

LICENCEE & OPERATOR
NORTHERN CEMENT PTY. LTD
FINAL REPORT
for
EXPLORATION LICENCE No [REDACTED]

N.T
by
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<u>MAP No</u>	<u>TITLE</u>	<u>SCALE</u>
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OPEN FILE

SUMMARY

Exploration, by Northern Cement, for a commercially viable gypsum deposit in northern Australia commenced in May 1985, when ground reconnaissance was carried out by Nixon & Associates, covering the south eastern corner of the Northern Territory.

The reconnaissance work indicated that, a potentially economic gypsum deposit occurred to the south west of Alexandria Station, along the southern bank of the Playford River.

Exploratory drilling followed surface sampling. This drilling totalled one hundred and thirty three (133) holes drilled exclusively for testing for gypsum in the tenement area. The holes varied in depth from a few centimetres to over six metres.

The objectives of the drilling included obtaining samples of gypsum for analysis and determining the thickness and extent of the deposit. The purpose of the drilling was to calculate the grade and volume of the occurrence with a view to exploiting it.

The work carried out indicated a resource in excess of one million tonnes of commercial grade gypsum. This resource was sufficient to warrant pegging mining claims and surrendering the exploration licence.

Because of aboriginal interests over portion of the deposit, the volume of gypsum available for mining has been reduced by a substantial volume.

The main deposit occurs near the Six Mile Waterhole and most of the exploratory drilling was located in this area.

A second, smaller occurrence of gypsum is exposed along the southern bank at the Eighteen Mile Waterhole. This deposit is of no commercial value to the company.

INTRODUCTION

In 1985 a ground reconnaissance for gypsum in the south eastern region of the Northern Territory was started. The search focussed on an area south west of Alexandria Station, particularly along the southern bank of the Playford River where gypsum was found exposed in a section of the southern bank of the Playford River, estimated to be about three metres thick. The presence of coarse and massive gypsum was also found at the surface and beneath a relatively thin veneer of black clayey soil extending for many hundreds of metres to the

south, east and west of the Six Mile waterhole.

A smaller deposit of gypsum was found along the southern bank of the Eighteen Mile waterhole. This occurrence was much smaller, less massive and less prospective than the deposit at the Six Mile waterhole.

Early in 1986 Northern Cement P/L., applied for an Exploration Licence covering the areas of interest along the Playford River.

In July 1986 application was made for four(4) mineral claims covering the then known gypsum deposit at the Six Mile waterhole.

In September 1986 reconnaissance drilling programmes were initiated to test areas considered prospective for high grade gypsum. The drill used for the initial exploratory work was a hand held petrol driven Stihl auger operated by two men and capable of drilling to two metres. Depths up to two metres were reached in only a few holes. A second programme using this plant for follow up exploratory work was operated by K.Pattison of Northern Cement. Reports on these drilling programmes together with drill logs and analytical data sheets were submitted in periodic reports to the Northern Territory Department of Mines and Energy.

Samples were collected every metre and sent to Adelaide Brighton's laboratory at Birkenhead in South Australia for chemical analysis.

Results from the auger drilling were encouraging but the main objectives were not achieved and a further drilling programme was constructed to outline the limits of the gypsum in the mineral claims.

In August 1987 a more extensive drilling programme was carried out by V & R Carusi Pty. Ltd., using a Proline 4 Tonne Class 2 Slewing Crane with a Pendulum Borer.

Altogether eighty two(82) holes were drilled into the gypsum occurrence at the Six Mile waterhole. This exploratory work defined some of the limits of the deposit but it was evident that the gypsum extended beyond the boundaries of the claims.

Eight holes were drilled into the gypsum occurrence at the Eighteen Hole waterhole. This drilling intersected only gypseous clay of no commercial interest.

In April 1988 further drilling was undertaken by Frisk of Darwin using a Hydropower drill. This drilling effectively outlined the economic limits of the gypsum.

GEOLOGY

The regional geology is outlined on the Rankin 1:250,000 sheet of the Geological Atlas series. The geology has been described in some detail in previous reports and only a brief description will be outlined in this report.

Outcrop is scarce in the tenement, most of the area is covered by a mantle of black soil or sand with floaters of dolomite, limestone, sandstone and an extensive scree consisting of angular chert and pisolitic limonite gravel.

Sediments range in age from Upper Proterozoic to Cainozoic and includes Middle Cambrian Rankin Limestone. The Cainozoic includes the Brunette Limestone which can be found as scattered boulders in the river valleys and low lying swamp areas as fine grained to coarse grained brown to white coloured limestone and dolomite. The most widespread material is a dark grey to black pedocalcic soil which is weakly leached and contains carbonate and gypsum horizons.

CONCLUSIONS

Exploration of EL 4968 has located a gypsum deposit near Alexandria Station of suitable size and grade to warrant exploitation.

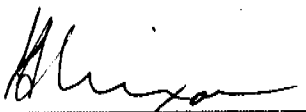
Test drilling has outlined a gypsum resource which is estimated to exceed one million tonnes and sufficient to meet Northern Cement's requirements for many years into the future.

Mining claims pegged over the deposit covers all the commercially viable gypsum in the licence area.

There is no need to continue holding the Exploration Licence.

RECOMMENDATIONS

Surrender the Exploration Licence.



L.G. Nixon.
30/05/1990

AREA TO BE FORFEITED
IN MAY 1990

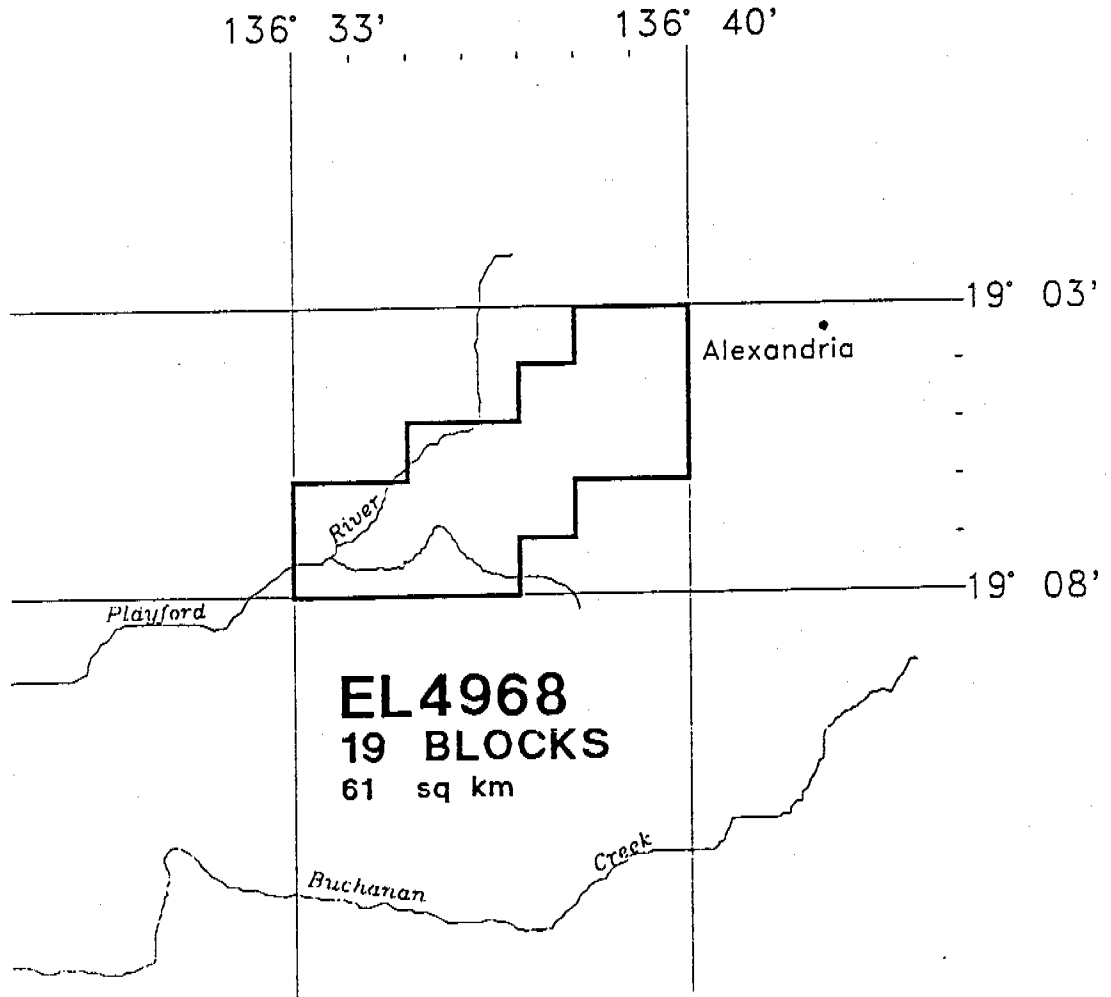


FIG. 1