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# The Real Cost of Mining Gold

Mining Americas Summit

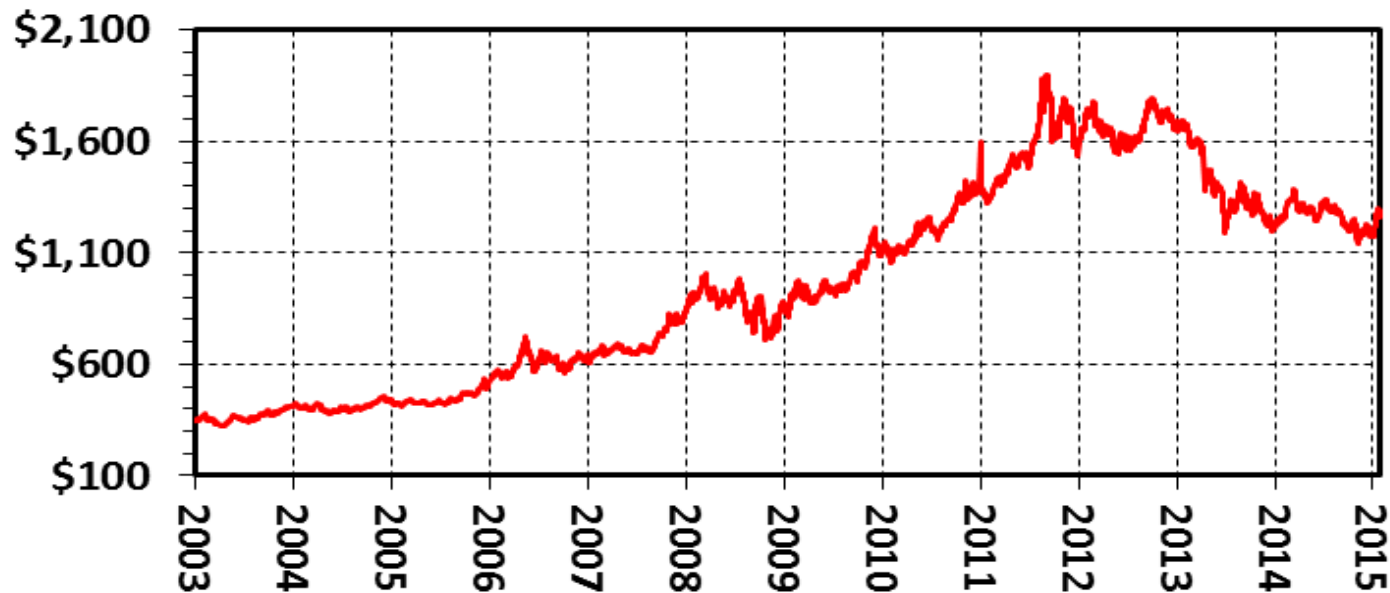
June 2015

(Data & Analysis: Cipher Research Ltd)



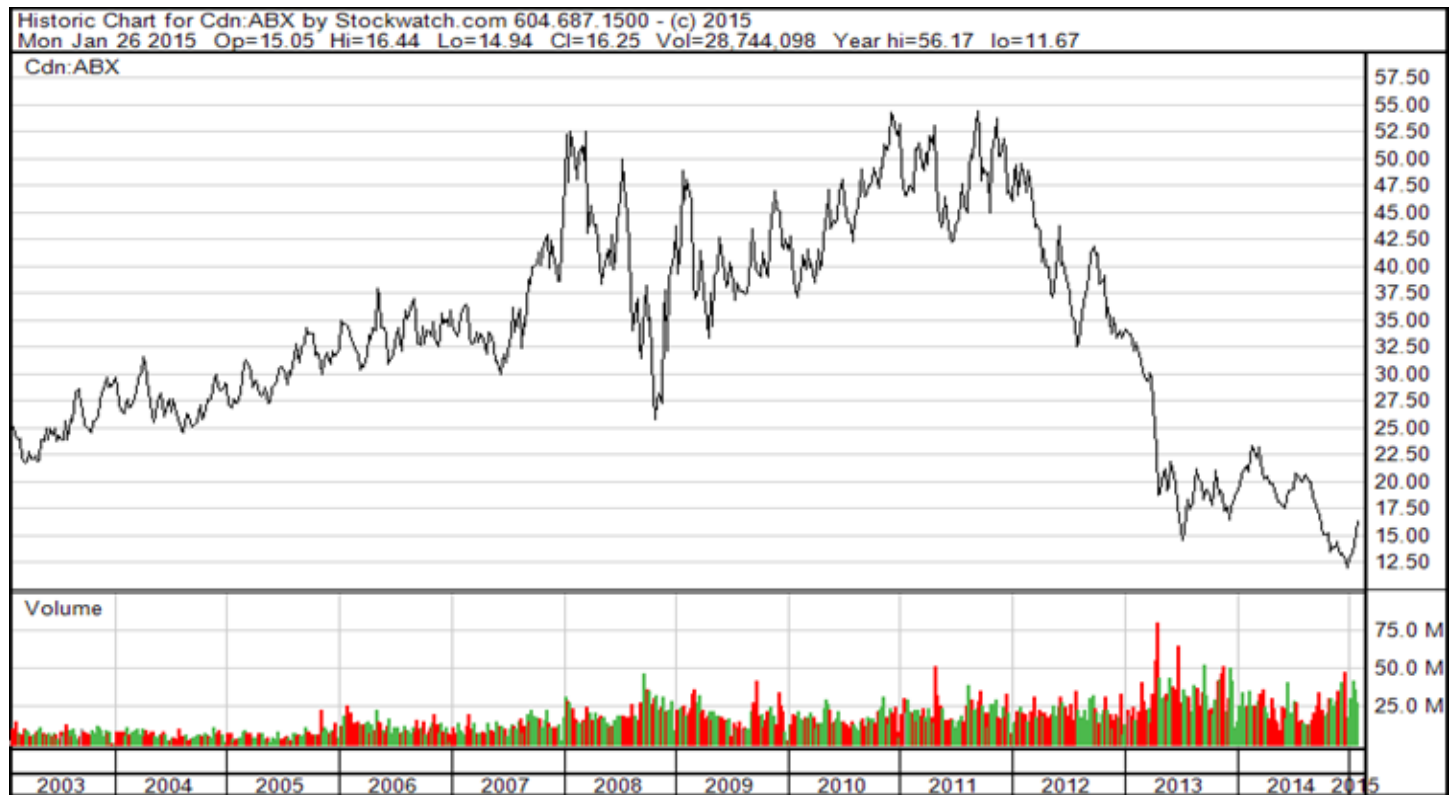
# Gold Price 2003 - 2015

**London Gold Spot Price  
01/01/2003 - 01/30/2015**





# Big 3 Gold Miners : Barrick Gold (ABX)



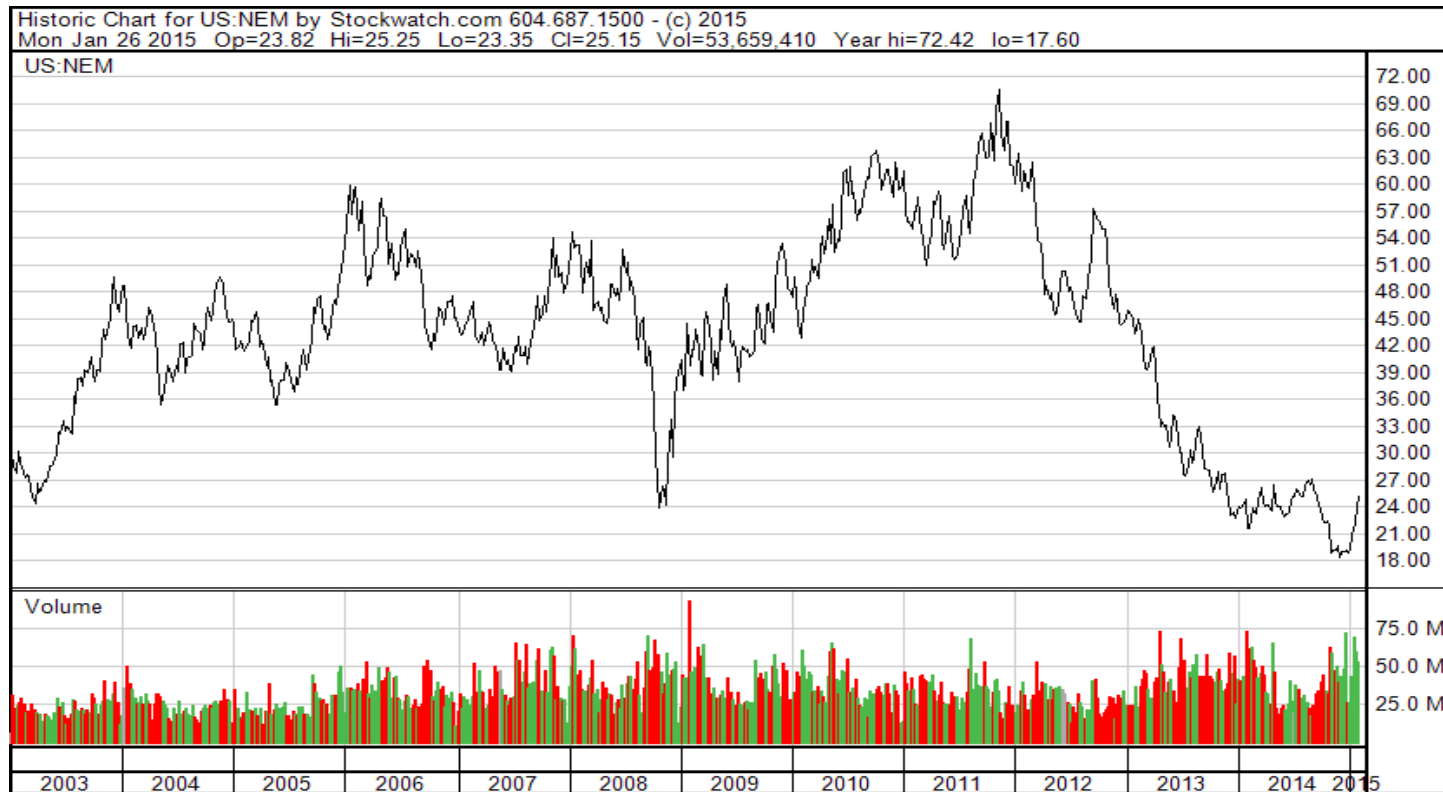


# Big 3 Gold Miners : Goldcorp (GG)





# Big 3 Gold Miners : Newmont Mining (NEM)





## 7 Major Gold Miners

### Share Price Return : 2003 - 2015

	Open	Close	% Change
<b>Gold Price (\$)</b>	\$344	\$1,260	266%
Agnico Eagle (Cdn)	\$23.02	\$42.84	86%
Barrick (Cdn)	\$24.35	\$16.25	<b>-33%</b>
Eldorado (Cdn)	\$2.05	\$6.10	198%
Goldcorp (Cdn)	\$19.75	\$30.69	55%
Newmont (US)	\$29.04	\$25.15	<b>-13%</b>
Randgold (US)	\$7.24	\$85.26	1078%
Yamana (Cdn)	\$0.16	\$5.26	3188%





## Gold Miners : Non - GAAP Cost Reporting

- Mid - 1990s : Cash Costs
- 2013 - Present : All - In Sustaining Costs
- Co - Products versus By - Products
- No Industry - Standard Cost Reporting
- Accountants Can Legally “Cook the Books”



## Barrick Gold 2010 - 2013

<b>Barrick Gold : Costs per Oz (\$)</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
Adjusted Operating Costs (total cash pre-2013)	566	563	463	573
Adjusted Operating Costs (on co-product basis)	589	580	484	592
All-in Sustaining Costs	915	1014	821	899
All-in Sustaining costs (on co-product basis)	938	1031	842	918
All-in Costs	1282	1404	1141	1317
All-in Costs (on co-product basis)	1305	1421	1162	1336



## Goldcorp 2010 - 2013

<b>Goldcorp : Costs per Oz (\$)</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
Total Cash Cost (assumed net of by-products)	533	300	233	274
Total Cash Costs (on co-product basis)	637	638	534	446
All-in Sustaining Costs	1031	884		
All-in Costs	1575	1590		



## Newmont Mining 2010 - 2013

<b>Newmont: Costs per Oz (\$)</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
Gold Costs Applicable to Sales / Oz	761	677	591	485
Total Production Costs	975	854	752	617
All-in Sustaining Costs	1104	1177	1062	



## Goldcorp 2012 Annual Report

- Avg Au Price per Oz Sold : \$1672
- All - In Sustaining Costs : \$874
- Production : 2.4 M Oz Au = Margin : \$1.92
- Operating Cash Flow = \$2.10 B / Profit = \$1.75 B
- Cash Position : Dropped by \$582 M
- Spent Almost \$2.5 B ... Where Did the \$\$ Go ?



## What Makes a Healthy Gold Miner ?

- ✓ Operations = Primary Source of Cash
  - ✓ Operating Cash Flow > Net Income
  - X Operating Cash Flow > Capital Expenditures
- 
- Year over Year
  - Growth Financed by Internal Cash Flow
  - Not by Debt Instruments & Equity Raises



## 7 Major Gold Miners 2003 - 2013

<b>COMPANY</b>	<b>AEM</b>	<b>ABX</b>	<b>EDO</b>	<b>GG</b>	<b>NEM</b>	<b>GOLD</b>	<b>AUY</b>
<b>Cash Flow Operations \$ (M)</b>	<b>3,129</b>	<b>25,739</b>	<b>1,789</b>	<b>10,835</b>	<b>20,955</b>	<b>1,925</b>	<b>4,839</b>
<b>Capital Expenditures \$ (M)</b>	<b>(4,750)</b>	<b>(41,096)</b>	<b>(1,711)</b>	<b>(13,658)</b>	<b>(20,595)</b>	<b>(2,553)</b>	<b>6,024</b>



## So What is the Real Cost of Mining Gold ?

- We Cannot Trust the Gold Miners'
- Balance Sheets & Income Statements
- Accrual Basis Accounting = Easy to Manipulate
- Our Solution : Follow the Cash !
- Cash Flow Statements: In-Flows vs Out-Flows





## How Do Miners Use Operating Cash ?

- Operating Expenses (OPEX)
- Direct Costs of Producing Gold for Sale
- 7 Miners : OPEX Averaged 45% of Revenues
  
- Investment in Mining Properties (IMP)
- Increases Value of Plant, Property, Equipment
- 7 Miners : IMP Averaged 33% of Revenues



## What is Investment in Mining Properties ?

- Create Long - Term Profitable Assets
- Extend Life of Operations
- Increase Cash Flows from Operations
- Increased Size of Reserve / Resource Base
- Increased Level of Production



## Investment in Mining Properties

- IMP Not Reflected on Income Statement
  - Except as Non - Cash Depreciated Expenses
- Or
- When P, P, & E are Periodically Written Off
  - Acquisition Costs are Not Included in IMP



## OPEX versus IMP ?

- Miners Capitalize Operating Expenses as IMP
- To Appear Profitable Y / Y
- Analysts & Shareholders Appeased
- Write - Down of Assets Every Few Years
- “Short - Term Pain for Long - Term Gain”



## Barrick Gold (ABX)

Barrick Gold		2003	2013	Totals
	Production (M oz)	5.4	8.9	78.4
	R & R (M oz)	110.6	235.4	
	IMP (B \$)			29.1
	Acquisitions (B \$)			22.8
	Write - Offs (B \$)			26.5

- Production : 2006 9.3 M Oz / 2014 6.2 M Oz
- If Write - Offs Expensed = Costs + \$338 / Oz



# Goldcorp (GG)

Goldcorp		2003	2013	Totals
	Production (M oz)	0.7	2.7	26.8
	R & R (M oz)	7.8	112.7	
	IMP (B \$)			11.6
	Acquisitions (B \$)			15.6
	Write - Offs (B \$)			2.9

- 3 Years of Declining Production / 2011 = 3.4 M Oz
- If Write - Offs Expensed = Costs + \$108 / Oz



## Newmont Mining (NEM)

Newmont Mining		2003	2013	Totals
	Production (M oz)	7.1	5.9	82.1
	R & R (M oz)	91.3	132.3	
	IMP (B \$)			18.6
	Acquisitions (B \$)			5.0
	Write - Offs (B \$)			7.7

- Declining Production : 8 of 10 Years / 2005 9.9 M Oz
- \$2.9 B Equity / \$5.8 B Debt / \$5.2 B Dividends



## Our Solution : Standardized Cost Reporting

- $\text{Total Costs} = (\text{Revenue} - \text{Cash Flow from Ops}) + \text{IMP}$
- $\text{Oz Au-eq} = \text{Revenue} / \text{Yearly Avg Au Price}$
- $\text{Cost / Oz} : \text{Total Costs} / \text{Oz Au-Eq}$





## Big 3 Miners : 2003 - 2013 Real Cost / Oz

### Operating Basis Profitability :

- Barrick Gold 7 of 11 Years
- Goldcorp 5 of 11 Years
- Newmont Mining 4 of 11 Years



## Adequacy Ratio (AR)

- Does Company Cash Flow Meet All Obligations ?  
Or
- Must Company Raise Equity &/or Take on Debt ?
- $AR = Rev / OPEX + IMP + Debt\ Repay + Dividends$
- $AR > 1.0$  Healthy       $AR < 1.0$  Unhealthy



## Adequacy Ratio (AR)

	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	Avg
<b>Au \$</b>	1411	1669	1572	1225	972	872	695	603	445	410	363	1052
<b>AEM</b>	0.81	0.80	0.94	0.50	0.49	0.29	0.59	1.10	1.04	0.97	0.76	0.75
<b>ABX</b>	0.60	0.82	0.96	1.02	0.60	0.84	0.91	0.70	0.84	0.80	1.03	0.83
<b>EGO</b>	0.83	0.76	1.08	0.94	1.29	1.20	0.78	0.42	0.22	0.50	0.74	0.80
<b>GG</b>	0.65	0.82	1.05	0.93	0.71	0.62	0.60	0.82	1.05	0.77	0.97	0.82
<b>NEM</b>	0.80	0.74	0.83	1.07	0.78	0.52	0.63	0.89	0.88	1.05	0.72	0.81
<b>GOLD</b>	1.06	0.94	1.06	0.82	0.82	0.93	1.03	1.02	0.85	0.49		0.90
<b>AUY</b>	0.73	0.77	1.15	1.13	0.70	0.84	1.00	0.33	0.23	0.92	1.08	0.81
<b>Avg AR</b>	0.78	0.81	1.01	0.92	0.77	0.75	0.79	0.75	0.73	0.79	0.88	0.82



2003 -2013 Adequacy Ratio  $> 1.0 = 25 \%$

- Agnico - Eagle 2 Years
- Barrick Gold 2 Years
- Eldorado Gold 3 Years
- Goldcorp 2 Years
- Newmont 2 Years
- Randgold 4 Years
- Yamana Gold 4 Years



## The Problem

- 2003 – 2013 Gold Miners : Growth Only Focus
- Increasing Production & Reserve / Resource Base
- Inadequate Cash Flows / Unsustainable Business Plans
- Debt & Equity Raises to Pay Dividends
- Massive Write - Offs
- Conclusion : Failed Business Model



## Major Gold Miners 2003 - 2013

- Growth of Production & Resources / Reserves
- Did Not Reward Shareholders
- Unprofitable = Flawed Business Model
- High Margin / Lowest Quartile of Costs Ignored
- *Quantity* of Ounces over *Quality* of Ounces



## Our Solution

- Mining is a Value Industry
- Mining is Not a Growth Industry
- Focus on High Margin Production
- *Quality* not *Quantity* of Ounces Produced



## Investors : Do Your Due Diligence

- Every Good Geologist Knows that Grade is King
- Beware : Gold Miners Using Equity & Debt for Dividends
- “A Mine is a Hole in the Ground with a Liar Beside It”
- Follow Cash Flow; Total Cost / Au-Eq Oz; Adequacy Ratio





# Beware of Frogs Masquerading as Princes





# Monday Morning Musings from Mickey the Mercenary Geologist



# CIPHER

RESEARCH

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