Developing local skills in Sudan’s extractive industry

By

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The views expressed are those of the author and do not necessarily reflect the views of UNCTAD.
Republic of Sudan
Ministry of Minerals
Rida Mining Company

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Rida Mining, a private national company pioneer in mining and mineral extractive industry and currently operating three plants:

- **Assalam Proper Mine (Abidiya Area)**, to extract gold from auriferous deposit.
- **Chromite ore production**, Ingassena, Blue Nile State.
- **6 Gold Extractive Plants from Artisanal Tailings** within 4 states of Sudan.
- **The company employs > 2000 person** to operate these activities.
RIDA MINING CONCESSION – BLOCK 23
MINE INITIATION HISTORY

Rida Mining, financing & performing the whole project life cycle depending only on experienced and technically skilled Sudanese staff to carry out the followings:

- Geological and exploration.
- Reserve estimation & Mine Optimization.
- Metallurgy & processing technique to extract gold.
- Engineering, design parameters and process flowchart.
- Feasibility Study, equipment procurement.
- Construction and gold production November 2009.

All these studies were carried by Sudanese expert except the Engineering phase which was performed in cooperation with (Time Mining SA).
RIDA PROJECT LIFE CYCLE 2000 - 2009

Performed Tasks

- Commissioning and Start up: 18%
- Issuing of Definitive Feasibility Study: 12%
- Developing the basic Engineering concept: 12%
- Selection of Process method: 2%
- Performing metallurgical test on the ore: 4%
- Calculating Ore Reserve and Block model: 6%
- Detailed geological studies & drilling program: 26%
- Geological and exploration, works: 21%

Number of Years
Mining Project Initiation Cycle

- Open Pit Model
- Open Pit Ore mining
- Crushing
- Bullion B
- ADR
- Heap Stacking
Rida is devoted to have highly skilled personnel to meet the company`s current and future manpower needs cycled as:

- Pre-employment training programs for newly hired university graduates and inexperienced.
- On the Job training, teaching individual how to perform his job
- Rotation Assignment, rotate an employee within his department or in different location.
- Individual Skill analysis to retain the position
RIDA MINING SKILL DEVELOPMENT CYCLE

- Inexperienced Employees
  - Pre-employment Training
    - Apprentice
  - On the Job Training
    - Experienced Employees
  - Rotation Assignment
  - Performance Appraisal
    - Skilled Employee
## ELEMENTS OF TRAINING PLAN

<table>
<thead>
<tr>
<th>Class Room Training</th>
<th>Site Visit Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture with aid of PowerPoint presentation</td>
<td>Guided Visit to the designated plant</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Explanation of the operation manuals</td>
<td>Visits to one or two operating plants</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Familiarization with the process flowchart &amp; layout drawings.</td>
<td>Visit of the respective section of the plant where person is assigned to work</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Familiarization with particular equipments through documents</td>
<td>Workshop hands with particular equipments disassembled</td>
</tr>
</tbody>
</table>
HEALTH & SAFETY SUBJECTS

- General Health & Safety training
- Technical equipment training
- Protective Personal Equipment (PPE)
- Handling dangerous substances
- Good housekeeping
- Recycling water monitoring
- Cover a range of issues identified through consultation
- Targeted and tailored courses to suit needs
RIDA MINING - UM DORMAN COMPANY
ASSALAM MINE JOB CREATION RATE

Employees Category

- Trainee: 27
- Graduates: 104
- Technicians: 137
- Operators: 434
- Total: 702
• **Rida Mining** is commissioned to develop suitable Extractive Processing techniques
• It has successfully developed reprocessing plants mostly using Carbon-In-Leach (CIL) & Heap Leaching methods to extract gold.
ARTISANAL TAILING REPROCESSING PLANTS OWNED BY RIDA MINING

Northern State
Al Hsour Company
Kodorma CIL - 1500
Khanag HL - 1000

River Nile State
Exseer H L - 4000t/d
Exseer CIL - 3000t/d

Red Sea State
Wedian CIL – 250 t/d

River Nile State
Rida CIL - 1500
Um Durman

River Nile State
Sedon CIL - 300 t/d

Al Gadarif State
Abu Regia CIL - 1500 t/d
RIDA GROUP DIFFERENT COMPANIES JOB CREATION RATE
## RIDA COMPANIES PRODUCTION STATISTICS

**January to August 2015**

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Gold In Feed</th>
<th>Gold Produced in Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Um Durman HL</td>
<td>3560</td>
<td>1700</td>
</tr>
<tr>
<td>Exseer HL</td>
<td>2750</td>
<td>1446</td>
</tr>
<tr>
<td>Sedon HL</td>
<td>1440</td>
<td>650</td>
</tr>
<tr>
<td>Abu Regia CIL</td>
<td>505</td>
<td>450</td>
</tr>
<tr>
<td>Al Hsour CIL</td>
<td>260</td>
<td>235</td>
</tr>
<tr>
<td>Al Hsour HL</td>
<td>320</td>
<td>158</td>
</tr>
</tbody>
</table>

### Graphical Representation

The bar chart illustrates the production statistics for different companies, comparing gold in feed (in kg) and gold produced (in kg) for January to August 2015. The chart provides a visual comparison of the quantities produced by each company.
Material Handling & Milling Circuit
1500 t/d Carbon-In-Leach Plant to Retreat the Artisanal tailing at Kodorma, northern State, Sudan
GOLD REFINING EQUIPMENT
PRODUCED GOLD BAR
Exseer Mining Company – River Nile state
Abu Hamad 4000 t/d Artisanl Heap Leach Plant