

Lecture 28 — Case Study: Bre-X

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In 1993, Bre-X was a penny-stock mining company with stocks selling at \$0.27.

David Walsh (owner) wished to buy a gold claim in Busang, Indonesia.

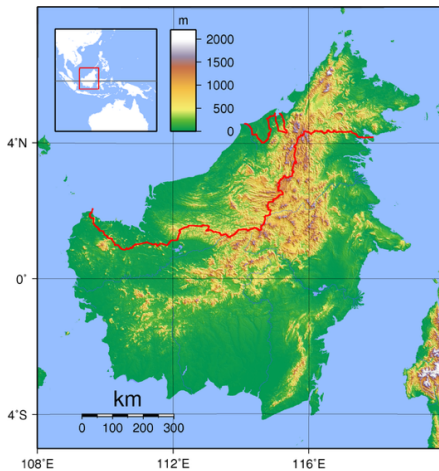
The highlands were formed by a massive volcano.

Numerous Australian companies had already prospected the island.

They were only able to establish a single viable mine.

The Grasberg Gold Mine in New Guinea is the largest in the world.

Busang, Indonesia



David Walsh was wined and dined by two geologists: John Felderhof & Michael de Guzman.

Walsh committed \$80,000 to the Busang project.

De Guzman was an engineer with a colourful character:

- At the top of his class
- As a Filipino, he was, however, subject to a low glass ceiling
- He had four wives with families, simultaneously, all of whom were unaware of each other

First they had to “partner” with an Indonesian.
They found Sigit Hardjojudanto, Suharto’s son.

They began to find gold...
Early 1994: 2 million oz
Mid 1994: 3 million oz
Late 1994: 8 million oz

Stocks were trading at \$2.05

Yes, gold is measured in ounces, despite it being a non-metric unit...
1 Troy Ounce is 31.1035g.

1995 continued to be a good year; the stock price was \$14.87 by the end of July.

The reserves only increased:

1995: 10 million oz

Speculation: 30 million oz

The stock was now at \$50 per share!

Normal practice is to store half of a core sample for verification.

De Guzman was crushing the entire core claiming the “nugget effect”.

That is, the inability to get a statistically valid sample for analysis.

The theory is that gold is not evenly distributed throughout the sample.

An auditor noted that the gold in the samples were rounded – more like alluvial gold.

Alluvial gold is found in alluvium: clay, sand, gravel, or similar material deposited by running water (according to Merriam-Webster Dictionary).

De Guzman gave a volcanic pool theory accounted the rounded corners of the gold found in the core samples.

Bre-X is now traded on the Toronto Stock Exchange (then, TSE, now TSX):

April: \$180

Early May: \$200

Late May: \$286.50

New announcements:

June: 39 million oz

Early July: 42.6 million oz

Late July: 47 million oz

Numerous mining companies – mostly Canadian – were headed off to Borneo staking other claims...

Felderhof sold \$84 million worth of stocks.

At this time, Trevor Cavicchi was Canadian geologist who had just graduated from university.

He was hired by Bre-X and, in Borneo, had noted numerous core samples lying open.

This is something that would not be considered among best practices.

He asked a few questions but was quickly told off.

As a junior geologist, he didn't pursue the issue...

Now, Bre-X was attracting the attention of the Indonesian strongman Suharto.

Indonesia revoked Bre-X's explorations rights claiming irregularities.

Freeport McMoRan Copper & Gold Inc. was brought in by Indonesia to exploit the mine.

A company employing one of Suharto's daughters would be building the infrastructure.

Following a resolution to a 10-month dispute:

Bre-X 45% Freeport 15% The Indonesian government 40%

Bre-X's stock was dropping: to prop it up, they “found” more gold.

February 17: 71 million oz

February 19: Claims of 200 million oz

The stock prices recovered and Felderhof is awarded the “Man of the Year Award” from the Prospectors & Developers Association of Canada.

De Guzman's office at Busang is destroyed by fire...

Unfortunately, Freeport was digging its own cores.

They dug a sample only 1.5 m away from Bre-X site.

Their core found 0.01 grams per tonne.

Bre-X had found 4.39 grams per tonne.

De Guzman was in Toronto addressing shareholders but is called back to explain the discrepancy in Freeport's findings.

During the helicopter flight, he appears to have jumped into the Indonesian jungle, committing suicide (allegedly).

Rumours continue to this day about whether he was pushed...

What appears to be his body, badly decomposed, was found four days later.

The stock price of Bre-X dropped to almost nothing...

- All involved blamed everything on de Guzman
- Walsh moves to the Bahamas
- Felderhof moves to the Cayman Islands
- No one is found guilty of this fraud
- Joe Groia, who successfully defended Felderhoff, was found guilty of professional misconduct in June 2012 by the Law Society of Upper Canada for his conduct during the trial

A Little Salt, Hold the Pepper

De Guzman had been salting the core samples.

He used gold from one of his wedding bands.

Initially, it was 3 oz per tonne – a modest amount, but this rose over the years.

Later, de Guzman ended up purchasing \$61,000 of alluvial gold

He was very intelligent in measuring plausible quantities of gold into each sample – never more than could have been believable given the current hype.

The Canadian mining industry was seen as the laughing stock of the world.

Prior to this, the industry was not regulated.

Regulation similar to that of engineering was introduced.

In Ontario, the Professional Geoscientists Act was passed in 2000.

Geosciences would now be a self-regulating profession.

Modeled on the Professional Engineers Act.

The Act established the Association of Professional Geoscientists of Ontario (APGO).

After a 3-year transitional council, the first elected council was formed in 2003.

Students graduating from geological engineering at UW satisfy the requirements of both PEO and the APGO.

In Alberta, the professions of engineering and geoscience form one association.

One silver lining: Trevor Cavicchi has since gone on to become a successful geologist.

He has apparently gained a reputation for stating the facts and not attempting to manipulate them to satisfy the wants or desires of others.

- [1] D. W. Harder, "ECE 290 Lecture Materials," 2013.
Online; accessed 31-May-2016.
- [2] J. Vale, "ECE 290 Course Notes," 2011.

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