EXPLOSIVES RESEARCH TESTING AND DISPOSAL

A COLLARBORATIVE APPROACH BETWEEN EXTECH AND MINING3

INTRODUCTION

In recent years, as a general statement there has been a perceptible downturn in mining and quarrying activities across Australia. Although some sectors have continued output it has done so by cutting costs and jobs.

The explosives industry, our industry has not been left unaffected by this and like other industries companies have streamlined their activities and their work force and accepted lower margins to compete in the market.

Some company’s and organisations like EXTECH and Mining3 by collaborating with each other have looked at more innovation and novel ideas through research and testing to try and create new opportunities for ourselves and for the benefit of the industry as a whole.

RESEARCH and TESTING

Research and testing are integral and important activities in any company irrespective of the industry and in low periods becomes even more essential to a company's viability.

Research is needed for, but not limited to:

- improving the effectiveness of the current range of products
- introducing new or better products into the market
- investigating more efficient and effective manufacturing materials
- development of products with non-reliance on AN or reducing the content (substitution)
- the reduction or elimination of the potential of NOX
- examining and adopting better or new technology in product manufacture and delivery systems
- promotion of innovation and novel ideas
- improving on history – what has been achieved before
- develop a non-DG product until loaded into the blast hole

RESEARCH and TESTING

There are other considerations in relation to the actual testing of explosives:

- To demonstrate that the products perform as designed and required under the manufacturers specifications.
- The regulatory authorities may demand that tests (UN Test Series) are conducted periodically to ensure that products complies with legislative needs.
- Such activity could be introduced into the ongoing training regime for shotfirers to increase their skill base.

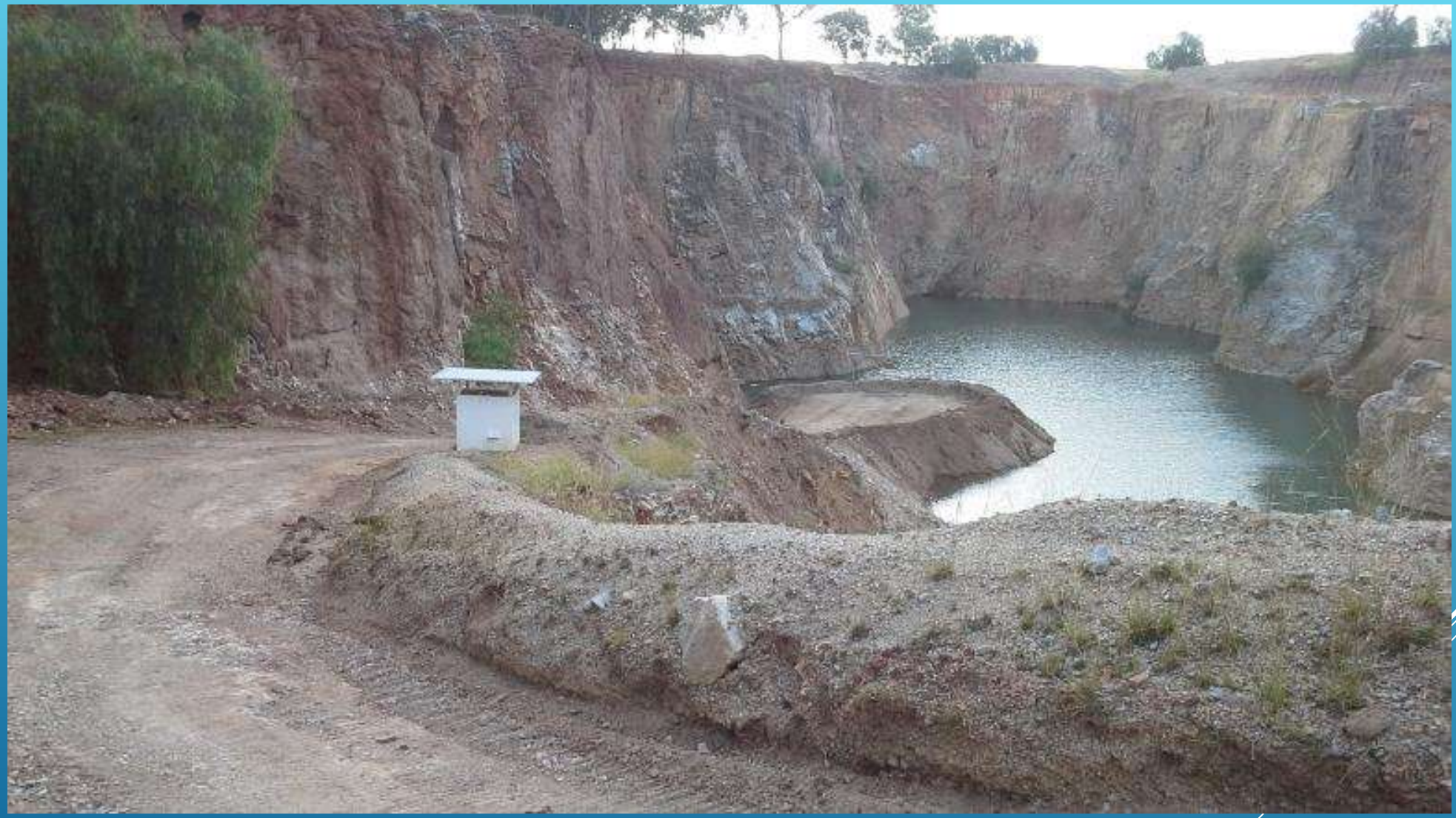
RESEARCH and TESTING

About 2 years ago EXTECH was approached to assist and facilitate the testing of explosives currently being researched and sponsored through Mining3 (formerly CRC Mining).

As a result of this a “bush” test site was established and has been used to facilitate the testing of research and “current in use” explosives.

The site itself has been continually improved upon adding facilities, even a “porta loo” over this short period of time as funds became available. The activities on site have included:

- the blending and sampling of research explosives and “in use” products
- test firing of explosives under prescribed conditions
- high speed photography,
- VoD monitoring
- EXTECH has also conducted the testing of products on behalf of clients

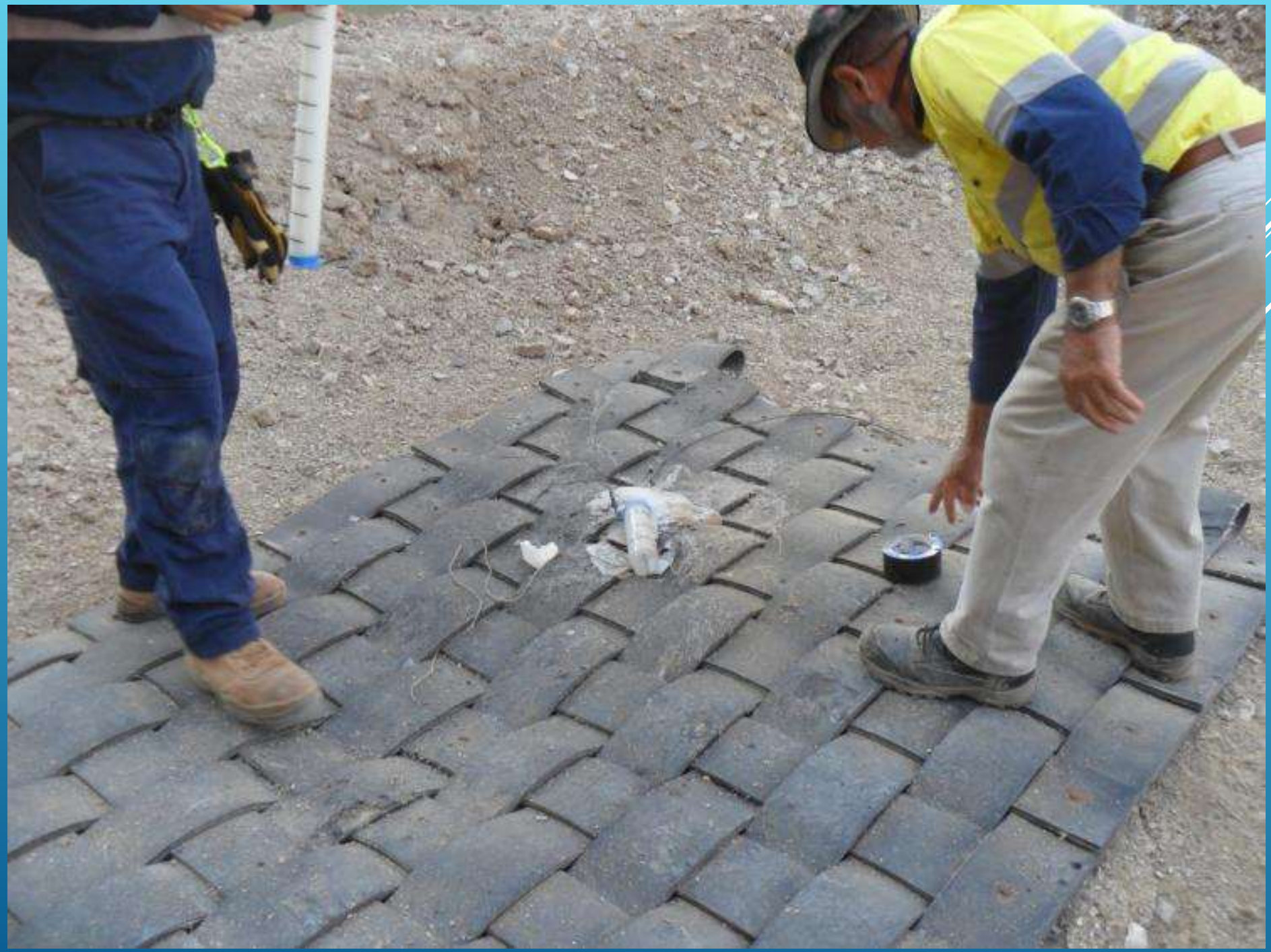


The test site firing area, Gore Qld

RESEARCH AND TESTING

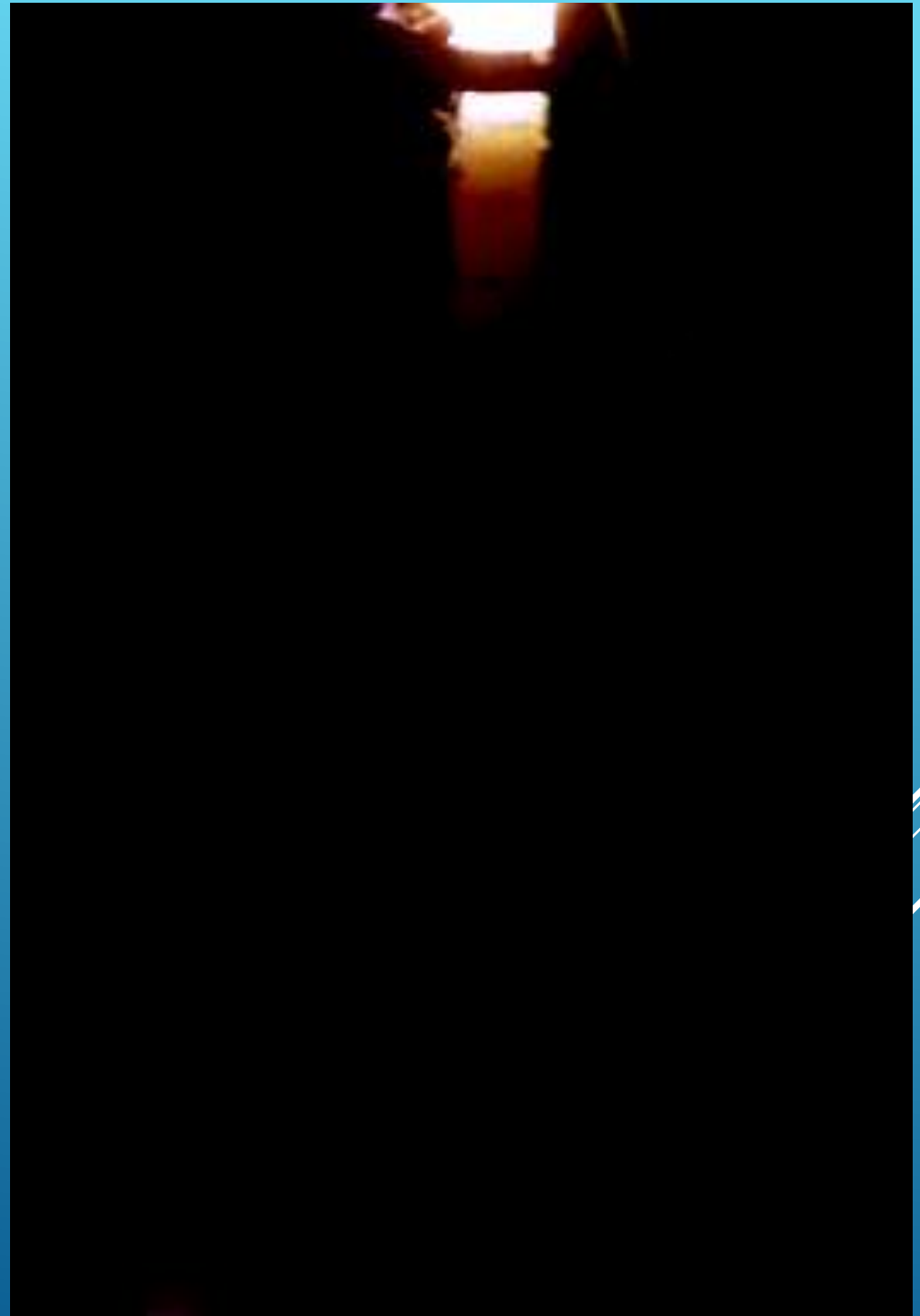
EXTECH's role in collaboration with Mining3 cannot be understated not only has the company assisted in relation to providing facilities but has been active in the manufacture of the products under research and in designing delivery systems.

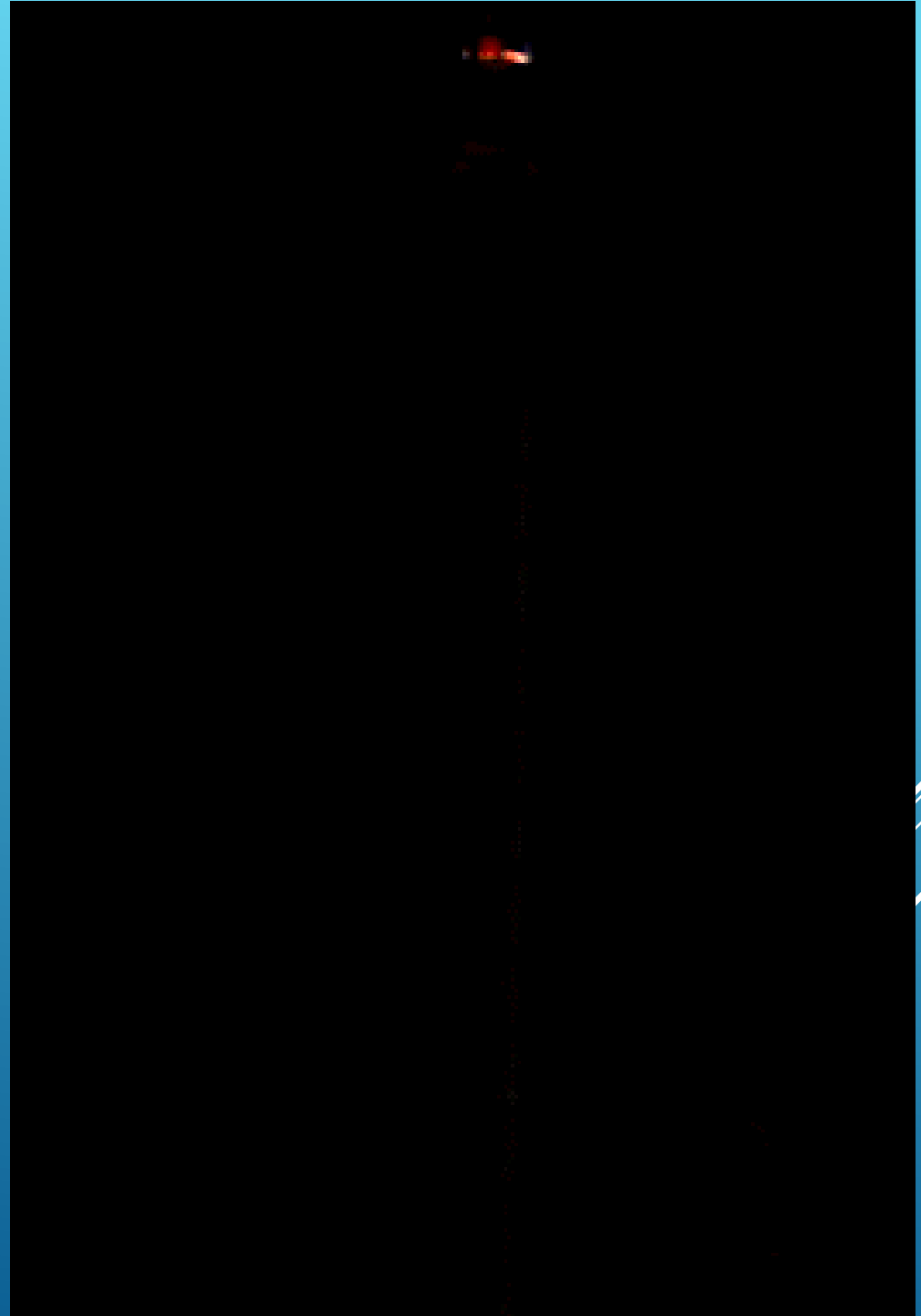
At this point in the presentation and to provide some insight into what we are doing and what has been achieved to date and where this may be going I will hand over to Miguel Araos from Mining 3.




WARNING
EXPLOSIVES TESTING
IN PROGRESS
DO NOT PROCEED
BEYOND THIS POINT


0.80





DISPOSAL OF EXPLOSIVES

The explosives industry creates its own waste issues and none the least are the problems relating to explosives, accessories and materials that due to a number of reasons ultimately need to be disposed of.

Although likely seen as still being an asset they are maintained at a cost in time (audit and accountability) and as a financial burden (storage, transport and authorisation) as generally they cannot be sold or used for production.

When the decision has been made to dispose of the products most of the items for disposal located here in Queensland have been transported for disposal inter-state resulting in huge transport costs and increased risk.

DISPOSAL OF EXPLOSIVES

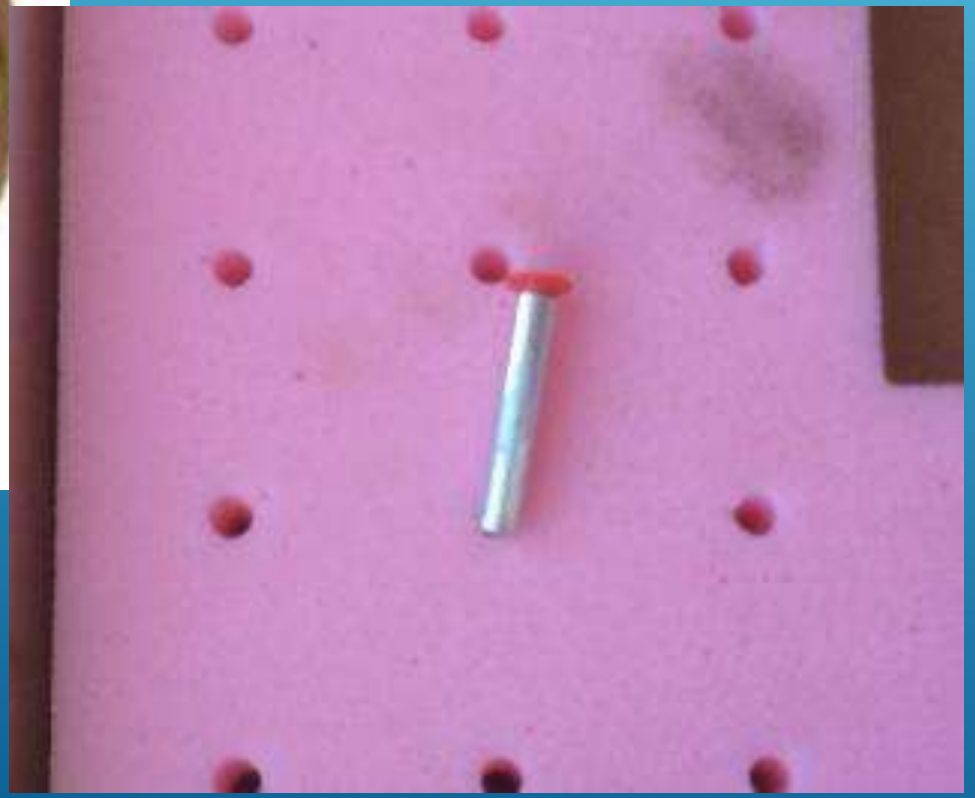
JMA Blasting established a unique site for the disposal of explosives here in Queensland, west of Dalby but due to the exploration and advent of coal seam gas industry the property was sold and the opportunity was lost.

EXTECH sought a partnership with JMA but that was cut short therefore the company sourced a site which can currently be utilised for this purpose to try and keep the activity here in Queensland on a long term basis.

DISPOSAL OF EXPLOSIVES

EXTECH has the capacity to provide a service for the disposal of explosives in bulk. This is conducted in an area close to the test site at Gore and to date the following natures have been disposed of on behalf of a number of clients:

- Detonators
- Packaged Explosives
- Jet perforators
- Detonating Cord
- Signal Tube and Lead-in-Line (through environmentally safe waste management sources)




2014/05/01


2014/05/01


2014/05/01

CONCLUSION

The collaboration between EXTECH and Mining3 has produced some interesting and viable results in relation to developing explosives without the reliance upon AN. The ultimate goal being able to produce a product that is a non-DG until is actually in the blast hole. The benefits of this from both the safety and security (transport and storage) aspects are obvious as are the financial benefits.

The other up side was the establishment and continual improvement of the test site and being able to promote through testing the products being developed. This also prompted EXTECH to run a parallel course and conduct explosives disposal as the need arose and to keep such activities in Queensland, and hopefully as the client base increases provide the service long term.

- *Any Questions??*