be strong well into 2012. Investors want to be part of gold's success and are looking to invest in companies that are able to capitalize on gold's popularity.

Market Capitalization based on stage of operation

Phase	2011	Market Capitalization	Market Capitalization	2010	Market Capitalization	Market Capitalization
Production	16 %	\$2.7B	13%	15%	\$2.3B	19%
Development	26 %	\$5.4B	26%	34%	\$4.2B	33%
Exploration	58%	\$12.5B	61%	51%	\$6.1B	48%

Income statement

Aggregated income statements for the Top 100 for the year ended June 30.

CAD (\$'000)	Production			Development			Exploration		
	2011	2010	Change	2011	2010	Change	2011	2010	Change
Number of companies	16	15	7%	26	34	-24%	58	51	14%
Total Revenue	899,076	726,061	24%	50,088	33,434	50%	41,165	40,317	2%
Cost of production	813,233	661,762	23%	20,908	29,902	-30%	31,081	13,727	126%
General and administration	98,437	68,709	43%	116,798	106,923	9%	197,282	123,852	59%
Exploration expense	10,636	13,600	-22%	35,196	16,259	116%	96,115	36,215	165%
Stock-Based Compensation	13,522	16,455	-18%	44,845	25,236	78%	107,559	35,478	203%
Other (income) expense	(23,955)	115,345	-121%	10,718	83,925	-87%	(877)	45,076	-102%
	911,873	875,871	4%	228,464	262,245	-13%	431,160	254,348	70%
Interest income	2,325	10,230	-77%	2,937	2,827	4%	9,637	2,249	328%
Write down of mineral properties & exploration	(4,618)	(15,867)	-71%	(9,396)	(34,594)	-73%	(29,122)	(45,179)	-36%
Other Gains (losses)	(167,457)	(92,807)	80%	(18,555)	(6)	309149%	7,159	(230)	-3213%
	(169,750)	(98,444)	72%	(25,014)	(31,773)	-21%	(12,326)	(43,160)	-71%
EBITDA	(182,547)	(248,253)	-26%	(203,389)	(260,584)	-22%	(402,321)	(257,191)	56%
Amortization & depreciation	43,758	72,975	-40%	4,131	31,352	-87%	6,421	5,100	26%
Interest Expense	103,572	79,721	30%	1,535	3,241	-53%	5,295	889	496%
Loss before tax	(329,877)	(400,949)	-18%	(209,055)	(295,177)	-29%	(414,037)	(263,180)	57%
				1,535	3,241	-53%	(414,037)	(263,180)	57%
Income tax expense (recovery)	(68,012)	(66,774)	2%	2,410	(17,957)	-113%	2,410	(17,957)	-113%
Net loss	(261,865)	(334,175)	-22%	(211,465)	(277,220)	-24%	(390,785)	(239,099)	63%

Source: Aggregated highlight financial information compiled by PricewaterhouseCoopers LLP based on public SEDAR filings

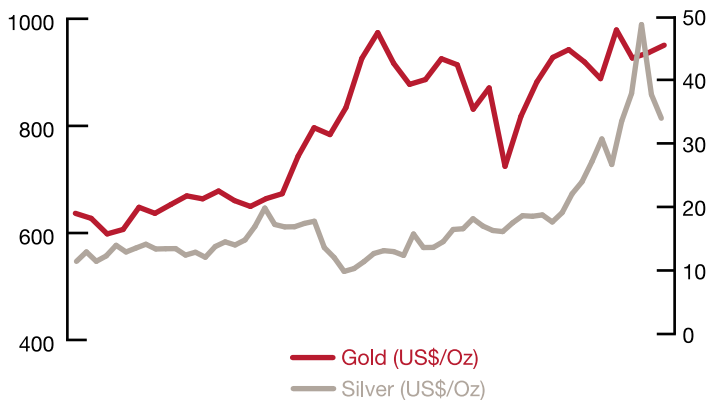
Getting splinters from the see-saw

Despite the up and down turbulence in the commodities market, for the year ended June 30, 2011 total revenue for the Top 100 increased by 24% to \$990 million; healthy growth on the back of 2010's 20% gain. The increase in revenue has been attributed to record level precious metal prices, as well as strong demand for base metals.

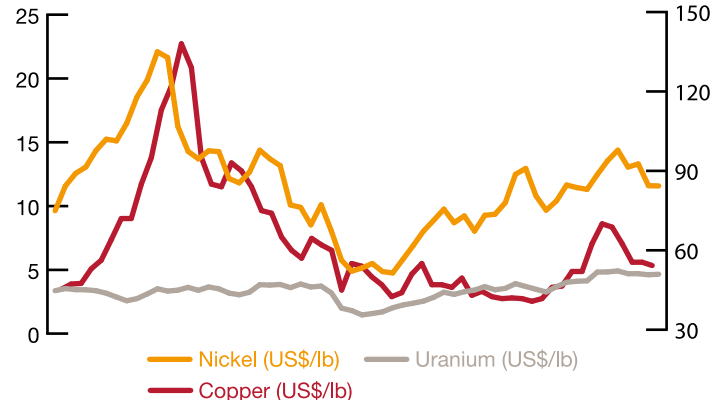
However, since June 30th the market has experienced continued volatility. The closing price of gold has risen from \$1,492 USD on July 1, 2011, climbed as high as \$1,896 USD on September 5, 2011 and dropped to \$1,600 USD on October 11, 2011, before recovering back to \$1,715 USD on October 31, 2011. Silver has followed a similar trend, although the drop at the end of September was more severe and overall the price is down 23% as of October 31, 2011. Copper is down 15% as of October 31, 2011. Company market capitalization has been negatively affected by the declining prices, decreasing by 38% for the

Top 5, 21% for the Top 100, as of October 31, 2011. As third quarter financials for most companies will not be made public until the end of November we will have to see what this dip's impact has been on company revenue. We expect to see a decline that is in step with the principal commodity mined, but could differ depending on whether the companies have entered into forward contracts or spot price sales. We don't expect this downward trend to persist far into the future; instead, we believe the long-term fundamentals for most commodities are strong.

Gold and silver commodity price index: July 1, 2006—June 30, 2011

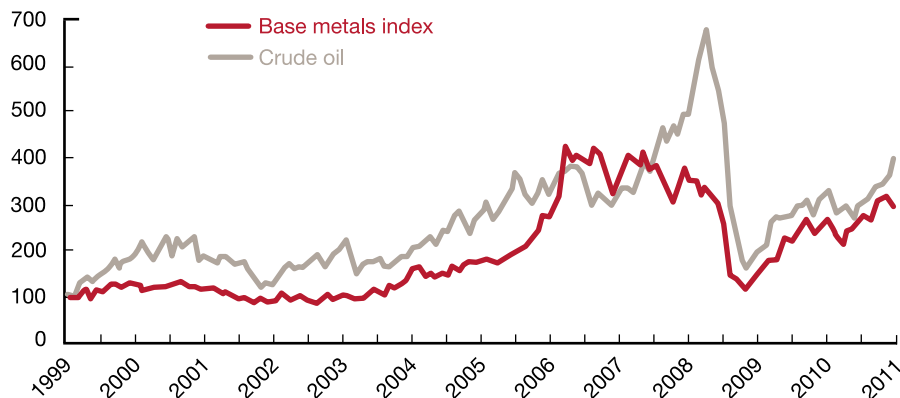


Copper, nickel and uranium commodity price index: July 1, 2006—June 30, 2011



Historical Trends

Base metals index versus crude oil



Production

Production companies, representing 16 companies of the Top 100, reported revenue gains of 24% to \$889 million. Iberian Minerals, Rusoro Mining and Anoroaq Resources accounted for 53% of the total revenue of the producing companies in the Top 100.

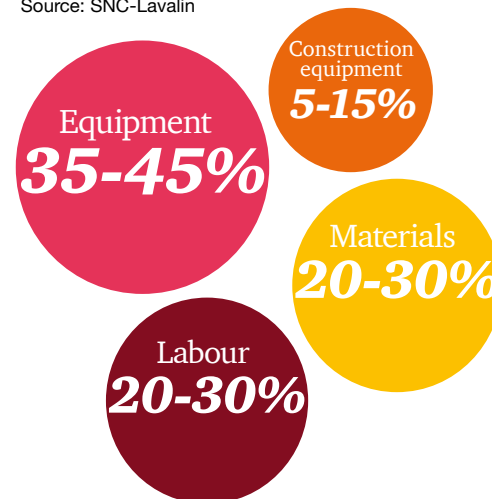
Production costs continued to rise for the sixth straight year. This year production companies experienced a 23% increase in production costs. Since our first edition of Junior Mine in 2006, production costs for the Top 100 have more than quintupled from \$162 million to \$865 million. What is to blame for these painful increases? Unfortunately, there are a number of things to point fingers at including labour costs, declining US dollar, price of fuel, lower grades, and remote locations. For example, oil which is a significant driver of mining costs has risen faster than base metals since 1999. Compounding the issue is the increasing pressure on governments to legislate the use of green energy in the production of power, resulting in the meteoric rise in electricity prices in many key jurisdictions. Also contributing to higher production costs are increasing royalty costs and mining taxes.

Battling production costs?

- Many mining companies are working on incremental technologies to improve energy efficiency as well as recovery rates, which indirectly reduce the cost of energy.
- Companies are also reaching agreements with host governments related to the supply of energy and power in situations where the cost is tied, at least partially, to the commodity price. This is done usually in cases where the alternative opportunity for the government to sell the energy/power is limited.
- Other companies are turning to natural gas as a cost savings strategy. Given the new technology that is being used to recover natural gas, worldwide reserves are growing exponentially. Some mining companies are switching their heavy transport vehicles to natural gas, which has the added benefit of lowering their carbon footprint.
- Exclusive agreements with suppliers, specifically heavy machinery suppliers, are being made to help contain costs and ensure timely delivery.

Mining project cost breakdown

Source: SNC-Lavalin



Iberian Minerals

Revenue: \$234M
 Head office: Toronto, Canada
 Region of operation: Spain and Peru
 Primary commodity: Copper
 Market capitalization growth from 2010: 186%
 Website: www.iberianminerals.com

Rusoro Mining

Revenue: \$151M
 Head office: Vancouver, Canada
 Region of operation: Venezuela
 Primary commodity: Gold
 Market capitalization growth from 2010: 4%
 Website: www.rusoro.com

Anoroaq Resources

Revenue: \$144M
 Head office: Sandton, South Africa
 Region of operation: South Africa
 Primary commodity: Platinum group metals
 Market capitalization growth from 2010: 31%
 Website: www.anoroaqresources.com

- Implementing lean and continuous improvement methodologies at the mine site level are becoming more popular in an attempt to counter rising input costs. Arming operational personnel with the skills and structure to identify and drive operational improvement opportunities on a continual basis has been a recent focus of mining companies.
- Activity based costing, linking operational drivers to financial outcome, has built momentum in the mining industry. The purpose of this strategy is to help mine management focus on key cost drivers that they need to control, while helping them understand how a change in these drivers can improve overall mine performance. This strategy has led many companies to put a structure in place to change month-end cost reviews to more action and decision focused, rather than just simply understanding performance.

EBITDA

Higher EBITDA (earnings before interest expense, taxes, depreciation and amortization and before write-down's of assets) losses for the Top 100 companies were mainly the result of higher General & Administration (G&A) (\$113M), exploration expense (\$76M) and stock-based compensation (\$89M) expenses. The \$145M in higher EBITDA losses in the exploration stage companies were offset by improvements in development (\$57 million) and production stage companies (\$66 million) due to lower "other" expenses and higher revenues.

Total net loss for the Top 100 was \$864M compared to \$850M in 2010.

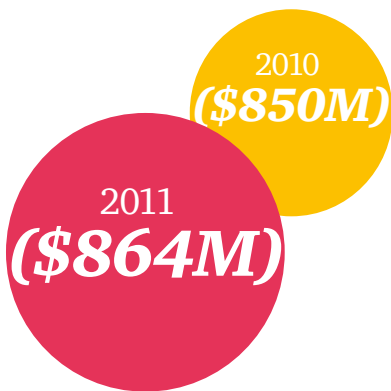


Photo credit: MIHR

G&A increased 38% year-over-year as a result of playing catch up from G&A expense cutting last year where wages were pressured to remain constant or even cut amid the recession. Exploration expense increased 115% or \$76M overall with increases in both the development (up 116% or \$19M) and exploration (up 165% or \$183M) categories being slightly offset by a

decrease from the production category (down 22% or \$3M). Stock based compensation increased 115% in 2011 compared to the prior year as many of the exploration and development companies turned to the use of stock options in lieu of cash as stock prices rebounded from lows seen during the recession and became more appealing to management.

A MiHR solution

The workforce continues to age and half of the mining workforce is eligible to retire by 2021, shown by cumulative hiring requirements of 75,280, 112,020 and 141,540 under contractionary, baseline and expansionary economic scenarios, respectively.

PwC surveyed the Top 100 asking, “What is your company’s top challenge”? Almost 50% of respondents noted availability of people as their top challenge. The issue of people resources is not going away. MiHR suggests a two-pronged approach to address the skills shortage within the mining industry.

An increasingly competitive labour market is affecting a number of sectors, but particularly those that rely on skilled labour and highly educated professionals. The Canadian mining industry, with its strong growth projections and aging workforce, is particularly vulnerable to labour shortages, a challenging issue that continues to climb the risk agenda for mining and exploration companies and threatens the future competitiveness of the industry.

It’s no secret that Canada’s mining industry is facing a demographic challenge; a combination of factors including the pending retirement of the baby boom generation, difficulties in attracting and engaging youth and an under-representation of diverse groups paints a challenging ten-year talent forecast. While industry has taken tremendous strides in addressing these issues, finding experienced and skilled workers is becoming more difficult, and competition across sectors of the economy is increasing, driving the need for approximately 112,020 new workers by 2021, according to the

Mining Industry Human Resources (MiHR) Council’s latest annual labour market information report, Canadian Mining Industry Employment and Hiring Forecasts 2011. The new outlook projected in this report indicates employment in the Canadian mining industry is expected to continue to decline over the forecast period, fuelled by continuous gains in labour productivity. However, due to an improved outlook for commodity prices, the decline in employment has improved over previous years’ forecasts.

The key element that has not changed in the ten-year outlook is that the workforce continues to age and half of the mining workforce is eligible to retire by 2021, shown by cumulative hiring requirements of 75,280, 112,020 and 141,540 under contractionary, baseline and expansionary economic scenarios, respectively.

As the national council for the Canadian minerals and metals industry and a recognized leader in the development and implementation of national human resources solutions, MiHR recommends a two-pronged approach to address the skills shortage: industry must first maximize and make the best use of all available sources of labour through innovative recruitment, retention strategies and workplace diversity, and second, increase its productivity through investments in training and skills development, coupled with improving the foundation for innovation and technological advances.

Attracting and retaining non-traditional sources of talent that have previously been underrepresented in mining is critical to ensure the necessary people and skills are available in the short and longer term for the sustainability of the industry. Currently, the mining industry lags the labour force as a whole in employing women and new Canadians. According to Ramp-UP – A Study on the Status of Women in Canada’s Mining and Exploration Sector (published February 2010), the participation of women in mining was just 14 per cent in 2006 (compared to 47 per cent for the entire economy), while immigrants accounted for only 9 per cent of the mining workforce (compared to nearly 21 per cent for the entire economy), according to Statistics Canada’s 2006 Census.

When it comes to employing Aboriginal peoples, however, the mining industry outperforms the rest of the economy, with seven per cent of the mining workforce self-identifying as being of Aboriginal descent, nearly double the rate for the overall labour force. As one of the fastest-growing segments of the Canadian population—and with Aboriginal communities close to many mine sites and operations—they are a large potential pool of workers for the mining industry. In support of industry’s efforts to continue to create more employment opportunities for Aboriginal peoples, MiHR and the Assembly of First Nations (AFN) have worked together with other partners to create Mining Essentials: A Work Readiness Training

Program for Aboriginal Peoples to help companies and communities meet joint hiring and employment targets. The program, which combines both classroom and experiential learning in a 12-week course, provides learners with the non-technical skills needed to obtain entry-level employment in the mining industry. After the completion of successful pilots in 2010, the program is being launched in the fall of 2011.

Retaining our skilled workforce

The overall change in the Canadian labour market means that increasing the participation of women, new Canadians, youth and Aboriginal peoples in the mining workforce will only partially offset the impact of the aging workforce. In the medium-term, the need to replace older workers will outstrip the availability of younger talent in the labour pool. Among the different broad occupational categories, the hiring requirements will be greatest for the Trades and Undesignated Occupations at 35,625, which represents nearly 32 per cent of the industry overall hiring requirements by 2021. Many of these new hires will be required in skilled occupations that have, until now, lacked a national, industry-recognized credential that supports mobility and retention within the mining workforce, such as production miners, development miners, heavy equipment operators and mill operators. A collaborative effort by mining employers, employees, educators and other stakeholders spearheaded by

MiHR, the Canadian Mining Credentials Program is the cornerstone of the mining industry’s efforts to recognize the skills, knowledge and experience of its workforce by certifying workers according to industry-developed National Occupational Standards (NOS). The program was piloted for underground miners, surface miners and minerals processing operators at seven mine sites across Canada in 2010 and beginning a pan-Canada roll-out this fall. Certification pilots for diamond drillers are set to begin in early 2012.

MiHR’s worker certification program will be an essential component in increasing and retaining the valuable skills required to keep the mining industry sustainable. Without a formal credentialing framework for these jobs, employers may struggle to evaluate the qualifications of experienced candidates and may end up wasting time and resources retraining new hires in areas where they have already demonstrated competency in the workplace. Furthermore, employees with skills sets that are not recognized by their industry can become frustrated and may seek opportunities elsewhere. A recent MiHR survey of mining industry employers revealed that turnover in these occupations is almost twice as high as other mining sector jobs.

Research for industry sustainability

MiHR will continue to focus on and expand the scope of its research capacity to provide industry with the most up to date labour market information. To accomplish this, the Council will continue to refine and develop the model used for the forecasts in our annual outlook reports, Canadian Mining Industry Employment and Hiring Forecasts. One of the major additions in 2012 reporting will be the incorporation of a talent-availability (or labour supply) forecast which will provide a more complete picture of the mining labour market. This will allow MiHR to analyze the gaps in the mining industry’s labour market and highlight approaches that may be taken to address these gaps.

This year, the Council has also published two sector studies on highly qualified people and mineral exploration that provide insight into sector-specific occupations and workforce segments that have not previously been studied from a mining industry perspective. As a result of these studies, *Making the Grade: Human Resources Challenges and Opportunities for Knowledge Workers in Canadian Mining and Unearthing Possibilities: Human Resources Challenges and Opportunities in the Canadian Mineral Exploration Sector*, MiHR is exploring the possibility of further research on HR management in micro- and small-enterprises to better understand their needs and, ultimately, create a hub to lend support to facilitate collaborative HR management efforts between smaller companies to reduce costs.

MiHR’s worker certification program will be an essential component in increasing and retaining the valuable skills required to keep the mining industry sustainable.

In 2012, MiHR will focus on expanding the scope of its research initiatives to offer more custom labour market research to meet the needs of industry. The Council’s previous custom research publications have included provincial reports for British Columbia, Saskatchewan, Ontario and, most recently, Saskatchewan Mining Industry Hiring Requirements and Talent Availability Forecasts 2011, which was published in partnership with the Saskatchewan Mining Association.

With increased media attention putting the mining skills shortage in the spotlight, MiHR will continue to mobilize our industry partners across Canada to work collaboratively on issues that apply to everyone: diversity, mobility, standardization and certification. Mining companies are now farther ahead, willing to open up their HR departments and adopt new methods to grow the overall workforce and attract talented individuals to our sector. Through the exchange of knowledge and best practices, we can, collectively, implement the strategies needed to build an appropriately skilled workforce to keep Canadian mining competitive on the world stage.

Ryan Montpellier
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Cash flow statement

Aggregated cash flow statements for the Top 100 for the year ended June 30.

CAD (\$'000)	Production			Development			Exploration		
	2011	2010	Change	2011	2010	Change	2011	2010	Change
Number of companies	16	15	7%	26	34	-24%	58	51	14%
Net income (loss)	(261,865)	(334,175)	-22%	(211,465)	(277,219)	-24%	(390,785)	(239,092)	63%
Non-cash items	192,156	218,590	-12%	106,831	135,012	-21%	209,207	62,835	233%
Working capital changes	(6,393)	(91,653)	-93%	578	(9,849)	-106%	(15,853)	(10,617)	49%
Other operating activities	113,150	160,852	-30%	1,566	(3,287)	-148%	(25,601)	59,108	-143%
Net cash provided by (used in) operating activities	37,048	(46,386)	-180%	(102,489)	(155,343)	-34%	(223,032)	(127,766)	75%
Capital expenditures	(281,255)	(267,454)	5%	(371,799)	(301,887)	23%	(380,918)	(267,082)	43%
Sale of property, plant & equipment	6,551	257	2452%	404	790	-49%	823	1,131	-27%
Cash acquisitions (net of cash acquired)	(35,839)	(118,122)	-70%	(83,127)	(43,778)	90%	13,684	(108,228)	-113%
Investment in marketable & equity securities	(827)	11,506	-107%	(69,018)	(4,581)	1407%	(132,805)	737	-18117%
Other investing activities	15,733	(9,292)	-269%	(28,387)	(15,588)	82%	(92,744)	(49,425)	88%
Cash used in investing activities	(295,638)	(383,104)	-23%	(551,928)	(365,043)	51%	(591,960)	(422,866)	40%
Debt issued	208,355	376,780	-45%	26,468	22,519	18%	27,824	3,136	787%
Debt repayment	(117,988)	(259,338)	-55%	(5,206)	3,588	-245%	(34,123)	(4,668)	631%
Net issue (repurchase) of shares	316,612	519,458	-39%	799,898	571,126	40%	1,595,832	1,139,716	40%
Dividends paid	-	(884)	-100%	-	-	-	-	-	-
Other financing activities	(48,331)	(259,869)	-81%	109,551	126,268	-13%	(33,456)	(32,574)	3%
Cash provided by financing activities	358,648	376,147	-5%	930,711	723,502	29%	1,556,077	1,105,610	41%
Effect of exchange rate	4,858	(9,621)	-150%	3,388	7,046	-51%	2,091	1,770	18%
Net increase (decrease) in cash and cash equivalents	104,917	(62,964)	-267%	279,682	210,160	33%	743,176	556,747	33%

Source: Aggregated highlight financial information compiled by PricewaterhouseCoopers LLP based on public SEDAR filings

Cash flow highlights

Cash flow highlights:

- For the fourth year in a row, non-cash items did not offset losses. This is because expenses paid with cash such as exploration, G&A and especially production costs were considerably higher.
- Net cash used in operating activities in 2011 was \$288 million, compared to \$329 million in 2010.
- Capital spending increased 24%, while cash spent on acquisitions fell 61%. This is opposite to what we saw in 2010, when cash spent on acquisitions increased and capital spending decreased. Development and exploration companies were responsible for the major increase in capital expenditures, \$70 million and \$114 million respectively.
- Appetite for junior mine equity placements continued to grow in 2011, as shares issued jumped 22% to \$2.7 billion, especially for gold projects.
- Debt financing, decreased 35% to \$263 million as the top debt issuers of 2010 (Iberian Minerals and Anoroaq Resources) issued significantly less debt in 2011.
- Exploration companies accounted for over half of all the money raised through shares issued, with the top issuers being Canaco Resources (\$161 million), Bear Creek Mining (\$130 million) and Rainy River Resources (\$109 million).

Balance sheet

Aggregated balance sheet for the Top 100 as at June 30.

CAD (\$'000)	Production			Development			Exploration		
	2010	2009	Change	2010	2009	Change	2010	2009	Change
Number of companies	16	15	7%	26	34	-24%	58	51	14%
Current Assets									
Cash & ST investments	267,425	226,160	18%	564,182	452,576	25%	1,434,262	726,179	98%
Accounts receivable	171,483	131,991	30%	31,874	21,390	49%	47,021	26,334	79%
Inventory	166,936	117,726	42%	8,063	9,133	-12%	8,649	3,490	148%
Other current assets	46,139	44,084	5%	51,351	15,470	232%	15,512	11,313	37%
Total current assets	651,984	519,962	25%	655,471	498,569	31%	1,505,445	767,316	96%
Non-Current Assets									
Property, plant & equipment	3,080,828	2,998,915	3%	959,471	1,387,676	-31%	1,984,458	1,544,091	29%
Investments	11,060	12,308	-10%	38,087	37,994	0%	28,005	11,606	141%
Other non-current assets	92,253	220,176	-58%	92,682	73,521	26%	36,337	33,303	9%
Total non-current assets	3,184,142	3,231,398	-1%	1,090,241	1,499,192	-27%	2,048,799	1,589,000	29%
Total Assets	3,836,126	3,751,360	2%	1,745,711	1,997,760	-13%	3,554,244	2,356,316	51%
Current Liabilities									
Accounts payable and accrued liabilities	202,771	172,960	17%	68,033	71,418	-5%	81,691	48,482	68%
Current borrowing	194,602	82,094	137%	12,571	31,099	-60%	14,763	13,770	7%
Other current liabilities	270,939	155,662	74%	28,401	19,335	47%	10,751	8,644	24%
Total current liabilities	668,312	410,717	63%	109,004	119,994	-9%	107,205	70,895	51%
Non-Current Liabilities									
Long-term debt	852,898	762,187	12%	12,259	24,386	-50%	13,540	25,871	-48%
Other non-current liabilities	579,463	947,991	-39%	84,330	215,596	-61%	153,159	164,986	-7%
Total liabilities	2,100,673	2,120,894	-1%	205,593	359,977	-43%	273,904	261,752	5%
Non Controlling Interests	13,557	-	-	3,598	-	-	17,368	-	-
Total equity	1,735,453	1,630,465	6%	1,540,118	1,637,784	-6%	3,280,340	2,094,564	57%
Total liabilities & equity	3,836,126	3,751,359	2%	1,745,711	1,997,760	-13%	3,554,244	2,356,316	51%

Source: Aggregated highlight financial information compiled by PricewaterhouseCoopers LLP based on public SEDAR filings

Balance sheet highlights

Assets and liabilities highlights

- Better access to equity financing helped the Top 100 build their cash and short-term investments by 61% to \$2.3 billion in 2011.
- As a result of improved cash positions, higher inventories and spending on Property, Plant and Equipment (PP&E), total assets increased 13% to \$9.1 billion.
- Currently liabilities increased by 47%, reflecting the increase in 'current borrowing' and 'other current liabilities'.
- Current liabilities were lower for exploration and development companies, but production companies experienced a 63% increase. One company accounted for \$100 million of the \$195 million current borrowings.
- The current ratio for the Top 100 remained relatively constant year-over-year, increasing slightly to 3.2, but this is still well below the high of 7.6 noted in 2006.
- Long-term debt increased 8%, mostly as a result of production companies' debt financing.
- Total liabilities decreased 6% to \$2.6 billion.
- Total equity increased by 22% to \$6.6 billion



Exploration companies accounted for over half of all the money raised through shares issued, with the top issuers in 2011 being Canaco Resources, Bear Creek Mining and Rainy River Resources.

The converted

Convergence with International Financial Reporting Standards (“IFRS”)

In January 2006, the CICA’s Accounting Standards Board (“AcSB”) formally adopted the strategy of replacing Canadian Generally Accepted Accounting Principles (GAAP) with IFRS for Canadian enterprises with public accountability. The conversion timetable required financial reporting under IFRS for accounting periods commencing on or after January 1, 2011. For these entities, IFRS has been required for interim and annual financial statements relating to fiscal years beginning on or after January 1, 2011.

Of the top 100 mining companies, 73 companies have already adopted IFRS. The remaining 27 companies will be adopting IFRS but given their fiscal year ends being non-calendar, statements have not yet been filed on SEDAR.

Prior to converting to IFRS, 82 of the top 100 junior mining companies had an accounting policy to capitalize exploration and evaluation expenditures that had a potential of being economically recoverable.

Upon transition to IFRS, 10 of the 57 mining companies who have filed IFRS statements on SEDAR, and had previously capitalized exploration and

At the time of this publication under IFRS:

- 47 mining companies capitalized exploration and evaluation expenditures
- 26 mining companies expense exploration and evaluation expenditures
- 27 companies have not yet filed their IFRS statements on SEDAR

evaluation costs, adopted the IASB framework for accounting for exploration and evaluation costs which resulted in these companies derecognizing and expensing exploration and evaluation expenditures previously capitalized in Mineral Properties. This is a change in accounting policy which has been applied retroactively.

The general view of management of these companies was that expensing exploration and evaluation costs provides shareholders with better information to evaluate the current financial position and the future results of operations.

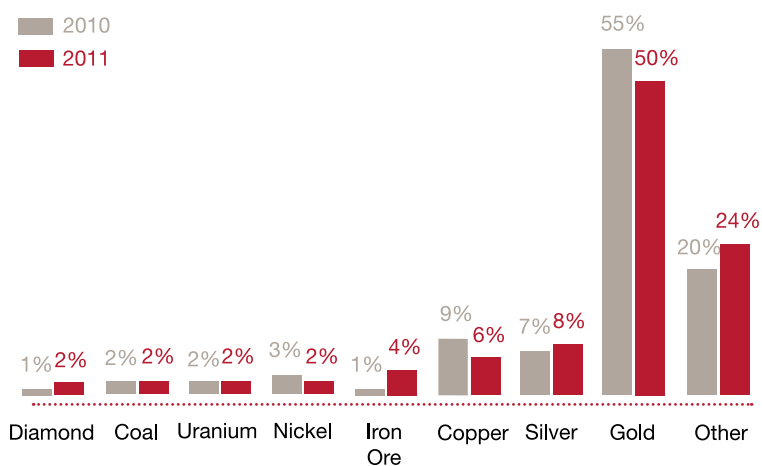
For these companies, exploration and evaluation costs (excluding acquisition costs) are now expensed as exploration costs in the Statement of Operations until the completion of a pre-feasibility study and the determination of commercial viability. Subsequent to a pre-feasibility study being completed and the commercial viability of a project being determined, the companies will capitalize all development costs relating to specific properties to Mineral Properties.

The majority of the junior sector continue though to capitalize exploration and evaluation costs in accordance with IFRS and consistent with their previous Canadian GAAP policy.

No big shocker here

The gold medal goes to – gold. For the sixth year in a row, gold tops the list as the principal commodity of the Top 100. Fifty of the Top 100 are exploring for, developing or mining the precious metal. Surprisingly though, this number is down 5% from last year, despite gold reaching a closing price high \$1,896 USD on September 5, 2011.

Principle commodity mined



Keep the maple syrup flowing Canada wins again

87%

Eighty-seven of the Top 100 have their headquarters in Canada.

Why? Well, the answer looks something like this:

1. Mining companies have access to financial professionals with deep knowledge of the mining industry and;
2. Mining companies have access to investors who understand the mining industry and want to invest in mining companies.

Company headquarters

	2011	2010
British Columbia	61%	60%
Ontario	17%	22%
Quebec	6%	6%
Alberta	4%	3%
Canada/Other	4%	3%
USA	3%	4%
United Kingdom	3%	0%
Australia	2%	1%
South Africa	0%	1%

Rest of Canada watch out, Plan Nord begins

The Government of Quebec expects the Plan to generate investments worth \$33 billion in the mining sector.

Renowned and loved for its vastness, Quebec's territory is extremely wide-ranging. By virtue of its size and variety, Quebec is a geographical mosaic with a hundred different faces and a thousand different facets. Blessed by nature with a broad array of landscapes, the territory has been planned in such a way that efforts to promote its many attractions and inevitable human settlement have not destroyed the prevailing sense of harmony.

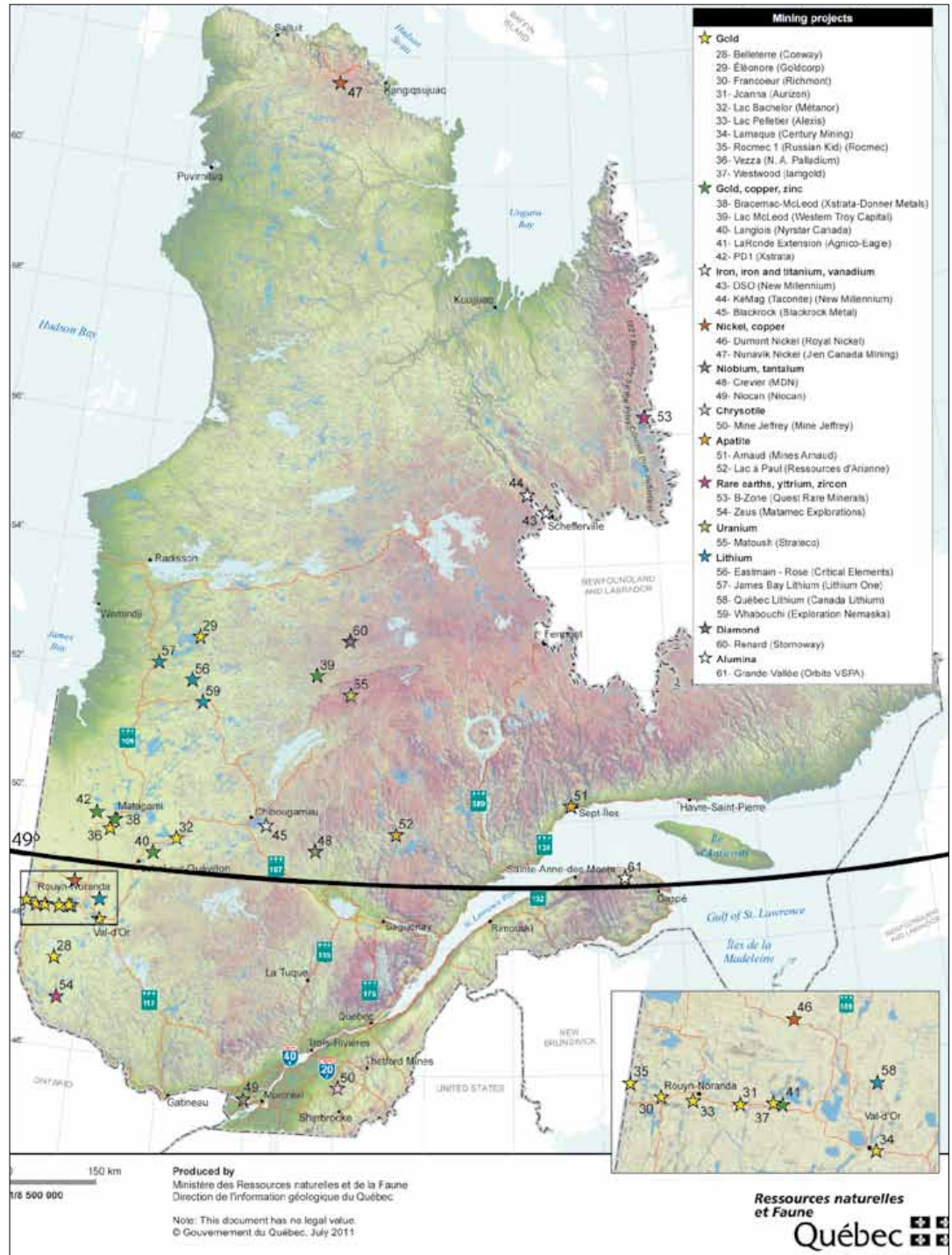
Quebec's majestic and resource-rich northern region is a vast territory in its own right. By virtue of their history and culture, its peoples are also unique. The region's rivers generate huge quantities of hydroelectric power, while the subsoil contains untold mineral resources. The Plan Nord proposes a sustainable development model aimed at developing these natural resources while protecting the environment and ecosystems and bringing benefits to northern residents and all Quebecers.

The area covered by Quebec's Plan Nord includes all lands north of the 49th parallel and to the north of the St. Lawrence River and the Gulf of St. Lawrence. The sheer vastness of the territory—nearly 1.2 million km², or 72% of Quebec's land mass—poses a formidable challenge in terms of access, while the cost of constructing new transportation, communications and infrastructure is often prohibitive given the large distances involved.

The Plan Nord—the project of a generation—will be carried out over a 25-year period. The figures involved are mind-boggling. The Government of Quebec expects the Plan to generate investments worth more than \$80 billion: \$47 billion in renewable energy and \$33 billion in the mining sector and public infrastructure, including roads, railways and airports. Some 20,000 jobs will be created or maintained annually over that same period. According to the Government, in terms of sheer magnitude, the Plan will be for the coming decades what the Manicouagan and James Bay developments were in the 1960s and 1970s.

The territory covered by the Plan is resource-laden and packed with other sources of wealth. Due to access issues, only a very small fraction of the territory's vast economic potential has ever been developed. Bringing in telecommunications infrastructure and an integrated transportation network will provide access to the areas with the greatest potential. Related projects include the extension of Highway 167 to the Otish Mountains; the extension of Highway 138 between Natashquan and Kegaska and between Kegaska and Blanc-Sablon; the reconstruction of Highway 389 between Baie Comeau and Fermont; feasibility studies for constructing a land link from Kuujjuaq southwards as well as a deep-water port in Whapmagoostui-Kuujjuarapik; and the construction of a land link to Radisson. Mining companies thus have a keen interest in positioning themselves strategically, not only within the boundaries of the territory covered by the Plan Nord, but also in proximity to the infrastructure projects that have already been announced.

Map of Quebec



Although the territory covered by the Plan Nord is home to only 2% of Quebec's population, great care must be taken to ensure that local and First Nations communities support and accept the projects proposed by mining companies. Maintaining smooth relations between these communities will be the key to creating genuine synergies in this new economic space while facilitating emerging partnerships. Indeed, the mining industry has a pioneering role to play in meetings with First Nations groups. Forging an alliance with our Native Canadian partners will help to provide access to the territory while maintaining solid links with local communities. This is the best way to gain social acceptance for mining projects. At the same time, First Nations groups will be seeking to draw on expertise, share facilities and obtain training for their workforce, generating direct benefits for their own communities. Mining companies must build bridges between the non-native and the native communities in order to boost the social acceptability of mining projects. Mining companies must ensure that First Nations groups are involved from the outset, i.e. exploration phase. This often works out to the mining companies' benefit since native trappers know the territory by heart and can save them both time and money.

Although the territory covered by the Plan Nord is home to only 2% of Quebec's population, great care must be taken to ensure that local and First Nations communities support and accept the projects proposed by mining companies.

As announced in the 2011-2012 provincial budget, Investissement Québec (IQ)—a public corporation owned by the Government of Quebec—has been allocated \$500 million for the purposes of negotiating stakes in mining projects, with a “return on investment” focus. These investments could take the form of equity interests or convertible debentures. This is a golden opportunity for junior mining companies to secure the involvement of political entities providing financial backing. To take one concrete example, IQ recently acquired a 37% stake in Stornoway Diamond Corporation under an agreement concluded in December 2010 (the Renard project).

Based on contributions to economic activity, security, environmental protection and social responsibility, the mining industry's performance, including that of its mineral exploration activities, continues to be a story that mining companies need to work at telling better. This is one of the most important issues at stake for the industry in Quebec and around the world. Mining companies are making many positive contributions to the regions they operate in, learning how to better communicate this message is critical.

There is no place for improvisation by the mining industry, which faces scrutiny from all sides. The industry must ensure that the necessary steps are taken in Quebec and elsewhere to clearly communicate the pivotal role it plays and to promote its performance vis-à-vis the above mentioned issues. The pressure is enormous and there is no room for error.

The Plan Nord is meant to be an exemplary sustainable development project, encompassing energy, mining and forestry development, environmental protection, biodiversity conservation and respect for cultures and identities.

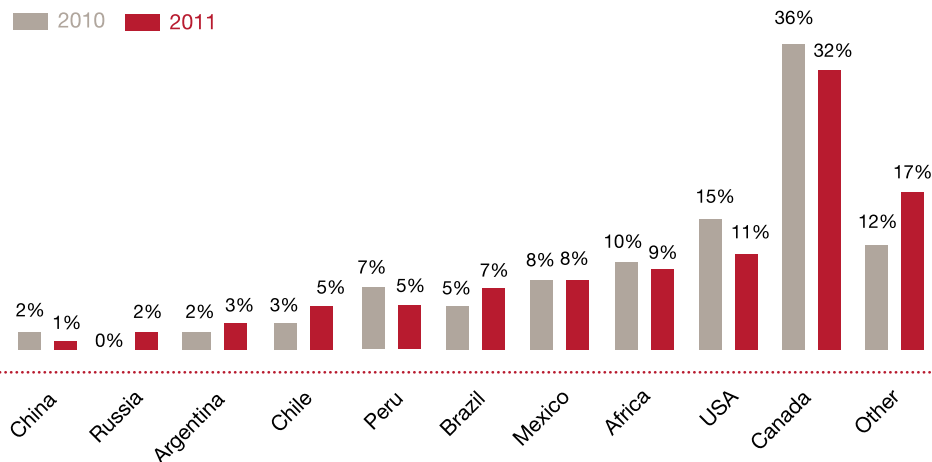
Some like it hot, others like it freezing

Africa vs. the Arctic – which area will become the most popular for mining operations? In 2009, of the Top 100 only one company was primarily operating in Africa. Now, there are nine companies primarily operating in Africa. As unexplored land becomes increasingly scarce worldwide the relatively unexplored areas of Africa continue to attract serious investors.

That being said, we surveyed the Top 100 asking, “in the next five to ten years

what region do you believe has the most exploration potential”. The most popular answer was the Arctic. In response to this prediction, Divya Reddy, a Senior Analyst for Eurasia Group commented, “although climate change and the associated warming of the Arctic is a major concern for environmentalists, it is also opening up the region to new sea routes and vast new minerals and hydrocarbon deposits that have the potential to dramatically shake up the global commodities trade. It’s no surprise then, that surrounding countries are now scrambling to position themselves to capitalize on the economic advantage the Arctic could provide”. Read on to learn of the risks and opportunities related to investing in the Arctic.

Primary areas of operation



Primary areas of operation and their associated risks*

Type of risk	Africa **	Brazil	Canada	Chile	Mexico	Peru	USA
Domestic market obligations/value-added production	✓	✓					
Expropriation/nationalization	✓						
Government stability and transparency	✓						
Local environmental/social opposition	✓			✓	✓	✓	
Contract revisions	✓						
National champions/parastatals	✓	✓	✓	✓			
Security	✓	✓			✓	✓	
Taxation and royalties	✓	✓		✓		✓	✓

Information provided by Eurasia Group

* Either recently implemented or currently under review

** In this context, Africa includes Tanzania, South Africa, Democratic Republic of Congo, Botswana, Ghana and the area of West Africa (made up of 16 other countries)

The challenges and rewards of a warming Arctic

Starting in 2007, when there was a dramatic drop in Arctic sea ice levels, accessible shipping routes in the region have become a reality for the first time. And due to the faster-than-expected thaw, scientists now estimate that Arctic summers will be completely ice-free in as early as a decade.

Due to accelerating climate change, the Arctic sea ice is melting at its fastest rate in 40 years, and shrunk to its second-smallest size on record in 2011, according to the National Snow and Ice Data Center. The Northwest Passage (across the northern border of North America and the Northern Sea Route running from the Port of Murmansk in northern Russia along the Siberian coast)—have become a reality for the first time. And due to the faster-than-expected thaw, scientists now estimate that Arctic summers will be completely ice-free in as early as a decade (although estimates range from 2013 to as far out as 2050 and beyond; the US military expects the Arctic to become ice-free for several weeks in the summer by 2030).

A major driver for accessing these sea routes will be the desire to tap Asia's ever-growing hunger for minerals and energy to feed its rapid growth. Currently, Asia-destined cargoes route through vulnerable chokepoints like the Strait of Malacca, which has been riddled with piracy attacks. In addition, larger cargoes that cannot pass through the Panama Canal circumvent South America, and are still vulnerable to piracy in the Suez Canal. But the shipping distances offered through the Arctic to send Russian or

North American resources to Asia (or Europe) are far shorter and therefore have a lower cost and environmental footprint. Already, Russia's Norilsk Nickel has announced plans to invest \$370 million toward doubling its Arctic shipments by 2016, estimating that it would slash shipping journeys by half (they estimate it takes 18 days to ship via the Northern Sea Route to Asia, compared to 40 days through the Suez). Norilsk has already poured \$720 million into several ice-class container ships and one tanker to carry metals to Asian markets. The route would further boost the competitiveness of Norilsk's coking coal projects in northern Siberia. Russia has already sent natural gas condensate shipments across the Northern Sea Route to Asia this summer.

Until recently, the US, Russia, Canada, Norway, and Denmark (via its sovereignty over Greenland) have all had longstanding claims to territorial seas and exclusive economic zones (EEZs) in the region, but expended very little effort to negotiate final resolutions or to take actions to assert national claims. Now, as more economic opportunity opens up in the region, jurisdictional claims are also stepping up.

As with all other oceans, the Arctic Ocean is governed by the United Nations Convention on the Law of the Sea (UNCLOS). The US is one of the few countries that has not yet ratified the treaty, but accepts its oversight over international law in this area, and will likely move to officially ratify it soon. Under the law, countries have full territorial claims over an area 12 nautical miles from their shores. Between 12 and 200 miles, countries have jurisdiction over EEZs, where they don't have authority over shipping lanes but still control rights for fishing and minerals resource extraction. Beyond 200 miles, a country can still lay claim to seabed resources if it can prove that the area in question is a natural extension of its continental shelf. As a result, countries are aggressively moving to map out regions in the Arctic to submit claims to the UN for extended EEZs.

Canada has been among the most aggressive in this regard. Since 2006, Prime Minister Stephen Harper has made Canada's claim to the Arctic a key point in the Conservative party's platform. Ottawa has also beefed up its military presence in the region (as have the Russians and Danes) and launched economic development initiatives targeted in the area. All this is on top of Quebec's Plan Nord to attract mining and energy investment to the northern region, which does not boost Canada's legal claim over Arctic zones, but gives it a more credible diplomatic position to engage in negotiations with other Arctic parties. Canada expects to complete its surveillance work and submit an application for an extended EEZ to UNCLOS by 2013. Canada is also making an assertion that it holds the rights to regulate shipping access to the Northwest Passage, claiming that these waters are an inland waterway under international law.

In its Arctic ambitions, Canada has butted heads most prominently with Russia, which will soon begin oil and gas production from the Arctic, and is undertaking its own mapping exercises with a goal of submitting its application for a 380,000 square mile extended EEZ to UNCLOS by 2013 or 2014. A key bone of contention is the Lomonosov Ridge, a 1,100 mile underwater ridge that extends from Greenland to Russia via the North Pole. And like Canada with the Northwest Passage, Moscow is claiming regulatory authority over the Northern Sea Route as "internal waters."

For the most part, disputed Arctic territory has been settled by bilateral agreements between relevant states, and is unlikely to result in real conflict in the future either. Norway and Denmark resolved a dispute over the demarcation of the EEZ along the median line between Svalbard and Greenland by a bilateral treaty in 2006, while more recently in September 2010, Norway and Russia signed an agreement on a maritime border between the two countries in the Barents Sea. The US and Russia have an accepted line of demarcation between their EEZs under a treaty signed in June 1990 (although Russia has not yet ratified it). Washington has not formally claimed an extended EEZ, in part because it has not yet ratified the UNCLOS. The US has surveyed the seabed, however, and could make a claim in coming years.

Since 2006, Prime Minister Stephen Harper has made Canada's claim to the Arctic a key point in the Conservative party's platform.

The issue of jurisdiction over sea lanes is potentially a larger near term dilemma relative to extended EEZs as shipping through the region begins to take off. Although the US and Canada are cooperating on surveillance work for Canada's UNCLOS submission, the US is concerned that granting Canada authority over the Northern Sea Route would set a worrisome precedent for sea access elsewhere, particularly through the Strait of Hormuz in the Persian Gulf, over which Iran has raised sovereignty issues. But Canada and Russia remain publicly adamant about retaining oversight over the sea lanes, although both countries have also shown more cooperative signs in negotiations at the Arctic Council. In fact, the most recent gathering of Arctic states resulted in an agreement on joint search-and-rescue missions in the ocean, in large part because there is growing acceptance that no one country will be able to adequately police the area or meet its vast infrastructure needs.

While claims over extended EEZs are designed to eventually tap vast deposits of natural resources housed in the Arctic (the area is estimated to hold almost a quarter of the world's untapped resources), actual development of these is likely decades away. Not only will access take time to achieve, but the projects may not prove economical in the near- or medium-term. As such, the more pressing issue for mining companies will be access to sea lanes to exploit faster shipping routes to growth markets in Asia. Close cooperation with host governments as well as expanded investment in Arctic-friendly ships will be crucial to taking advantage of this new opportunity.

Geopolitics aside, companies operating in the Arctic will also have to contend with an uptick in local opposition from native Inuit groups that live across the Arctic coast in Alaska, Canada, and Greenland. In 1999, the Inuit formed their own federal territory in Nunavut in Canada, while Greenland—with a largely Inuit population—was granted self-rule by Denmark in 2009. The Inuit are worried about environmental degradation and interference with their traditional livelihoods, as Royal Dutch Shell has had to contend with for the past few years off the coast of Alaska. Importantly, the Inuit have boosted their international presence, by forming the Inuit Circumpolar Council in 1997 and working with indigenous groups from elsewhere in the world to ensure their needs are met. As such, companies looking to do business in these areas of the Arctic will also have to come to an agreement on environmental protection and profit-sharing with local Inuit communities.



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Make it a double... no a triple

Four of this year's Top 5 tripled their market capitalization over the year.

Top 100's Top 5

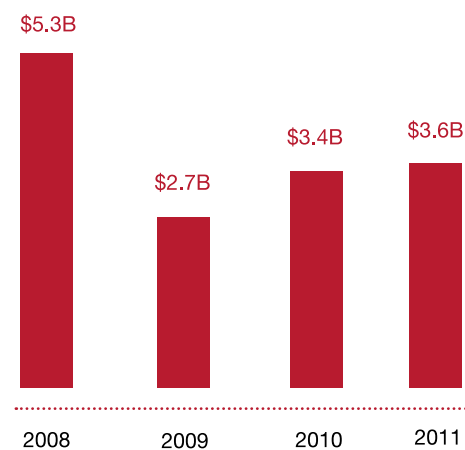
Four of this year's Top 5 tripled their market capitalization over the year. Trelawney Mining and Exploration posted an increase of almost nine-fold. What is behind their success?

Working from the top of the list down, the rise of Copper Fox Metals was mainly attributable to positive drilling announcements and a NI 43-101 report on their Schaft Creek deposit, one of Canada's largest undeveloped copper-gold-molybdenum-silver deposits located in north western British Columbia. This resulted in a higher stock price and capital raises.

ATAC Resources is a well-funded, Yukon-based exploration company focused on developing Canada's only Carlin-type gold discovery at its 100% owned Rau Gold Project. During the year it had many positive drilling results and was able to raise approximately \$45 million in private placement funding during the 12 month period ended June 30, 2011.

Canaco is a Vancouver-based mineral exploration company built on a foundation of experienced management and focused on rapidly advancing exploration projects in Africa. Canaco's key asset is the Handeni gold project in Tanzania, which was discovered by the Company in 2009. Canaco's rise to the Top 5 this year was the result of discoveries of new gold mineralization close to the Magambazi gold discovery and approximately \$200 million in equity financing during the 12 month period.

Total market capitalization of Top 5
(in billions)



Trelawney Mining and Exploration Inc. is a Canadian public corporation, focused on exploring and mining high-grade narrow vein resources in northern Ontario. Trelawney's main property, the Cote Lake Deposit, yielded positive test drilling results and the company was able to raise approximately \$100 million through 2 separate placements.

Rainy River Resources is focused on exploring and developing a newly discovered gold resource in northwest Ontario, Canada. During the 12 month period, Rainy River had closed two separate equity deals for approximately \$95 million. The Company intends to use the majority of the net proceeds of the offerings to fund ongoing advanced exploration activities at its Rainy River Project. In addition, the Company will use a portion of the net proceeds to fund expenditures under its option on the TPK Project.

ATAC Resources Ltd.

Phase: Exploration
Market Capitalization: \$704,300,000
Head office: Vancouver, Canada
Region of operation: Canada
Primary commodity: Gold
Growth rate from 2010: 392% www.atacresources.com

Canaco Resources Inc.

Phase: Exploration
Market Capitalization: \$661,900,000
Head office: Vancouver, Canada
Region of operation: Africa
Primary commodity: Gold
Growth rate from 2010: 412%
Website: www.canaco.ca

Copper Fox Metals Inc

Phase: Exploration
Market Capitalization: \$790,000,000
Head office: Calgary, Canada
Region of operation: Canada
Primary commodity: Copper
Growth rate from 2010: 814%
www.copperfoxmetals.com

Rainy River Resources Ltd.

Phase: Exploration
Market Capitalization: \$782,300,000
Head office: Toronto, Canada
Region of operation: Canada
Primary commodity: Gold
Growth rate from 2010: 65%
www.rainyriverresources.com

Trelawney Mining and Exploration Inc.

Phase: Exploration
Market Capitalization: \$642,300,000
Head office: Toronto, Canada
Region of operation: Canada
Primary commodity: Gold
Growth rate from 2010: 881%
www.trelawneymining.com

What happened to 2010's Top 5?

In 2011, only one of 2010's Top 5 remained within the Top 5 listed on the TSXV.

1. San Gold Corporation

San Gold Corporation graduated to the TSX in October 2010. Its market capitalization as at October 31, 2011 was \$624 million, a 51% decrease from 2010.

2. Romarco Minerals

Romarco Minerals also made the move to the TSX in November 2010. Its market capitalization as at November 1, 2011 was \$498 million, a 40% decrease from 2010.

3. Rainy River Resources

Rainy River Resources increased its standing on the TSXV from third place in 2010, to second place in 2011. It is the only company in last year's Top 5 to remain in 2011's Top 5.

4. East Asia Minerals Corporation

East Asia Minerals maintained its market capitalization year over year of \$243 million, after an increase of almost ten-fold in 2010. This level of market capitalization slipped to the twenty-fourth spot on the Top 100 list in 2011.

5. Brett Resources

Brett Resources was acquired in a friendly acquisition by Osisko Mining for US\$372 million in August 2010. Osisko's market capitalization as at November 1, 2011 was \$4.6 billion. Osisko, a gold mining company, has operations in Northern Quebec and Argentina.

Notes on reporting

We made some estimates and adjustments in order to arrive at a common format and aggregation of financial information as at, and for the years ended, June 30. For the few companies who had yet to file their June 30, 2011 financial statements, we used the twelve months ending March 31, 2011. Consistent with 2010, the data was broken down into three categories of companies (exploration, development and production) in order to be comparable year over year.

For balance sheets, we converted foreign currencies to Canadian dollars using the closing exchange rate on June 30, 2011. For income and cash flow statements, we used the average exchange rate for the year ended June 30, 2011.

Some companies have elements of non-mining activities in their results. However, non-mining revenues are insignificant and have been included in our results and analysis.

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