18 Stages to Mining Ruin

A for-illustration-purposes-only foray
into a hypothetical mining company
on its journey of destroying shareholder value

Dr John Wolstencroft
for Frisby's Bulls and Bears

The Starting Point

- A junior miner, with 100m shares in issue has just received a bankable feasibility study on a proposed 100,000 ounce p.a. gold mine
- Cash costs of $500 per ounce are envisaged
- The stock is trading at $1
- The company, at $1500 gold will be "throwing off" 100,000 * (1500-500) = $100m per annum
- That's $1 per share profits
- That's a p/e (price/earnings) ratio of 1!
- Everyone is buying!

1. Into Production

- The mine needs $200m to go into production – i.e. build the mine
- They can borrow 2/3 but that still means they have to raise $66m (1/3 of $200m)
- The share price falls, in anticipation, to 66c
- That's another 100m shares that have to be issued
- So now there are 200m shares in issue
- That's means earnings of 50c per share not $1 per share
- So the p/e ratio is 2

2. Warrants

- To sweeten the deal the company had to issue 33m warrants exercisable at 80c
- The share price rises and these warrants are exercised
- The $24m or so raised goes into "working capital". After all the $200m raised was for building the mine not additional exploration and cash burn until production starts
- It's rapidly spent
- 233m share in issue, $100m profits, at $1 a share that is a p/e of 2.33

3. Last minute fund raising

- Its all going very well
- But they have a few cost overruns
- They need another 15% on the $200m costs of building the mine
- Share price falls back, to 50c
- That $33m ($30m after expenses) at 50c per share, or 66m shares
- Now 300m shares, $100m profits, at $1 a share that is a p/e of 3

4. Free Carry

- It turns out that these are **gross** production figures
- In fact the government has a 25% free carry on the mine
- That means of the 100,000 produced the company only get 75,000
- Profits are now only $75m, not $100m
- Now 300m shares, $75m profits, at $1 a share that is a p/e of 4

5. Royalties

- It turns out that a prospector has a 2% royalty on the mine (this is on the sale proceeds)
- And the government has 2%
- That's 4% off the gold price of $1500
- We still get $1440 for an ounce of gold
- Now 300m shares, $70.5m profits, at $1 a share that is a p/e of 4.26

6. Director's options

- The directors are very important and awarded themselves a bunch of options to encourage them to stay in this important phase
- 30m options (that's only 10% of shares in issue)
- They exercise these, the proceeds going into working capital for more exciting projects
- .. and to fund the company after the mine is built and before its cash-flow positive
- Now 330m shares, $75m profits, at $1 a share that is a p/e of 4.68

7. Sustaining Capex

- The “dirty little secret” of the mining industry
- All mines need capital expenditure (capex) to build – that’s what the $200m was for – but also annually sustaining capex to build new shafts, declines, tunnels, do more pre-stripping, extend the pit “on strike”, refurbish equipment etc
- This can be $100 to $200 per ounce produced, lets say $150 per ounce on the 100,000 ounces
- Now 330m shares, $59.5m profits, at $1 a share that is a p/e of 5.57

8. Costs I

- The land all around is "highly prospective"
- They need to drill out the current resource to make it bigger, $4m p.a.
- …and do some exploration drilling to find that next mine, $4m p.a.
- Now 330m shares, $51.25m profits, at $1 a share that is a p/e of 6.44

9. Costs II

- All costs so far are on-site project costs, not General and Administration "plc" costs
- The directors, brokers, corporate advisors etc. need paying
- Lets say \$3m p.a.
- Now 330m shares, \$48.25m profits, at \$1 a share that is a p/e of 6.84

10. Cost Inflation

- Cash and sustaining capex costs have risen, from $650 to $750 per ounce.
- This sort of inflation is quite common
- Now 330m shares, $40.75m profits, at $1 a share that is a p/e of 8.1

11. Ramp Up

- This is a 100,000 oz per annum mine … eventually
- There is a ramp-up, so first year or two it's actually 10% less than anticipated
- 67,000 net ounces to the company, not 75,000
- Now 330m shares, $35.2m profits, at $1 a share that is a p/e of 9.4

12. Reverse Efficiency

- At point 11 we are producing less ore
- But fixed costs basically stay the same (running the mine – employees, mill etc).
- So costs rise from $750 per ounce produced to $850 per ounce produced.
- Now 330m shares, $27.5m profits, at $1 a share that is a p/e of 12.

13. Not what we expected

- The only thing certain about mining is that we won't mine what is planned
- Projects typically return – i.e. ounces produced per annum - between -50% and +100% of what was expected. Low grade pockets are encountered and the weather always seems be terrible wherever there is a gold mine
- We are being generous and say they mine what they expected – if we weren't the p/e could go up from 12 to 30 in this stage alone
- Still 330m shares, $27.5m profits, at $1 a share that is a p/e of 12

14. What about the debt

- In stage 1 we borrowed about $133m
- So we have to pay interest and also some of the debt back every year
- Lets say $10m interest and $10m debt repayment
- (Debt repayment wont affect accounting profit but will affect profit in the sense of cash “thrown off” and potentially available to shareholders as a dividend which is what we mean by profit here. The capex will depreciate by roughly the same as debt repayment though and this will reduce accountancy profits)
- That’s $20m dollars a year less profits!
- Now 330m shares, $7.5m profits, at $1 a share that is a p/e of 43.9

15. Royalty hike

- Government slaps on a new 1% special royalty as miners must be raking it in
- Now 330m shares, $6.5m profits, at $1 a share that is a p/e of 50.6

16. Directors pay reward

- They give themselves pay rises based on their new responsibilities being miners not explorers
- …and extend the management team
- Another $1.5m p.a
- Now 330m shares, $5m profits, at $1 a share that is a p/e of 65

17. More options

- The new management team need incentivising to stay
- …and the directors need more options too as a reward for production
- Another 20m options
- Now 350m shares diluted, $5m profits, at $1 a share that is a p/e of 70

18. Tax

- Turns out tax is circa 35% in the country of the mine
- Now 350m shares diluted, $3.3m after-tax profits, at $1 a share that is a p/e of more than 100
- (The debt repayment is not tax-deductable but the mine will also have been depreciated – there are many factors affecting tax so this is a rough estimate)

- But of course, the share price wont be $1 a share, that's the price you bought in at when the forward p/e was 1, when it was a bargain
- To be on a par with Barrick (p/e of 10) or a junior growth miner the share price will be more like 10-20 cents
- …at least you enjoyed the ride!