# METALS EXPLORATION LIMITED AND NORTH KALGURLI MINES LIMITED

An Evening Meeting Address By

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Managing Director, Metal Exploration Limited and Chairman, North Kalgurli Mines Limited to The Securities Institute of Australia, New South Wales Division, Sydney, May 3, 1983.

Metals Exploration owns the Nepean nickel mine in WA where mining has been suspended, holds a 50 per cent joint venture interest in the Greenvale nickel mine in North Queensland through a wholly owned subsidiary and controls 31 per cent of the capital of Kalgoorlie gold miner North Kalgurli Mines Limited which is currently gearing up its production following the gold price recovery over the last year. Metals Exploration manages North Kalgurli. Other interests include an 85 per cent share in the Mt. Bischoff tin project in Tasmania, 51 per cent of the Forrestania nickel project in WA and 100 per cent of the Sandy Flat/Dinner Creek tin mine in Queensland.

## METALS EXPLORATION LIMITED

Metals Exploration Limited's fortunes in the next 5 years will largely depend on the markets for nickel, tin and gold and the company's ability to economically produce these metals from existing mines and its undeveloped reserves. The company's fortune in the longer run will depend on our skills as explorers and developers of new projects.

### Nickel

World consumption has fallen each year for three years causing chaos in an industry in which productive capacity was doubled in the 1970's largely in response to changing markets and Canadian taxation and environmental policy. The price of nickel has fallen from a high of US$3.40 per pound in mid 1980 to a low of about US$1.60 per pound a month or two ago.

Nickel consumption is related to capital spending (factories, ships, aeroplanes) and this will pick up with economic recovery. Nickel prices must improve but because of surplus productive capacity it should be expected that a nickel price recovery to a level where the industry is profitable will lag behind general economic recovery.

Prices in the order of US$3.00 per pound could be expected in 1984.

### Tin

Although world consumption has fallen somewhat in recent years the price has been stabilised by the workings of the International Tin Agreement. The present price of around Malay $30 per kilogram is down from the the mid 1980 high of Malay $37 per kilogram.

While most mines could operate profitably at todays price sales quotas imposed under the same ITA are in force and Australian mines are cut to about 64 per cent of last year's sales levels.

Tin consumption is related to consumer spending (tin cans) and this will pick up with economic recovery. Quotas can be expected to ease and prices increase in parallel with economic growth.

No significant change in quotas should be expected this year, however, progressive removal of quotas in 1984 would seem likely. Pricing in the order of Malay $33 per kilogram could be expected in 1984.

In most commodities the long term price is related to the cost of production. Improved productivity generally leads to a reduction in price in real terms. This is certainly the case in nickel and tin and producers must work very hard to remain competitive.

### Gold

In the case of gold, production is small relative to the world inventory of gold. Gold's chief use is as an anonymous and portable method of storing wealth because the price of gold appears to be less related to the cost of production and more related to world inflation. Over the long term the metal maintains its value in real terms and is one of the few commodities to do so.

In the shorter term large price fluctuations are caused by short term investments and speculation on a scale which is very large compared to the physical gold market. Money flows in and out of the market as investors expectations of inflation and interest rates change. Some political crises accentuate the price swings.

The gold market is the most anticipatory of all markets and has been in a recovery phase since mid 1982. It will continue to strengthen as people anticipate economic recovery and the upturn in the rate of change of inflation that inevitably follows when unions and governments think they can get away with taking a bigger share of the economic cake.

Gold prices in 1984 are expected to be higher than 1983.

## Exchange Rates

All of Metals Exploration's revenues are denominated in foreign currency and most of the company's costs are in Australian dollars.

Australia's exchange rate has weakened from A$1.00 = US$2.40 in 1945 to A$1.00 = US$0.86 in 1983. This is a drop of more than 60 per cent in about 40 years.

This depreciation will continue over the long run unless we Australians improve our bad work habits. Over the next few years, however, an increase in commodity prices and an increase in the volume of rural and mining exports should more than offset the long term depreciation.

In summary I think we can look forward to an improved level of metal prices and not much exchange rate movement over the next few years.

How then will Metals Exploration perform in this environment?

## NICKEL

Every nickel miner of significance is losing money on its operations. Metals Exploration is the only Australian nickel producer able to cut production and stem losses during the current price down turn. Greenvale is operating at about 50 per cent of 1982 levels and Nepean is temporarily closed.

### Greenvale

This project has generated an operating surplus every year since start up except this year to date. The operating surplus has been insufficient to service debt.

The project is financed on a non recourse basis. Since start up lenders have not been called on to supply new funds and have supported continued operations. The project has generated some $75 million since start up of which lenders have received about $30 million and the remaining $45 million has been spent on converting the energy base from oil to mainly coal. Since the conversion was completed in mid 1982 Greenvale has become one of the worlds lowest cost laterite operations.

Reserves are sufficient for nearly 10 years at full production and the plant is excellently located for processing foreign ores.

Full production will be resumed when prices recover.

### WA Sulphides

Nickel occurs in sulphides in these styles:

— small high grade, e.g. Nepean, Kambalda and Forrestania (the latter two being a cluster of small high grade deposits)

— medium size, medium grade, e.g. Agnew

— large low grade, e.g. Mt. Keith

Small high grade deposits permit staged development in manageable steps on a scale that make sense from a capital and market point of view. WMC's development of Kambalda took this form.

### Nepean

This is a small high grade deposit and has been mined by the company for 14 years. It has been profitable for everyone for these years, particularly in recent years when the mine has been partly mechanised and heavy media preconcentration installed. The mine is fully developed and ore reserves now stand at 2—3 years. It would be irresponsible to work out these reserves at current prices. Production was cut in February of this year and will resume when nickel prices have recovered.

### Forrestania

The company owns 51 per cent of Forrestania where several small high grade deposits have been discovered. Reserves currently stand at about 1/3 the level of Kambalda. The property is largely un-explored and has significant additional potential.

Development can be staged and our current planning envisages a flow on of operations from Nepean.

Reserves are sufficient to support a long life operation.

## TIN

### Alluvial

The company has been mining alluvial tin for nearly 20 years. Reserves in North Queensland will be worked out this year. Additional reserves have been located at Gibsonvale in N.S.W. and the company is planning to transfer operations to Gibsonvale in the next year. Earnings from alluvial tin while modest provide a useful and steady contribution.

### Mt. Bischoff

Drilling by the company in recent years has outlined an important tin reserve at Mt. Bischoff. The scale of operation which can be based on this reserve is relatively small and the company recently bought back an interest it had earlier farmed out and now holds 85 per cent of this project.

## GOLD

The company owns 31 per cent of and manages *North Kalgurli Mines Limited.* That company in turn holds 186 hectares of leases at Kalgoorlie which have been mined almost continually since 1895.

The gold occurs in many separate veins or lodes each of which are a few metres wide and several hundred metres long and deep. While veins can be located by drilling they are so variable in size and grade that it is not possible to calculate reserves from drill data. Each lode must be accessed by underground development. Once it is opened for inspection and detailed sampling along levels and rises it is possible to estimate reliably the reserve. Accordingly, until all lodes that have been located by drilling are developed by levels and rises the so called ore reserve is a function of the amount of development that has been completed.

It is really a reserve available for mining and is not an indication of the mine life that can be expected.

Underground development is costly and it is usual on a mine like North Kalgurli to have about 4 years mine reserve outlined by development. In good times it makes sense to accelerate and build reserves to give one the flexibility in poor times to mine higher grades or cut costs and run down reserves.

North Kalgurli in its 90 year history has been developed to a depth of 600m and produced about 10 million tonnes of ore at + 7g gold/tonne. Deep drilling at North Kalgurli indicates extensions and the same vein system has been worked by Lake View and Great Boulder to the south to some 1,200m.

North Kalgurli suffered poor times in the late 60's and ran its developed ore down from 2 million to 700,000 tonnes. The better grades of developed ore were also mined out. Therefore, until new development provides access to new high grade lodes the tonnes and grade that can be extracted from underground will be limited.

In March, 1982 production from underground was about 500 tonnes per day of 4 to 5 grams gold per tonne ore. This compares with 1,000 tonnes per day at 7 grams per tonne during the 1960's when the mine had some 2 million tonnes of ore developed.

The mill and infrastructure remain intact from the 1960's and accordingly have also 1,000 tonnes per day capacity. With the mine limited to about half that rate until development of new reserves are possible there was a waste of capacity giving poor economics at a time when gold prices were weakening. The company was in serious trouble when Metals Exploration completed its partial take-over in March, 1982.

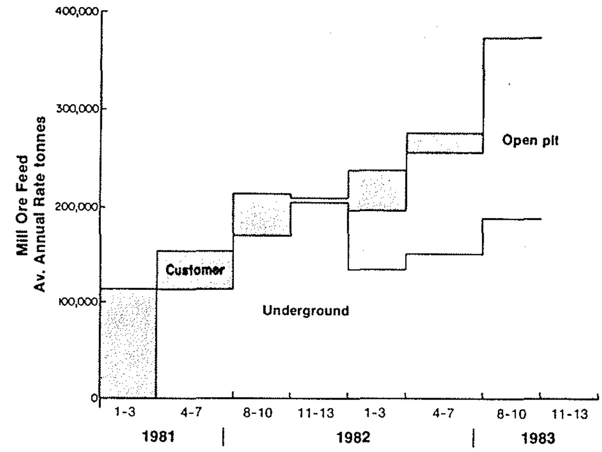
It was very plain to the new managers installed by Metals Exploration that a supply of readily accessible ore was required to fill the mill while new underground development could be carried out.

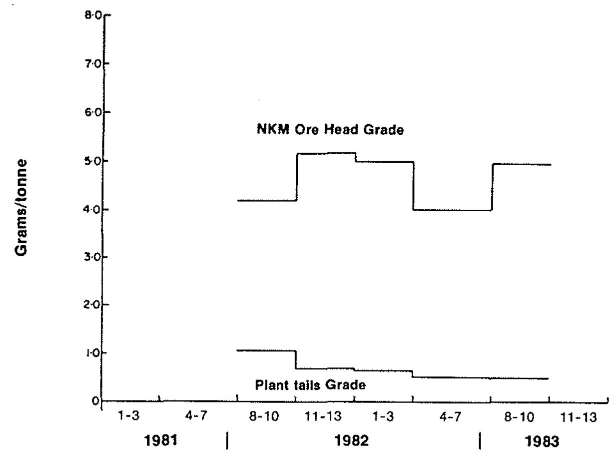
A review of geology indicated potential for open pit ore and surface drilling was initiated. By September, 1982 some 60,000 tonnes of 5 1/2 grams gold per tonne had been outlined in the Kemlo prospect and a recovery plan based on boosting production by filling the mill to capacity with open pit ore was made. Sufficient capital was raised to initiate this plan. The following graphs are based on North Kalgurli's quarterly reports and illustrate the success of the plan. Open pit ore has permitted the mill throughput to be increased to more than 1,000 tonnes per day and gold production to be increased to a rate of some 45,000 ounces per year.

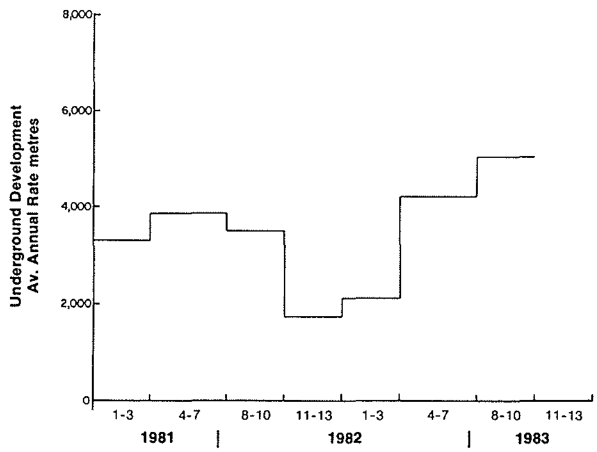
Open pit ore and an increase in the gold price has enabled the company not only to substantially boost development in the third quarter but also to turn in its first profit from gold mining in more than 10 years.

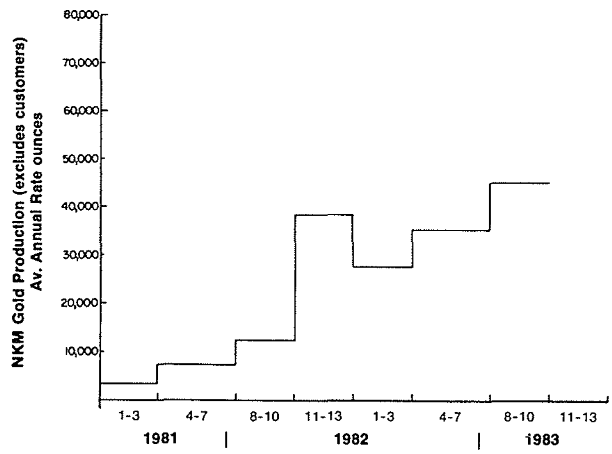
Additional drilling on some 13 separate surface prospects has located extra open pit ore. It is now clear that sufficient open pit ore will be available to maintain current milling rates for at least a further 18 months by which time underground capacity should be at least 1,000 tonnes per day of 6 to 7 grams gold per tonne supporting gold production of more than 60,000 ounces of gold per year.

## NORTH KALGURLI MINES LIMITED




In parallel to this a miner training school has been started, equipment and methods are being modernised and a major assessment of the overall ore potential of the leases is being carried out to determine whether production can be expanded beyond our 18 months target.

The cost structure of the mines operated by Metals Exploration can be assessed from annual and quarterly reports. Good progress in cutting unit costs has been made at each mine in recent years, in particular through:

— coal conversion at Greenvale,

— mechanisation and pre-concentration at Nepean,

— open pits and accelerated development at North Kalgurli.

Our structure provides investors with two opportunities:

*North Kalgurli Mines Ltd.* is a gold company and under present Board philosophy will remain a gold company. The company's profitability is very sensitive to the price of gold and the ratio of annual gold sales to market capitalisation is one of the highest of all listed companies. Good progress is being made in reduction of costs and expansion of production.

*Metals Exploration Ltd.* has a unique commodity spread through its interests in nickel, tin and gold. The company will continue to improve its mines and develop new ones and we have a strong commitment to explore for deposits upon which to base future growth.