CONTENTS

Rum Jungle Lead Prospect – Blocks 2102/2104 Progress Report: 1

1. Before 1959
2. 1959-60
3. Future Programme

List of Plans

D8  -  Blocks 2102/2104 Section looking north through N20100 1

D10  -  Blocks 2102/2104 Surface Plan of Lead Prospect 2
AUSTRALIAN MINING & SMELTING CO. LIMITED

RUM JUNGLE, NORTHERN TERRITORY

RUM JUNGLE LEAD PROSPECT - BLOCKS 2102/2104
PROGRESS REPORT

1. **Before 1959**

An area of radiometric anomalies, known as Area 55, was discovered in 1953 on Block 2104. In the course of costeanning, cerussite was discovered in a group of costeans at the north eastern end of the line of radiometric anomalies. Although samples were taken from these costeans in 1954, only a few were assayed for lead. Assays ranged from Trace %Pb to 4.8% Pb.

Assays of lead are recorded from three churn drillholes, drilled in 1955. CD165 (N20090 E17020) assayed 95 feet x 4.9% Pb (including a 5 foot section which was not assayed and is presumed barren). One assay only is recorded from CD162 (N20130 E16720) being 5 feet x 0.7% Pb. Four assays are recorded from CD168 (N20190 E16880) as follows:

- 45 feet - 80 feet (sic) 1.2% Pb
- 130 " - 140 " 1.6% Pb
- 155 " - 160 " 1.6%
- 175 " - 180 " 1.5% Pb

I am unable now to discover why these particular sample ranges were chosen and whether all portions not assayed should be regarded as barren.

At this period, lead assays carried out in the Rum Jungle laboratory were not reliable.

In 1958 a geochemical survey carried out by the Bureau of Mineral Resources disclosed a large copper-lead anomaly surrounding these costeans in which lead had been recorded.

2. **1959-60**

Diamond drilling was carried out in 1959-60 to test below the lead bearing costeans. From the costean mapping, the mineralisation could be envisaged as occurring on the nose of a northerly pitching anticline (see Plan D10).

Two drillholes, declined at 60°, A1(N20100) and A2(N20300) were designed to intersect ore horizons on the western flank of this anticline.

DDA1 (N20095 E16506) was abandoned in AX size at 382 feet, the last 30 feet of which resembled fault breccia. The only lead intersection was 50 feet - 65 feet which assayed 0.34% Cu 1.94% Pb.
DDA2 (N20295 E16555) was completed at 659 feet in limestone. Core recovery from about 400 feet to the bottom of the hole was poor. The only lead intersection was 529 feet - 543 feet which assayed 0.39% Cu 1.94% Pb.

DDA3 (N20297 E16805), also declined at 60°, was collared on the same section as DDA2 but nearer to the surface outcrop of mineralisation. This hole was completed in limestone at 386 feet.

Mineralised sections are:

| 83 feet | 108 feet | 25 feet | 0.67% Cu | 4.4% Pb |
| 347 "  | 357 "   | 10 "   | 1.35% Cu | 0.1% Pb |

The lower intersection is in limestone at the contact.

Results from these three drillholes could not readily be correlated to indicate an orebody. Lead mineralisation in DDA1 was in slates whereas that in DDA2 and DDA3 was in mica schist; and in these two drillholes, the distance between mineralisation and limestone differed widely. It was therefore decided to collar a vertical hole alongside the churn drillhole, which showed lead mineralisation.

DDA4 (N20100 E16975) was abandoned 335 feet in micaceous siltstone. Assay results are:

<table>
<thead>
<tr>
<th>From Feet</th>
<th>To Feet</th>
<th>Feet</th>
<th>% Cu</th>
<th>% Pb</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>26</td>
<td>20</td>
<td>0.38</td>
<td>4.0</td>
</tr>
<tr>
<td>26</td>
<td>36</td>
<td>10</td>
<td>0.19</td>
<td>4.3</td>
</tr>
<tr>
<td>36</td>
<td>51</td>
<td>15</td>
<td>0.34</td>
<td>7.9</td>
</tr>
<tr>
<td>51</td>
<td>61</td>
<td>10</td>
<td>0.23</td>
<td>2.2</td>
</tr>
<tr>
<td>61</td>
<td>91</td>
<td>30</td>
<td>0.58</td>
<td>7.3</td>
</tr>
<tr>
<td>142</td>
<td>162</td>
<td>20</td>
<td>2.35</td>
<td>0.1</td>
</tr>
<tr>
<td>325</td>
<td>335</td>
<td>10</td>
<td>1.39</td>
<td>0.1</td>
</tr>
</tbody>
</table>

(Assays used are R.J. Glayes' composite results)

These results, while not easily correlated with those of CD165, 40 feet away, at least confirm a reasonable thickness of +5% Pb.

3. Future Programme

The Bureau of Mineral Resources has nearly completed a geophysical survey over the area and no firm programme will be proposed until their results have been obtained. However, costeaining should be carried out among the present costeains outlined in red on the accompanying plan and across the ends of the possible ore horizon also outlined. These new costeains will be mapped and sampled.

Future drilling will depend on what comes out of the geophysical survey and from the costeaining.