MINING LEASE 1744H-1751H "Harts Range" N.T.

ANNUAL REPORT

FOR

PERIOD ENDING 12 JULY, 1987

BY

D A WALKER

JUNE, 1987

NORTHERN TERRITORY GEOLOGICAL SURVEY
CR 87/185
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1. SUMMARY

Mistral Mines N.L. holds several exploration and mining leases in the Harts Range area of the Northern Territory. The tenements have been explored for vermiculite, ruby and garnet mineralization.

Work undertaken during the reporting period includes reassessment of the economic potential of the licence areas for vermiculite, ruby and garnet; and regional assessment for gold.
2. INTRODUCTION

Mistral Mines N.L. currently holds several mining and exploration tenements over the Harts Ranges in the Northern Territory. The tenements have been explored for vermiculite, garnets and rubies in the past and may be prospective for other minerals.

3. TENEMENT STATUS

Mistral Mines N.L. hold the following tenements in the Harts Range area.

<table>
<thead>
<tr>
<th>Licence No.</th>
<th>Area</th>
<th>Date Granted</th>
<th>Expiry Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL 4862</td>
<td>319 sq. km.</td>
<td>28/02/86</td>
<td>28/02/88</td>
</tr>
<tr>
<td>EL 4754</td>
<td>26 sq. km.</td>
<td>18/07/85</td>
<td>18/07/91</td>
</tr>
<tr>
<td>MC 58</td>
<td>20 ha.</td>
<td>03/04/86</td>
<td>03/04/91</td>
</tr>
<tr>
<td>MC 59</td>
<td>20 ha.</td>
<td>03/04/86</td>
<td>03/04/91</td>
</tr>
<tr>
<td>MC 62</td>
<td>20 ha.</td>
<td>11/08/86</td>
<td>11/08/91</td>
</tr>
<tr>
<td>ML 1744-1751</td>
<td>12.8 ha.</td>
<td>13/06/79</td>
<td>31/12/99</td>
</tr>
</tbody>
</table>

4. LOCATION AND ACCESS

The leases are located in the vicinity of the Springs Creek Bore, 140km north east of Alice Springs in the Northern Territory.

Access to the licence areas is by sealed road (Stuart Highway) from Alice Springs, then along the Plenty Highway for 160km to Springs Bore. The last 25km is along station and company tracks.
5. GEOLOGY & MINERALIZATION

Within the mining leases, ruby mineralization occurs within an aluminous gneiss unit towards the base of the Riddock amphibolite. Vermiculite mineralization occurs within discontinuous ultramafic pods in the sequence. Garnet mineralization is widespread in this amphibolite facies terrain.

The mineralization occurs within the highly metamorphosed Harts Range group of the Arunta Block.

6. PREVIOUS WORK

Previous exploration over the Harts Range tenement areas includes:

- mapping
- stream sediment sampling
- trial mining of ruby and vermiculite
- market analysis of ruby, vermiculite and garnet products

This work has led to the identification of resources of ruby and vermiculite and potential for alluvial garnet deposits. All results are included in previous statutory reports.

7. WORK UNDERTAKEN DURING THE PERIOD ENDING 17 JULY 1987

During the reporting period, work undertaken includes an economic reassessment of the mining lease areas for industrial minerals, and a reconnaissance assessment of the area for gold.

An in-house revue of current economics related to ruby and vermiculite production was carried out, with a view to providing an updated feasibility for the various commodities. This review was based on resources used in previous company reviews, with present day commodity prices, capital and working costs.

Ruby

The rubies occur in both hard and weathered rock, and in small alluvial areas. The crystals are fractured, and good recovered fragments can only be obtained from weathered material. Alluvial rubies are fragmented and also fractured, and of such a small resource to not constitute a mineable reserve. On the basis of an average cost of $15 a carat for the initial mined parcels from weathered ground, the prospect does not provide a sufficient resource to attract the necessary risk capital. There is also some suggestion that significant extraction problems will be encountered in fresh rock below the depth of weathering.
Vermiculite

A resource of 10,200 tonnes of vermiculite ore, grading at 30% vermiculite greater than 1mm grain size is established to 4m depth in the licence area. Results of chemical and physical analysis of the vermiculite by Neuchatel Contracting (Crimeen and Mellor 1987) showed the mineral to be of inferior quality compared with internationally and locally available material. Coupled with the remote site of the deposit and associated transport costs, the material is clearly uneconomic at a present value of $170/tonne.

Garnet

The garnets associated with the ruby and vermiculite deposits in the Hartz Range licence areas are unsuitable for abrasive application (Crimeen and Mellor 1987) and clearly uneconomic to transport for any other uses.

Gold Exploration

Because of the poor economic results from preliminary feasibility studies into ruby, vermiculite and garnet mineralization in the area, the licence areas have been re-examined for vein gold potential.

Examination of early reports indicated that there are no historical gold mines in the licence area. Further reconnaissance evaluation by a company associate indicated negligible potential for zones of quartz veining. This involved a field visit to the licence area. No samples were taken or submitted for analysis.

8. FUTURE EXPLORATION PROGRAM

A regional reconnaissance exploration program for quartz vein mineralization and or attendant base metal mineralization will be extended over the Harts Range tenement group.

Anticipated expenditure over the next 12 months is $2,000 for all mining leases.
9. **EXPENDITURE**

Expenditure for the year to 12 July 1987 amounts to $1,430.00 made up as follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geological Contractors</td>
<td>$620.00</td>
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<tr>
<td>Consultants</td>
<td>-</td>
</tr>
<tr>
<td>Drilling</td>
<td>-</td>
</tr>
<tr>
<td>Assays</td>
<td>-</td>
</tr>
<tr>
<td>Accommodation &amp; Travel</td>
<td>-</td>
</tr>
<tr>
<td>Vehicles</td>
<td>-</td>
</tr>
<tr>
<td>Rents &amp; Property</td>
<td>640.00</td>
</tr>
<tr>
<td>Technical Requirements</td>
<td>40.00</td>
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<tr>
<td>Overheads</td>
<td>130.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$1,430.00</strong></td>
</tr>
</tbody>
</table>


Signed: D A Walker  
MISTRAL MINES N.L.
10. BIBLIOGRAPHY

Crimeen JD & Mellor D: Exploration Licence 4863
Annual Report for Period ending
28 February 1987
Mistral Mines N.L. report
February 1987
COMPANY: Mistral Mines

PROSPECT: Harts Range

TENEMENT(S): ML 1744 - 1751

AUTHOR: David Walker

DATE: (MONTH/YEAR) June 1987

TENEMENT YEAR ENDING: (DAY/MONTH/YEAR) 12 July 1987

1:250,000 SHEET(S): SF 35-15 Illogwa Creek

1:25,000 SHEET(S): 

NOTES: 

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