CHAPTER- 2
ORGANIZATIONAL PROFILE OF THE HUTTI GOLD MINES COMPANY LIMITED
2.1 BACKGROUND AND INCEPTION OF THE STUDY:

Hutti Gold Mines Company Limited (HGML), Government of Karnataka Undertaking (Established in 1947 as Hyderabad Gold Mines), has the unique distinction of being the only producer of primary gold in the country.

HGML has been active in the exploration, development and exploitation of gold deposits occurring in Karnataka.

The Company’s Corporate office is situated in Bangalore and it operates two units-The Hutti Gold unit (HGU) in Raichur district and the Chitradurga Gold unit (CGU) in Chitradurga district with an operating mine at Ajjanahalli (Tumkur District). HGU and CGU are fully integrated units, with capacities to produce 600000 TPA and 261000 TPA of ore respectively. The HGML currently processes the ore from Hutti Mine and two satellite mines at Uti (opencast) and Hira-Buddinni (Exploratory underground mine).

This mine is probably one of the ancient metal mines in the world dating to the pre-Ashoken period. Carbon dating of the old timber collected from old workings indicated about 2000 years of ancient mining activity. Between 1887 and 1920 nearly 7.40 tons of gold was recovered from very rich ore at an average yield of 19 grams per ton. Most of the ore was from the main mine which was worked by Hutti (NIZAMS) gold mine, an of shoot of Hyderabad (DECCAN) Company. The main mines were up to a depth of 1056mts.

The industry was closed down in 1920 due to technical difficulties and the First World War. In 1937 the Nizam’s decided to prospect the area with a view to response the mines.
In 1940 based on favorable exploratory results, it was decided to install a plant to treat 100 TPS per day. But before the plant could be commissioned, mining operation was suspended from 1942 to 1946 due to second world war, the mine was shut down and only pumping was carried out.

After the war, the Hyderabad gold mines company Ltd was found in 1947 and regular mine production started in September 1948 at the rate of 130 tons per day. By 1972 this was progressively increased to 600 tons per day. In the year 1999 increased to 910 tone per day.

2.2. HUTTI GOLD MINES AT A GLANCE:
Location : Hutti, Raichur District, Karnataka, India.
Distance : 80 km west of Raichur,
            300 km south west of Hyderabad,
            480 km north of Bangalore.
Railway station : South central railway, Raichur.

2.3. NATURE OF BUSINESS CARRIED:
HGML is the only mine engaged with extraction of gold ore in the country. It removes mud from the earth and separates gold particles from it by crushing, grinding and refinery process.

2.4. VISION AND MISSION:
The corporate vision is to become one of the most vibrant, self reliant, financially viable, and steady growth oriented mining corporate. The corporate mission is:
- Improve productivity and profitability.
- Provide financial stability on long term.
- Register steady growth in terms of percentage of capacity utilization, production of income and overall profitability.
- Provide safe working conditions in the mine.
- Introduction of modern and effective management apart from achieving day to day production target.

2.5. **PRODUCT PROFILE:**

Gold has long considered one of the most precious metals, and its value has been used as the standard for many currencies (Known as the gold standard) in history. Gold has been used as a symbol for purity, value, royalty, and particularly roles that combine these properties.

The price of gold is determined on the open market, but a procedure known as the Gold Fixing in London, originating in 1919, provides a twice-daily benchmark figure to the industry.

Historically gold was used to back currency in an economic system known as the gold standard in which one unit of currency was equivalent to a certain amount of gold. As part of this system, governments attempted to control the price of gold by setting values at which they would exchange it for currency.

For all long period the HGML, Government of Karnataka Undertaking (Established in 1947 as Hyderabad Gold Mines), has the unique distinction of being the only producer of primary gold in the country.

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Gold Unit (CGU) in Chitradurga district with an operating mine at Ajjanahalli (Tumkur District)

2.6 AREA OF OPERATIONS:

The area of operation covers Karnataka state. It can be said as regional operation. The hutti gold mines ltd is only one unit producing gold. The Company’s Corporate office is situated in Bangalore and it operates two units-

- The Hutti Gold unit (HGU) in Raichur district and
- The Chitradurga Gold unit (CGU) in Chitradurga district
- An operating mine at Ajjanahalli (Tumkur District).

It has got other units like HIRABUDDINI, UTI, and Chitradurga. The company can produce around 7 kilograms of gold every day and will send to Bangalore regional office to sell in Bombay Bullion market. HGU and CGU are fully integrated units, with capacities to produce 6,00,000 TPA and 2,61,000 TPA of ore respectively. The HGML currently processes the ore from Hutti Mines and two satellite mines at Uti (opencast) and Hira-Buddinni (Exploratory underground mine)

2.7 OWNERSHIP PATTERN:

Government has owned 99% of the company shares and rest is owned by the private enterprises.

2.8 COMPETITORS’ INFORMATION:

There are no competitors because of the nature of the product that is gold and hutti gold mine is one and only gold mines in India

2.9 INFRASTRUCTURAL FACILITIES:

HGMEM Institute: it maintains a stadium, multi-gymnastic equipment, circulation library and all other outdoor and indoor sports,
materials for the benefits of employees and their children’s. It also conducts many outdoors and indoors tournaments.

2.10. Housing :-

The company has having 2365 quarters. These have been allotted to eligible officers, Staff and Employees. Regular visit made to colonies by Welfare officers to regulate Health and Hygienic Camp area.

2.10.1. Hospital :-

HGML Company has also most modern Hospital facility with 120 wide capacity. The existed hospital is equipped with modern in fractures like AC operation theatre, ECG, X-ray, Ultrasound scanner, Defibrillator with cardiac monitor, Auto analyzer, Lung function test in computer, Blood bank, Ventilator etc.

2.10.2. Education:-

The company organizes periodically training programmes to employees and officers. Worker education class for staff and workers is being organized on a regular basis. Merit awards are given to the children of employees excelling examinations. The Board of Directors has approved payment of Rs.5 lakhs contribution for construction of Mathematics, Laboratory by Science Education Trust, Raichur Science Center.
2.11 WORK FLOW MODEL:

Source: Company Reports
2.12 ORGANIZATION STRUCTURE OF HGML

Source: Company reports.

2.13 FUTURE PLANS OF HGML:

Hutti underground exploration by diamond drilling from 26th level and up to 30th level to establish strike and depth continuity of ore body for 2nd phase of mining.

1. Deepening of the existing shafts and associated work like coarse ore bin, crusher chamber, fine ore bin, belt conveyor and measuring flask will be installed in Hutti Mine.

2. Underground Exploration by Diamond Drilling and Primary Development from 24th Level to 30th Level to establish depth persistence of ore body.

3. Detailed exploratory mining at Hutti South Block

4. Detailed Surface exploratory by Diamond Drilling at Hutti North (Northern portion of major Dyke)

5. Development of Main Reef (Main Mine)

6. Development of Grey's Shaft
7. Development of Hutti New East Reef
8. Exploration by Surface & Underground Diamond Drilling to identify the resource along the strike direction as well as depth continuity at Hutti Mine.
9. A new mineral beneficiation plant (Sag and Ball Mill) for treating 2000 tonnes per day is in erection stage. And likely to be commissioned by May 2009.
10. The present ore reserves at Hutti Mines up to 2000 feet level would be exhausting by the year 2011. HGML is already developing the depths between 2000 feet and 2600 feet which will be the second phase of the expansion and modernization programme. Further development below ground between 2600 feet level and 3000 feet is already envisaged and preparations are on. This expansion and modernization will further sustain the life of the mine.
11. Implementation of Enterprise Resource Planning (ERP)

2.14. DEPARTMENTATION

2.14.1. Production Department:

Production is the basic activity of all units. All other activities revolve around this activity. The end product of the production activity is the creation of goods and services for the satisfaction of human wants. The production activity is nothing but the step-by-step conversion of one form of the material into another either chemically or mechanically. This is done in factories which houses manufacturing processes. The basic input of the production processes are men, machines, plant and methods.

An organization capabilities and the intent are strongly reflected in the product it manufactures. The manufacturing competencies and facilities echo truly, the R & D extent and the ability to implement it for the best of
the market it targets. The product of the mines is used as raw material on which the processing is done to create or enhance the form of utility.

It should note that the finished product of one manufacturing unit does nto always furnish a redymade product for the ultimate consumption. In a chain of manufacturing activities, the finished product of processor sometimes becomes the raw material (or component) for the other manufacturing firms falling next in the sequence.

HGML company has world class manufacturing facilities having to extract the gold as well as finished product will be completed through the manufacturing process.

2.14.2. Mining and Treatment:

HGML’s operations starts with mining gold ore. The use of bulk mining methods viz, large diablast, hole stepping and sub-level mining have achieved safety and productivity.

The ore is crushed ground to very fine powder. The grinding output is subjected to cyanidation and CIP (carbon in pulp) process, where metallic gold leaches and gets adsorbed on activated carbon. *Gold is recovered through two routes:* Gravity concentration, Leaching, CIP, Elution, Electro winning process and there after smelting to produce saleable Gold Bullion Bar. the mining/grounding process of the gold ore in Hutti employs two distinct grinding techniques.

In the first technique, grinding is done in two way stages, i.e primary and secondary grinding for further the communnion and one 8’ dia * 16 ‘ long primary mill and three no’s of 5-1/2” dia * 22-1/2” long tube mills constitute one stream of grounding in which pebble and smaller size balls are used as composite grinding media.
In the first technique, two such streams are there and strake tables are used to collect coarse gold as concentrate for this circuit.

The gold loaded steel wool cathodes are manually removed periodically, subjected to acid digestion, drying and smelted to obtain bullion buttons. The bullion buttons thus obtained from the table concentrators and steel wool are cast into bullion and then dispatched for sales.

2.14.3. Metallurgical Department:

The gold extraction process in HGML practices mineral processing, Hydro electro & pyro metallurgical routes. The major unit processes involved is described below:

**Role:** To extract gold of 91% pure ROM at optimal cost.

**Crushing:**

Mine ore is drawn mainly from the adjacent Mallappa shaft ore-bin of 1000 tonnes capacity, while ore from other shafts is brought into the crushing circuit via surface ore-bin of about 200 tonnes capacity equipped with the chain feeder and inclined conveyor belt etc. Automatic sampler and weight meter and weigh-bridge provide the necessary production input details.

**Grinding:**

The mining/grinding process of the gold ore in Hutti employs two distinct grinding technique. In the first technique grinding is two stages i.e one primary mill and 3 nos. of secondary tube mills constitute one stream of grinding. Two such streams are there. The discharges of these mills are passed on the strake table spread with blankets which recover coarse gold by gravity process, and system is in close circuit operation.
In the second technique, single stage grinding is done in four nos. of independent ball mills in close circuit with cyclone classification system. The mill discharge is passed through knelson concentrators to recover the free gold. The stake tables concentrate and knelson concentrate is further upgraded on james table to produce smelt able grade of gold.

**Cyanidation and carbon in pulp process (CIP):**

The cyclone overflow from both the techniques is subjected to thickening in a high rate thickener to remove access water, which is passed through a series of carbon column to recover dissolved gold. The thickened pulp of specific solid content is mixed with cyanide for leaching in a series of mechanical agitators at alkaline media. To facilitate leaching hydrogen peroxide assisted with compressed air is used to improve oxygen potential in circuit. The cyanide leached pulp is sent to carbon-in–pulp unit, agitated with activated carbon in suspension. The dissolved gold is then absorbed on carbon as sodium auro cyanide. The gold loaded carbon is removed from the CIP periodically and carbon is washed with water and given acid and alkaline treatment.

**Elution and Electro-winning Plant:**

The clean & gold loaded carbon is elution columns by maintaining the specific parameters. The gold in the pregnant solution is recovered in electrolytic cells using steel wool as a cathode on which the gold is deposited. The stripped carbon that details very little gold is activated and reused.

**Refinery:**

The upgrade james table concentrate is roasted, magnetized and finally smelted into bullion buttons. The gold loaded steel wool is manually removed periodically, subjected to acid digestion, drying and smelted to obtain
bullion buttons. The bullion button thus obtained from table concentrate and steel wool are cast into saleble bullio bars weighing 5 to 11 kgs having a purity of 88-91% of silver and balance impurity.

2.14.4. Finance Department:

Accounting is the art of recording, classifying and summarizing in a significant manner and in terms of money, transaction and events which are in part atleast, of financial character and interpreting the results there of.

Introduction:

Finance department is a vital department of an organization and is concerned with providing and using cash and credit for carrying on business correctly. Finance is regarded as life blood of a business enterprise this is because on the modern economy finance is one of the basic needs of all kinds of economic activities. Is is the matter key, which provided access to all source to be employed in the manufacturing and mechanizing activities. The finance department should decide when, where and how to achieve funds to meet the firms, investment needs.

The control issue before the finance department is to determine the proportion of equity and debt the mix of equity and debt is known as the capital structure being on eof the best run co-opertaive mills in India, having following membership and paid up share capital structure.

Functions of the finance Department:-

It prepares and maintains journal books, cash and bank, ledger a/c and trail balance.

- To prepare profit and loss a/c
- Maintainence of account in which undertaken
- Supplier bill paying
- Cash and bank balance.
• It makes calculation and decision regarding the funds of the company HGML company’s finance department having following Departments:-
  ▪ Inventory accounting
  ▪ Cost accounting
  ▪ Billing section
  ▪ Trust account section.

**Inventory account section**

The HGML company has having a lot of stores material items are to be divided into 8 parts (Ledger) according to the materials descriptions. All the materials cannot do in one place that’s way it is divided for the purpose of materials stores maintain activities in gold manner.

**The ledgers are:**

- Chemical and billing materials- such as sodium cyanide, Hydrochloric acid and other chemicals.
- Electrical and underground spares- Drills rods, drill bits, diamond core bits etc.
- Machinery spares- compression spares, generator spares.
- Steel materials and pipe fitting- walls, nut bolt, rails, pipes etc.
- Tools and miscellaneous materials- General items and tools such as, cutting blades, spanners, pipe rinch, Boots, Helmets, Uniforms etc.
- Explosives- used for underground Department.

**Brief Description about inventory:**

✓ After processing the bills the material receipts notes (MRN) details like material code, quantity, bill amount, Freight, Insurance, entry tax are entered to arrive at the unit rate of each material.

✓ Through inventory software weighed average rate is arrived and the same is applied for all material issues. Stores stock ledger and closing master reports are also computed.
✓ Stock ledger report is sent to stores for reconciliation with bin card balances.
✓ Cost code with report is given for completion the cost sheet.

**Cost accounting section**

The HGML maintained the standard costing system. Costing section makes the companies all departments expenses checked and then cost will be shown according to the expenses they are incurred while every day's consumption. In every month this department will show the transaction expenses accurately in a print of copies. Also, income from any department will be prepared according to the personnel code and cost centre of the company provided for the different departments and different employees on the basis of this cost sheet will be prepared.

**Billing section**

Stores ledger passes the material receipt notes on the basis of this bill will be ordered.

**MRN Base:** This is nothing but the material Receipt note received from the stores. On those note bills order will be scrutinized then pass the bill and give the material code then bill wise fabricate in account wise. For Example: Account code like, 214001 called as material cost account 215001 called as capital machinery in stock.

**Trust account section**

In this section the company provides to the employees the basic schemes like employees provident fund, educational loans, sick loans, housing loans are provided for the purposes of employees satisfaction.

**Depreciation:**
1. Depreciation on fixed assets is provided on straight line method.
2. Additions to existing assets are depreciated over the remaining useful life of that asset.
2.14.5. Purchasing Department:

This is also one of the important departments in this department they purchase the materials, which require for production and also for the office work. Its main function is purchasing the materials. It receives the requisition letter from the store department to know what type of materials is required. After receiving this letter they make enquiry and then place the order.

“purchasing refers to the act of buying an item by price”

Purchasing means procurement of goods and services for some outside agencies the object of purchasing is to supply materials, semi finished goods etc. to the production department. The object of purchasing is procurement of materials of the right type, right quality, right quantity and at the right time. Effective management and control over the use of materials and equipment so as to avoid waste, duplication and obsolescence of materials and equipments.

Purchase procedure:

The company following the procedure of the purchase department.

Receiving purchase requisition:

The first step in the purchase is to receive the purchase requisition from various departments. Request for purchase materials are made on a form known as “purchase requisition”. It specifies what kind of material is required.

Exploring the source of supply:

The purchase manager is usually in contact with several sources of suppliers of different materials. If the materials are to be purchased in bulk, he invites quotations from various suppliers in the form of a tender. When tenders are invited, then the lowest tender should be accepted by the purchase department by considering other factors like quality.
Placing an order:

After selecting the supplier who has quoted the most favorable quotations, the next step to be taken by the purchase manager is to place the order. The order must be made on a printed form and must contain such information as number, date, address of the supplier, particulars of goods etc. This order form should prepare in 4 copies. The original copy should be sent to suppliers, second copy to the stores department for its future reference.

Receipt and inspection:

When the invoice is received from the concerned vendor, it will be compared with the order form to ascertain the ordered good have been supplied or not. Then these goods are physically inspected to ascertain whether goods received tally with the invoice.

Entries in the books of Account:

After the goods received are closely checked and if found correct, the receiving clerk prepares goods received note in three copies. Three copies along with goods received will be sent to stores department which will send one copy to purchase and accounts department for payment.

2.14.6. Human Resource Department:

Human resource management is a management function that helps manager recruit, select, train and develops employees for organization. It is concerned with the people dimensions in the organization. It is specialized field that attempts to develop programs, policies and activates to promote the satisfaction of both individual and organizational needs, goals and objectives.
It is concerned with the people dimension in management. Since every organization is made up of people acquiring their services developing their skills, motivating them to higher levels of performance and ensuring that their skills, motivating their commitment to the organization are essential to achieving organizational objectives.

**Human Resource policy at HGML:-**

A policy is a plan of action. It is a statement of intention committee management to a general course of action. Management drafts a policy statement to cover some feature of its personnel programmes. The statement may often consist an expression of philosophy and principle as well.

**Objectives of HR Policy at HGML:-**

- To ensure uniformity of HR policies among the Hutti group of company.
- To ensure that all personnel have a thorough and uniform understanding of policies and provide as a guide in implementation of these policies.
- Enable a new entrant in the department to understand his/her as well as his/her colleague’s functions.

**Staff:**

Staffing is the process of acquiring human resource for the organization and assuring that they have the potential to contribute to the achievement of the organization’s goals. Various positions in the company require different contributions and thus have the implication that different people are needed to fit these various roles. Certain position requires people with special skills other required special knowledge also different types of personalities. It is essential that the company recruits, selects and develops the right people for mix of role requirement.
2.14.7. Research and Development:

HGML is equipped with the R&D and Assay laboratory, recognized by dept. of science and Technology, Govt. of India, handles the following with ease and perfection:

- Assay of gold ores and bullion.
- Beneficiation studies of gold and allied products.
- Heap and column leaching of gold.
- Gravity recoveries of gold.
- Bio-leaching of gold in a pilot plant of 100kgs/day.
- Air monitoring.
- Water Analysis.
- Knelson, Falcon and AAS facility.

The analytical and R&D Facility for gold is available to outsiders on payment basis.

Total Manpower strength of HGML:

There are about 3933 employees working in the company out of them 173 officers and 251 ministerial staff 492 supervisors and 3017 workers.

Table 1.3: classification of employees

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<th>Percent</th>
<th>ST</th>
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<td>3933</td>
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2.15. WORKERS EDUCATION PROFILE IN HUTTI GOLD MINES COMPANY LIMITED.

Workers education programmes was started in the year 1978-79. From this period up to current number of educational programmes were conducted by the company.

In the year 2003-04 three kinds of educational programmes were conducted which are as follows:

- 2 self generation fund programmes under which,
  1. Supervisory and workers level classes which were conducted for the duration of 3 days with 30 participants.
  2. Unit Level Classes: These were conducted purely for workers for the duration of 30 days with 30 participants.

- 1 Industrial Tour (south India): For the period of 10 days an industrial tour for 30 participants (only those workers who have attended the 30 days unit level classes). This tour was undertaken by a group of workers. This tour was accompanied by a labor welfare officer and workers teachers.

All the expenses incurred on these workers Education programmes were taken care by the company and central Board for Education according to prescribed standards set up by the government. Per programme incurred the amount approximately Rs.60,000/- as per the duration of the classes.

Workers Education Programme consist the following subjects offered by Central Board for Workers Education. They are,

- Workers and working conditions.
- Safety.
- Total Quality Management.
• Motivation and Morale.
• Team work in industrial organization.
• Industrial welfare.
• Provident Fund Legislation.
• Productivity.
• Quality of Life.
• Population profile.
• Industrial Health and protection.
• Environmental pollution and Protection.
• Human Rights.
• Quality Circle.
• International Labor Organization.
• Work Ethics.
• Human Relation.
• Quality Management.
• Stress Management.
• Transactional Analysis.
• Customer Satisfaction.
• Absenteeism.
• ISO Series.
• EMS and IO 14000
• Health and Hygiene.
• Globalization.
• Industrial Relation.
• Recent Amendments in Labor Laws.
• Ecological Balance.
• Work Culture etc.
Objectives of the self generation fund (SGF) Programme:

➢ To bring representatives of workers and management on common forum at unit level to enable them to understand each other’s role for better discipline, greater efficiency and enhanced productivity.
➢ To develop amongst them mutual trust and community of interest for collective excellence.
➢ To equip them with knowledge and skills for contributing efficiently in participative bodies or bi-partite committees.
➢ To mobilize them to suggest ways and means for corrective steps for safety at work, welfare and health.
➢ To develop among interpersonal communication skills.

Other Activities Related To Education at HGML:

➢ There exists 1 vocational training centre at HGML where workers are trained.
➢ Number of sports and cultural programmes for the workers were conducted.
➢ Functional Adult Literacy Classes were also conducted for the illiterate workers.
➢ Seminars/Debate/1 Day programme held at CBWE Centre, Hubli were attended by workers teachers and head of the management.
➢ Company also conducts seminar, special Lectures etc, or the officers.

Welfare Activities:

➢ Company provides donations to the school along with benches, hairs and books for school.
➢ Provides accommodation to the school staff with provision of quarters to them.
➢ Requisition facility for employees (multi-gym, sports, indoor /outdoor games).
**Education Status in HGML:**

Total number of schools in Hutti is 17 comprising of both government and private schools,

- High School (Government).
- High School (Private).
- Industrial Training Institute.
- Nursing Training centre.
- PUC-Science/Arts/Commerce.

**Language Offered in These Schools are as follows:**

- Tamil
- Telugu.
- Urdu.
- English.
- Kannada.

**Scholarship Scheme:**

- Company gives poverty-cum-merit scholarship in the memory of J.D Aitkin (founder of HGML)
- Meritorious scholarship is offered to boys form 5th standard to I.T.I / Diploma. (No scholarship is offered to P.U.C boys).
- Meritorious Award of cash prize Rs.1100/- and silver medal is offered with honour for the students who secures the highest marks in S.S.L.C throughout Hutti village.
- Meritorious Award of cash prize Rs.1000/- is offered with honour for the students who secures the highest marks in subjects throughout Hutti village.
- Meritorious scholarship is offered of Rs.500/- per-year (Nursing Training Centre)
- For the upliftment of the students belonging to backward classes SC/ST scholarship are also offered.
2.17. SOME SNAPSHOTS OF THE SAMPLE ORGANIZATION

2.17.1: Training Building
2.17.2: Gold Extraction-1

2.17.3: Gold extraction -2

http://scholarsclub.blogspot.com
2.17.3: Gold extraction MALLAPPA SHAFT-3

2.17.4: Mining:
2.17.5: Refinery

2.17.6: Gold
2.17.7: Gold Bullion

2.17.8: Separated mud