GEOLOGICAL SURVEY DEPARTMENT

Ministry of Forests, Lands and Mines

ANNUAL REPORT 1968

P.O. Box 1026,
Georgetown, Demerara,
GUYANA.

Oil Concessions
(Guyana)
GEOLOGICAL SURVEY DEPARTMENT
ANNUAL REPORT FOR 1968

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The quarry centre of Guyana is around the Bartica area. Small scale quarrying is also done in the Demerara and Corentyne Rivers, but these are only of local significance.

2. Hydro-power development at Tiboku

The Department continued to give geological advice on the appraisal of the site at Tiboku Falls on theazaruni River as a potential for hydro-power development. During the first phase of the investigations, a geologist was seconded to the Project.

The Director of Geological Surveys continued to serve as a member of the Technical Co-ordinating Committee for the Tikobu Project.

3. Hydro-meteorological Service

The Director of Geological Surveys continued to serve as Chairman of the Hydro-meteorological Advisory Board.

IV. UNITED NATIONS - GUYANA MINERAL SURVEY PHASE II

Work under this project gained momentum during the year. The following internationally recruited staff were provided by United Nations:

- Mr. Gerald Drech - Project Manager
- Dr. A.K. Banerjee - Field Geologist
- Mr. M.N. Fargher - Field Geologist
- Dr. S. Sabo - Geophysicist
- Dr. A.Z. Gideon - Geochemist
- Mr. R. Miller - Drilling Supervisor
- Mr. H. Carey - do -

At the request of the Guyana Government, Mr. M.N. Fargher was withdrawn from the Project in September.

Dr. A.Z. Gideon completed a 6 month extension of his contract and departed from Guyana in November.

Mr. H. Carey left on the expiration of his contract in December.

Field activities under this Project have been described in the Summary of Field Work.

The helicopter services provided as a sub-contract to Foothills Aviation of Calgary proved to be of great assistance in the administration of field operations.

V. MINERAL DEVELOPMENT

BAUXITE

Demerara Bauxite Company

By the end of the year the effects of major expansion projects initiated in 1966 were beginning to show in increased production of dried and calcined bauxite. There was a slight decrease in the sales of alumina for the year. Sales for the year were as follows:
<table>
<thead>
<tr>
<th></th>
<th>1967</th>
<th>1968</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dried metallurgical grade bauxite</td>
<td>945,720</td>
<td>1,020,954</td>
</tr>
<tr>
<td>Calcined bauxite</td>
<td>457,753</td>
<td>521,623</td>
</tr>
<tr>
<td>Alumina</td>
<td>282,521</td>
<td>267,293</td>
</tr>
</tbody>
</table>

Prospecting during the year was concentrated mainly in EP 445 and the Red Mud Pond. In EP 445 prospecting took the form of follow-up drilling on locations selected from geophysical surveys. A total of 89 holes totalling 26,969 feet were completed in this lease. In Red Mud Pond a total of 58 holes covering a footage of 16,622 were completed.

Four bucket wheel excavators of 150, 200, 400 and 600 litre capacities together with two 450-w draglines and three 460-w draglines, shipped a total of 15,727,100 cubic yards of overburden during the year. A total of 2,759,524 long tons of dried bauxite was produced during the year. Of this 1,029,158 long tons went into the production of dried metal grade bauxite; 538,402 long tons into various calcined grades; and the balance was converted to alumina.

Reynolds Metals

Reynolds Metals shipped a total of 905,017 long tons of dried bauxite from Ettena during the year as compared with 861,147 long tons for 1967.

MANGANESE

During the latter half of the year the North West Guyana Mining Company announced its intention to cease its mining operations at Matthews Ridge by year end. The Company commenced mining operations there in 1961. Government concluded negotiations with the Company for acquisition of the assets in October and at year end the takeover was completed.

The Company exported 128,694 long dried tons of manganese of average 37% grade for the year.
The production of gold and diamond for the year is given below. The 1967 figures are also given for comparison.

<table>
<thead>
<tr>
<th>District</th>
<th>Diamond (Metric carats)</th>
<th>Gold (ozs, troy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berbice</td>
<td>445.37</td>
<td>-</td>
</tr>
<tr>
<td>Potaro</td>
<td>11,161.72</td>
<td>11,648.51</td>
</tr>
<tr>
<td>Mazaruni</td>
<td>74,020.23</td>
<td>43,602.74</td>
</tr>
<tr>
<td>Goyuni</td>
<td>5,897.95</td>
<td>4,664.76</td>
</tr>
<tr>
<td>North West</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Rapununi</td>
<td>5,826.36</td>
<td>6,185.57</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>97,351.68</strong></td>
<td><strong>66,311.58</strong></td>
</tr>
</tbody>
</table>

The production of diamond fell by 32% when compared with the previous year. This fall in the production came almost entirely from the Mazaruni District. The reason appears to be a significant shift of activity during the year from around Arawai to the Upper Mazaruni above, Imbaimadai which resulted in a lull in mining.

Gold production increased 72% over the 1967 figures. The increase came exclusively from the Mazaruni District and appears to reflect increased recovery of gold by suction dredges engaged in diamond mining in the district. There was a significant decrease in gold production from the North West District which has been the leading gold producing district for many years.

**OIL**

The oil siege was relatively dormant during the year.

Continental Oil Company and Tenneco Guyana Inc., did no work in their 16,000 square miles prospecting lease.

During the year Guyana Shell Ltd made some modifications in the titles of their concessions. They now hold prospecting licenses over 7,900 square miles of offshore area and nine 200 square mile blocks onshore. The only field activity by Shell during the year was the shooting additional seismics in OPL 211. This was carried out by Geophysical Service Incorporated of Dallas and was completed in two weeks.

In the Takutu Basin of Southern Guyana there was no activity during the year. Octogon Petroleum and Macmillan King Free applied for exploration concession over 2,500 square miles of this basin and while Government approved of the application early in the year the Companies had not taken up their licence at year end.