



CRUNCH TIME

Welcome to another edition of Crunch Time

We thought you might like to read something bullish for a change – that just might set your heart pumping?

According to a forecast in a recent edition of the publication, 'The Daily Reckoning Australia' quoting a claim by renowned investment bankers, Goldman Sachs there's another mining boom on its way.

While the last one was primarily driven by demand from China, this time, the publication says it will be driven by a lack of supply.

Goldman Sachs believes the next mining boom is going to be brought on by the fact that spending on exploration has touched a 30 year low that is predicted to become a problem when existing mining operations run-down.

According to the publication, 60% of the world's top 100 mines were built last century and their reserves have been running down for a long time now.

The thinking behind the prediction is that the lag times on getting mines up and running is enormous so that whatever supply is available will be: I quote: 'bid up and drench mining companies in money'.

No doubt you're wondering when this is going to happen. The exact timing wasn't mentioned – though the writer did say he expected commodity prices to move within two years.

If this comes true... don't forget that you read it first in *Crunch Time*.

Rapid takes a role in a lithium mining project

Rapid Crushing has been awarded a five year contract by Galaxy Resources to work its Mt Cattlin spodumene project located just north of Ravensthorpe. Spodumene is a pyroxene mineral consisting of lithium aluminium inosilicate, $LiAl(SiO_3)_2$, to be a source of lithium.

3 STAGE CIRCUIT

The Mt Cattlin mine operations include open-pit mining of a flat-lying pegmatite ore body. The flat-lying nature of the ore body allows mining to proceed at a constant strip ratio once the ore is uncovered.

Mining is carried out using excavator and truck operations, delivering to Rapid's crushing and screening circuit and thereafter into Galaxy's HMS gravity recovery circuit.

Rapid's plant when fully operational will consist of a 3-stage modular electric crushing circuit producing up to 1.6 million tonnes per annum of -14mm feed material to Galaxy's fine ore bin.

At present Rapid has commissioned a 3 stage mobile

track crushing & screening circuit to crush ore whilst the larger modular electric circuit is being commissioned

24 HOUR PER DAY FEED

The crushing plant provides feed to a fine ore bin and this fine ore bin feeds the site's concentrator on a continuous 24 hour per day basis.

The project produces spodumene concentrate which is being shipped as bulk concentrate to Asian downstream converters.

Below...The modular electric crushing circuit being installed



As we're headed towards end of year (where did that year go?) may we extend best wishes to you for Christmas and the New Year.



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FROM LITTLE THINGS...

As we head towards the 40th year of Rapid Crushing having been in operation...we're once again thinking: 'One of these days when there is time to spare we're going to work out the tonnage we've crushed and screened over our years of operation'.

It would be great to know because since the early days of our principal Neil Irvine establishing himself as a crushing & screening service provider, Rapid Crushing has become a significant part of Australia's mining industry.

We've processed a heck of a lot of rock through what is possibly the widest range of machinery that anyone in this industry has used. If anyone has developed the right type of machinery for the job it's probably Neil Irvine because Rapid has not just been a crusher of rocks but has built a massive amount of machinery specifically to cater for the output needs of its clients.

STARTING AS A BOILER-MAKER

Neil began his working career as a boilermaker in Victoria and later changed direction to work for a scrap metal merchant. That role finished up with him running the show at the age of 22 after the owner had died. In 1978 he moved to the West started a business, purchased a home and had a wife expecting their first child.

"It was a case of head down and arse up," he recalled.

That year, with three employees in small rented premises, located in Kent St, Cannington, he established Mini Welding before ultimately changing the business name to Rapid Crushing.

Rapid Crushing entered the world of contract crushing and screening for mining companies in 1993 as a very minor player and subsequently, during the peak years of the boom, had in the region of 260 people working in the operation.

INADEQUATE IMPORTED PLANT

One of the keys to Rapid's growth was the fact that Neil Irvine was not content to settle for machinery imported from other countries where conditions were a far cry from that experienced in remote outback Australia.



Rapid Crushing founder, Neil Irvine



Our Perth office and workshop



Modular crushing circuits on Burrup Peninsula

He made major modifications to the machinery – and through his engineering workshop, Irvine Engineering, he reconstructed and built all levels of machinery that could perform better in the conditions, achieve greater reliability and give a better output.

Furthermore, it enabled Rapid Crushing to be unique in not being reliant upon suppliers to service or repair equipment which meant that clients could count on Rapid meeting its commitments. [Continued next page](#)

The right plant for the job

You would be surprised at the number of times Rapid Crushing has been called in to take over a project after another contractor has not been able to meet output targets.

The reason is usually because incorrect plant has been installed for the project requirements.

On other occasions the site output requirements have been increased to beyond the capacity of the original plant or stringent specifications simply could not be met by some plant operators.

When it comes to output requirements

above 500,000 tonnes we have found that modular crushers are vastly superior.

Ours are usually electrically powered by their own generating sets, though we can also provide track mounted rigs where needed.

We build our modular crushers ourselves because they need to be built specifically to suit Australian outback conditions.

Modular plant takes more time to set up/pack up on site which means the set-up costs more, but the extra cost can be more than offset over time by the quantity of tonnes crushed at a lower operating cost per tonne - as well as of course greater reliability.

We have a mountain of evidence from very satisfied clients to prove this.

BIG THINGS CAN GROW!

PROJECTS

Rapid has built a reputation for this in working on projects operated by the likes of BHP, FMG, Rio Tinto and Chevron (Gorgon) as well as undertaking numerous quarrying and construction mate-



Branch opened in Mackay, QLD in 2014

rial operations for a number of major civil contractors. The nine acre Maddington site, complete with large storage areas and an operation in Mackay, Queensland is a far cry from the early days of a 12m storage shed at Cannington. Rapid Crushing has subsequently established a subsidiary, Rapid Dams that specialises in providing services in building wet and dry lift tailings storage facilities, dam extensions & the raising of embankments as well as mine site road construction, drainage and rehabilitation earthworks.

HORSE RACING

Aside from the business, Neil's passion has always been horse racing.

This has led to him resurrecting the run-down horse training property 'Narbethnong' - once owned by Rothwells merchant banker, the late Laurie Connell.

Subsequent owners changed the property name to 'Balmoral Park', which has been retained.

The once grand horse property has had major restoration work to become a showplace for thoroughbred breeding and training activity under the helm of one of WA's leading stud-masters, Brian Collison.

Aside from these ventures, Rapid Crushing has developed a close alliance with the Indigenous Construction Resource Group to create training and employment opportunities for Aboriginal people in regional communities.

CHARITIES

Rapid also has a five year funding program for the Ronald McDonald House and is a major sponsor of the Butterfly Ball for Down Syndrome WA.

It has also had involvement with the McGrath Foundation to promote the message of breast cancer awareness; has donated funds to build a Sporting pavilion at Kambalda and had a three year joint venture involvement with the Royal Flying Doctor Service and Karara Mining Limited in co-sponsoring the annual cost of delivering mobile dental services to remote areas in the Mid-West region of WA.

40TH YEAR AHEAD

As we head into our 40th year, Rapid is one of, if not the largest, privately owned crushing and screening contractor in Australia. We're looking forward to 2018 that represents our fourth decade of establishment.

Hopefully by then, we'll have worked out the tonnage to have passed through our machinery.



A 3 year joint sponsorship project delivering mobile dental services to the Mid-West region of WA.

TWO TEAM MEMBERS REACH A MILESTONE

Rapid Crushing recently marked the occasion of two key members of the team reaching 10 years of service.

The members are Draftsman, Dinesh Koteeswaran (left) and Fleet Manager, Colin Osborne (right) pictured with Rapid Crushing's Managing Director, Neil Irvine.

Neil presented each with a gold watch during a celebratory lunch to mark the occasion.



Neil Irvine (centre) MD of Rapid Crushing pictured congratulating Dinesh Koteeswaran (left) Draftsman and Colin Osborne (right) Mobile Fleet Manager on their 10 years of service lunch in Rapid's Maddington workshop and presenting them with a gold watch each.

STREAM OF TSF TENDER PACKAGES A GOOD SIGN THAT THE RESOURCE INDUSTRY IS INTO AN UPBEAT PHASE

An overwhelming number of tender packages being received by Rapid Dam Contractors during the last 12 months is a good indication that the Resource Industry is into an upbeat phase.

The tender packages resulted in Rapid Dams constructing a series of major Tailings Storage Facilities, among them three large wet upstream Tailing Storage Facilities, a large tails harvesting project and an exploration project across various salt lake locations.

The projects in the Eastern and North Eastern Goldfields and the Murchison have in some cases been substantial. The three TSF projects saw the team safely move approximately 385,000 cubic metres of material.

Needless to say there were various challenges along the way as is invariably the case with this type of work, however, all clients gave positive feedback stating their projects were executed in a highly professional manner.

ACTION NEEDED QUICKLY

One project required recovering 140,000 cubic metres of tailings over a three month period as their underground operation was running short of back-fill paste and furthermore, the rate of rise in the TSF was rapidly increasing to the point that action was needed soon rather than later.

Rapid Dams assembled a small team with specialised machinery – mobilised within a week of the client's phone call request. A methodology statement was put together and within an hour, tailings were being harvested.

The project went well as the underground mining operation was able to continue and the Processing Facility maintained 'steady state' while tailings were being deposited into the TSF.



Rock Armouring on the Decant Access

EXPLORATION

Among the activities undertaken by Rapid Dams was a review of a new client's operation where they were undertaking exploration works on one of their leases. The exploration on a Salt Lake involved extracting brine with the aim of producing Sulphate of Potash (a premium fertiliser).

After the site visit and much consideration given by the Lead Team, a proposal was given to the client which was agreed upon.

Modifications were made to plant so that it could withstand the Salt Lake conditions, support equipment along with a small team of personnel were pulled together and mobilised to site.

After several weeks of exploration the client had Rapid Dams construct trial ponds with different designs so testing and monitoring could be carried out with the purpose of looking for the most efficient way of tackling the next stage of the operation. There were some challenges with getting the material to optimum construction levels, however, it was achieved in the end.

ABSOLUTE 'NEWBIE'

Not that long ago Rapid Dam Contractors was an absolute 'newbie' though it has to be said it is led by a highly experienced team of: Martin Fowler, Mark Bowman and Mark Tyler three of the most experienced people in this field.

Rapid Dam Contracting is now known by many in the resource industry including the Geotechnical Engineering companies. They're putting Rapid Dams at the forefront in Invitations to tender on projects with the result that we could have a second permanent crew for either TSF projects or other civil type projects within the next 12 months: Exciting times!



A completed embankment ready for use

New site crane has our team in raptures

There's no doubt the world of truck cranes has come a long way.

Rapid has recently purchased a new 60 tonne, Tadano GT-600EL.

The crane will be used for the erection of modular and fixed plant and the replacement of wear media during production.

We have to say the difference between the

new cranes and those of a few years ago is staggering.

The unit offers vastly better cabin comfort, automatic transmission, a lifting height of 43.4ms (boom) and 57.3ms (jib).

Crane control is significantly better and the telematics used for monitoring crane activity to view work history from the head office



is fantastic. With all this comfort and ease of use – everyone suddenly wants to be a crane operator.

"Doing it Right"

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