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INTERNSHIP REPORT
ON
FEASIBILITY STUDY
OF
OIL WELL CEMENT
OF
SCANCEM BANGLADESH LTD.

PREPARED FOR
CHAIRMAN
DEPARTMENT OF BUSINESS ADMINISTRATION
EAST WEST UNIVERSITY

PREPARED BY
MAHMUD HOSSAIN
ID#1997-3-10-018

DATE OF SUBMISSION: APRIL 26, 2001

EAST WEST UNIVERSITY, DHAKA.

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April 26, 2001

Md Sadrul Huda
Senior Lecturer
East West University
Mohakhali, Dhaka.

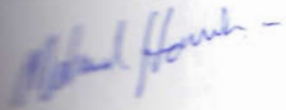
Dear Sir,

As per your instructions I am submitting the report on the proposed project that was assigned to me by Mr. Christer Eriksson Vice President of MKT & Sales of Scancem Bangladesh Ltd. It has been a great pleasure for me to work on this project as it provided such unique opportunities for me to expose my self in the real life organizational context. The preparation of this report and the relevant study on literature also help me to gain new insights on the subject of oil well Cement.

I've tried my heart and soul to preciously follow the guide line you suggested and to include necessary explanation for each of the facts that would help you to evaluate the truthfulness of this report as well as my efforts.

I will be pleased to answer any sort of query you think necessary as now and further needed.

With Best Regards
Your sincerely



Mahmud Hossain
1997-3-10-018

April 26, 2001

Mr. Faisal Halim
Senior Lecturer
East West University
Mohakhali, Dhaka.

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Your sincerely

Mahmud Hossain
1997-3-10-018

Acknowledgement

To
Mr. Nusrat A Chowdhury
Head of the Department, BBA
East West University.

For being all time cooperative nature and for providing the guideline to improve the Report.

To
Mr. Sadrul Huda
Senior Lecturer
East West University.

For providing valuable guide line and suggesting necessary modification for the report and giving time to time feedback's on my progress.

To
Mr. Faisal Halim
Senior Lecturer
East West University.

For providing valuable guideline and suggesting necessary modification for the report and giving time to time feedback's on my progress.

To
Mr. Christer Eriksson
Vice President Mkt & Sales
Scancem Bangladesh Ltd.

For providing valuable guide line and suggesting necessary modification for the report and giving time to time feedback's on my progress.

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List of Table & Graph

Number	Topic	Page No
1.	Market Share	15
2.	Cement consumption	22
3.	Cement Import	30
4.	Oil well Cement (Forecasted)	52
5.	Consumption Trend of OWC Last 3 years	53
6.	Imported Brand And Price and Source	55
7.	Quantity Consumption Of 1999-2001	59

Table of Contents

No	Topics	Page No.
	Executive Summery	1
1.	Introduction Organization Part	2
1.1	Scan Cement International	4
2.	Cement industry in Bangladesh	7
3.	Market Share of Cement	15
4.	Foreign Vs Local Cement	15
5.	The Industrial Progress	18
6.	Scancem in Bangladesh	20
6.1	Company Over View	20
6.2	The Strategy of Geography Diversification	21
7.	The Factors that brought Scancem in Bangladesh	23
7.1	Ownrship	23
7.2	Market Factors	24
7.2.1	Supply and Analysis	24
7.2.2	Demand for Cement	25
7.2.3	Manufacturing Factors	31
8.	Human Resource	32
8.1	Nature of Management	32
8.2	Present Organ Gram	34
8.3	Present Organ Gram of Mkt	36
8.4	Present Organ Gram Financial Department	37
9.	Technological Competency and Competitive Advantage	38
10.	Conclusion	39
11.	Literature Review	39
12.	Background of the Research	41
12.1	Broad Objectives	41
12.2	Problem Recognition	41
12.3	Specific Objectives	42
12.4	Types & Source of Information	43
12.5	Scope of the Research	43
12.6	Hypothesis of the Research	43
12.7	Descriptive vs Causal	43
13.	Developing a Sampling Plan	44
14.	Analysis	50
15.	Finding	57
16.	Recommendation	64
17.	Appendix	65

Executive Summery

The market of the oil well cement in Bangladesh at the moment is very small. In fact presently there are only 3 oil and gas exploration company that are consuming oil well cement, they are Shell, Unocal and Bapex. Two drilling and cementing organizations, that are schlumberger and BJ services, that are engaged in drilling service for the extracting organization.

The price MT of oil well cement for the year 2000 a~ 167USD per IT, (according to shell 144 USD per Sack (acoordin~ to unoal providod by the BJ servines) USD7-s - 9 per sack (50kg from singapare, Thaijand Malaysia. Usually thocementing organization purchase bulk quantity of Pan MalaysIan Cement (PMC from Singapore Siam cement from Thailand and nalmia and Dikbizoy from India. Usually they purchase the cement for ~3 years. ~ormally ~ey purchase it in ~o ways that are 50KG/bag ar sack and it is shrink-wrapped, 1t~n? tag or saok shnnk-wrapped

The demand far the oil well cement is largely dependent on the exploration activities. The consumption of nil well cement fully depends on the shape of the casing and whether it is a normal drill or abnormal drill The normal drill requires 360 to 650 MT cement and abnormal drill requires 800 MT cement.
In the year 1999 the total consumption of oil well cement was 465fl MT equal to USD 55COOC
In the year 2000 the total consumption at Oil well cement was 3300 MT equal to USD 4900.00
In the year2001 the total consumption of oil well cement is 600 MT equal to USD 100200.00
The total demand of oil wall cement decrease because of less exploration due to no new exploration is taking place at the moment. Considering the present situation Bangladesh government has fulfilled the present demand and also have surplus of inventory so the government do not allow them to go tar further drilling. Some political issues are also taken place during negotiation with other oil companies.

The oil and gas companies made an agreement with the drilling companies 10 drill the well for them. Scancem Bangladesh Ltd. can introduce oil well cement towards the users after having the approval by the API specification and they had to create a good link with the oil and gas exploration companies and the other oil well cement related organizations to launch the product in Bangladeshi market. The market of oil well cement is very small and the number of user is very few. So the here the Scancem Bangadesh Ltd. should follow the relationship marketing to capture the market.

ORGANIZATION PART

ORGANIZATION PART

1. INTRODUCTION

Of all the building materials that are used in construction and other industrial processes, Gray Portland Cement is the most versatile. Portland cements are hydraulic cements composed primarily of hydraulic calcium silicates. Hydraulic cements set and harden by reacting chemically with water and form a stone like mass. When the paste (cement and water) is added with aggregates (sand, gravel, crushed stone or other granular material) it acts as an adhesive and bind the materials to form concrete. And this is what we call the worlds most adaptable and most used construction material- concrete.

Therefore the production of cement and its distribution has been a major business endeavor for more than a century, since it was first invented in England by the English mason Joseph Aspdin. In 1824 he patented the product and named it Portland cement. He named it so because the concrete resembled the color of limestone that was found in the Isle of Portland, a peninsula in the English Channel.

Long used in the Western Europe and the United States, Portland cement plays the role of building blocks in the rapidly demanding needs of erecting structures, buildings and bridges in the Asian countries. Since developing nations are the one who constantly are engaged in the process of modernizing the infrastructure of the country- better communications, roads, bridges, schools and hospitals-

their per capita consumption of cement and the rate of growth in consumption is higher than most developed nations. This is the key reason which makes cement such a lucrative commodity in the developing nations.

Multinational companies that have achieved considerable expertise and economies of scale in the production, distribution and the marketing of cement, bank on this opportunity that generally exist in most of the developing nations. Bangladesh being a developing nation has its share of incumbents who are multinational cement producers of world-class repute.

The world' s top five cement producers are already here and have ambitious plans of firmly entrenching themselves as they vie for market share and profitability. *Lafarge*, *Cemex* and Scancem Bangladesh *of* ***Hidelberger ScanCement group*** are all here who respectively are the second, third, and the fourth largest cement producers in the world. Among these players Scan Cement is one of the biggest cement trader in the world coupled with its esteemed producer status.

1.1ScanCement International:

The international cement and concrete business represents a substantial part of Scancem's total activities. Today, ScanCement International is one of Europe's leading cement exporters and traders. Activities cover all aspects of the cement business, from production to deliveries to end-users, including technical and commercial management of cement plants and ownership. The company also has substantial coal trading business.

Through ScanCement International, the business area is established in eight countries in Africa, and owns Castle Cement; the second largest Cement Company in the U.K. ScanCement International also has cement and concrete operations in the U.S., Estonia, Poland and the Middle East. Asia is designed as a new area of expansion. Totally, Cement International handles about 14 millions tons of cement and clinker per year, including from affiliated companies.

1.1.1United States

The U.S. activities consist of growing concrete operations in Florida as well as large cement import terminals in Florida and New York, which are vital for the Group's cement exports. ScanCement International also owns Allentown Cement in Pennsylvania, with a production capacity of 1 million tons, and the Vineland Group in New Jersey, which produces ready-mixed concrete and aggregates in several plants.

1.1.2 Africa And Middle East:

Few companies can match Scancem International's know-how and experience in Africa. The group has a strong position in cement operations in this area. Activities in Africa are conducted in Angola, Benin, Ghana, Liberia, Nigeria, Sierra Leone, Tanzania and Togo as well as in the United Arab Emirates.

1.1.3 United Kingdom

Castle Cement is the second largest cement manufacturer in the U.K with a market share exceeding 25 percent. Castle Cement has three plants in the central part of the U.K.-in Ketton, Ribblesdale and Padeswood-with a combined production capacity of approximately 3.3 million tons. Castle Cement covers the entire domestic market by distributing cement from its plants and import terminals.

1.1.4 Finland and Eastern Europe

Scancem International is responsible for ready-mixed concrete and aggregate activities in Finland, the Bal tics, St. Petersburg and Poland and ready-mixed concrete operation in Germany. The company also manages cement operations in Eastern Europe. The operations include a major shareholding in Estonia's sole cement producer, Kunda Nordic Cement, and 50/50 partnership in three Polish companies.

1.1.5 Asia

Investing in Bangladesh was the first step of Scancem Group to enter in Asia. Bangladesh is a rapidly developing country especially in infrastructure as roads, bridges and culverts. Furthermore real estate is rapidly developing. Considering quality construction and participating into development work for Bangladesh, Scancem decided to set up a Clinker Grinding Plant in Dhaka with 750,000 metric tons production capacity per year. It is a joint venture project with Multimode Group, Bangladesh. The project value s USD 90 million and it will come in production during 2000.

Until the project will come in production, Scancem group also decided to supply high quality Ordinary Portland Cement to Bangladesh Market from our nearest foreign factories at a very competitive price. In this regard, Scancem Group established Scancem Bangladesh Ltd. early of the year (1998), which is responsible marketing ScanCement in Bangladesh.

2. CEMENT INDUSRTY IN BANGLADESH

Bangladesh does not have any deposit of easily extractable limestone. Bangladesh with an area of 147,570 square k.m consists of flat, alluvial land in what is known as one of the largest deltaic areas of the world. Mighty rivers like Ganges/Padma, Jamuna, Brahmaputra and hundreds of other rivers crisis cross the entire country.

From the distant past, the country depended on river systems and waterways for most of its needs for circumstances and in absence of appreciable urbanization and infrastructure development, cement industry did not show any significant development in Bangladesh.

Bangladesh has always relied heavily on imported cement. This is because: a) the country does not have any cheap source of limestone: and b) government policies have discouraged local cement production. Consequently, even today nearly 65% of the country's cement needs are met by imports. Until the late 1980's the government maintained price controls on cement and high duties on imports of clinker, the key raw material for local cement producers.

As a result, until 1992, there were only three cement companies in Bangladesh. These are limestone-based factories in Chhatak and Ayenpur and the clinker based Chittagong Cement Clinker Grinding Co. Chhatak cement factory was the first cement factory in Bangladesh. It was limestone based. The limestone was imported from India. After partition, India stopped the supply of limestone to the factory. This almost stopped the factory. This is why Government realized that

depending on one source for raw materials is not a very good idea for running a big cement factory. This is the reason why the second state owned cement factory that is Chittagong Cement Clinker Grinding Co is clinker based instead of limestone based.

In the late 1980's the Government finally took steps to encourage local cement production. The step were as follows:

- Price controls were gradually reduced and then abolished.
- Tariffs on imported clinker were gradually reduced from 45% in 1987 to 7.5% by 1994. However after severe flood of 1998, this was increased to 15% in October 1998.
- The tariff on imported cement was raised to 20% from 15% in 1994, this was also further raised to 30% in October 19998.
- Government adapted a policy of deregulation and promotion of industries in the private sector.

All these factors created a congenial environment for growth of cement industry in the private sector in the country. As a result, since 1994, there was rapid expansion of cement production capacity in the country. In a span of about 4 years since 1994, as many as 9 clinker grinding units with a total capacity of 1,924,000 tons per annum were established in the country. The complete scenarios of the cement manufacturing units are described below:

2.1 CHHATAK CEMENT FACTORIES

Chhatak Cement Factory Ltd. is the only state owned factory in the cement sector. This is also the only limestone based operating factory in the country. The Chhatak Cement factory was set up in North Bengal in 1940 with a capacity of only 60,000 tons per annum (tpa). After partition of India in 1947, the factory was in East Pakistan but its main source of limestone – 10 miles away in Komora- remained in India. After 1965 war between India and Pakistan, India suspended limestone supplies and the factory was virtually closed.

However, after emerge of Bangladesh in 1971, supplies resumed and the plant's capacity was raised to 270,000 tpa. Chhatak Cement Factory is situated in Chhatak under Shylhet district. The plants capacity utilization is 59% to 63%. The production for the year 97 and 98 were 170,000 and 160,000 respectively.

2.2 CHITTAGONG CEMENT CLINKER GRINDING CO. LTD.

Chittagong Cement Clinker Grinding Co. Ltd. started commercial production in July 1974. as a result of Government's decentralization policy 51% shares of the company held by Bangladesh Chemical Industries Corporation (BCIC) were transferred to T.K Oil Refinery Ltd. in June 1993. Chittagong Cement produces ordinary Portland cement under the "Ruby" brand name. The production capacity of Chittagong Cement is 300,000 tpa. Chittagong Cement is in the process of tripling its production capacity.

The total capacity after the expanding will be 900,000 tpa. The commercial production of the expansion plan is scheduled in June '99. Chittagong Cement

factory is situated in Halishahar. The factory has its own jetty facility, which educes transport costs, bypasses delays and backlogs at the port.

2.3 MODERN STRUCTURAL SERVICES LTD.

Modern Structural Service Ltd. is a cement factory that was established in 1992 in the private sector. The factory is situated in Munshiganj. The production capacity of the project is 30,000 tones per annum. They have a plan to expand their capacity to 90,000 tpa. It is expected to go on production in mid 2001. The actual production for the year 97 & 98 were low as 5,000 tpa. The primary reason for this low production was insufficient supply of clinker.

2.4 AYENPUR CEMENT FACTORY LTD.

The second limestone based factory of Bangladesh is also in Chhatak. This is under the private ownership and has a capacity of only 15,000 tones per annum. But due to the management problem the factory is closed for the last two years.

2.5 CONFIDENCE CEMENT LTD.

Confidence Cement Factory started production in 1994. The factory is situated in Chittagong. The production capacity of the factory is 180,000 tpa. They are now in the process of increasing the capacity to 480,000 tpa. The expansion plan will go on operation in the end of this year. Their last two years production was 150,000.

2.6 MONGLA CEMENT LTD.

Mogla cement Ltd. is a factory of Shena Kalyan Shanstha. It is situated in Mongla, the capacity is 468,000 tpa. They have produced 200,000 tones in the year of 1998.

2.7 MEGHNA CEMENT MILLS LTD.

Megha Cement Mills is situated in Mongla. It is under private ownership. It is started production in 1996. The production capacity is 300,000 tpa. They are under process of expanding 500,000 tpa more. The expansion is expected to be in production in June 2001.

2.8 HYUNDAI CEMENT (BANGLADESH) COMPANY LTD.

Hyundai Cement is situated beside the river Maghna in Narayangonj. There are four expatriates sin this company. It started commercial production in the middle April 1996. Under the Korean management Hyundai Company is doing well and has a good reputation in the market.

2.9 AHAD CEMENT FACTORY LTD

Ahad cement factory is situated in Rajghat, Noapara, Jessore. It started its commercial production in December 1997. The capacity of the factory is 180,000 tpa. It produced 50,000 tones in the year 1998. It has a plan to expand up to 400,000 tpa. But the expansion plan is still uncertain.

2.10 NILOY CEMENT INDUSTRIES LTD.

Niloy Cement is also situated in Jessore and also started its production in August 1997. Niloy Cement is a project of Nitol Group. Their production capacity was 50,000 tpa. But they have expanded the capacity to 100,000 in year 99. The expansion unit went into production in February 1999. There are 56 direct and 24 indirect employees in the factory. The brand name of the cement is "FISH". In the year 98 it produced 35,000 tones.

2.11 DIAMOND CEMENT

The factory went into production in the year 1998. The capacity of the project is 210, tones per annum. Diamond Cement has a plan of additional capacity of 240,000 tones per annum, the expansion is very much uncertain. The production for the year 1998 was 750,000 tones. The factory has 170 direct and 75 indirect employees. The brand is "DIAMOND".

2.12 DOEL CEMET

Doel Cement is situated in Pabna. Doel Cement is a concern of Bangladesh Chemical Industries Ltd. they have started the production in July 98. Their production capacity is 90,000 tones per annum. In the year 1998 they have produced 30,000 tones.

2.13 EASTERN CEMENT

Eastern Cement Mills is situated in Narayangonj. Under the private ownership, it ahs a capacity of 180,000 tones per annum. Eastern Cement has just started its production in the month of February 1999.

These are all the factories that are in production now. Only *Ayenpur Cement* Factory is factory is closed. The other 12 factories are running. Besides, these factories, there are many factories that have started their work and are expected to come into production shortly. The demand- supply gap of the cement industry has encouraged many investors to come to this sector.

Till now Hyundai is the only foreign factory, producing cement in Bangladesh. There are many other foreign factories that have come to Bangladesh. They are ScanCement, Lafarge, Cemex and Cemcor.

The other cement factories that are under implementation are listed below:

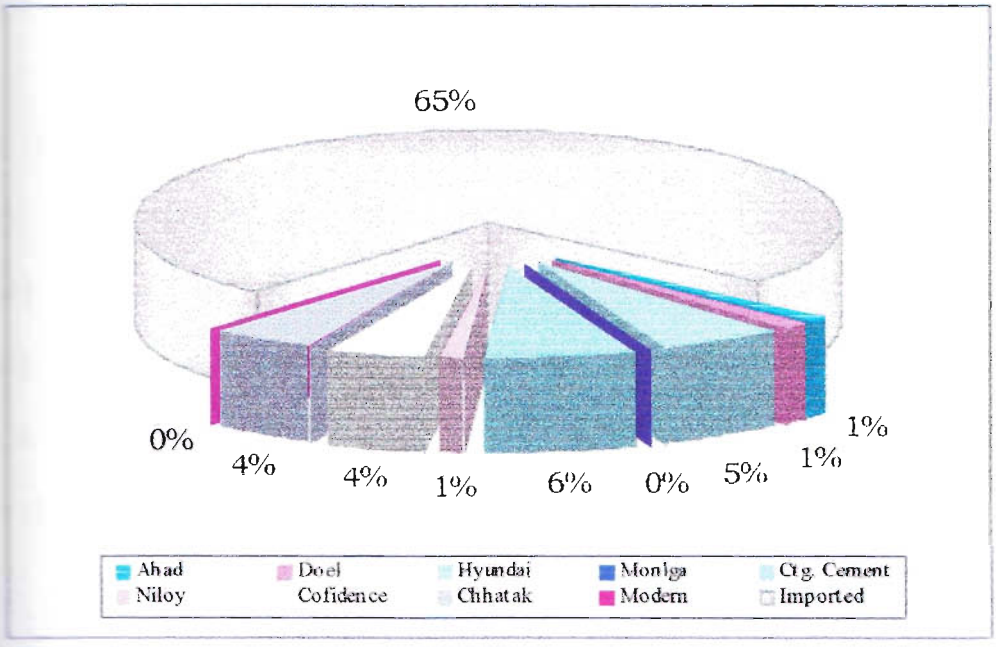
1. National Cement Factory
2. Aramit Cement Factory
3. Bengal Tiger Cement Industries. Ltd.
4. Akij Cement
5. Anwar Pittie Cement Ltd.
6. Cemcor.

7. Scancem Bangladesh Ltd.
8. Dubai-Bangladesh Ltd.
9. Lafarge Surma Cement
10. Jalalabad Cement.

There are nearly two dozens more cement factories that have registered with the Board of Investment. But they not yet started any work. If all these cement factories go for export of cement. The list of all the cement-manufacturing units is shown.

3. MARKET SHARE OF CEMENT

Eleven nos. of factories were in production in the year 1998 along with the imported cements. The market shares of the cements in shown below in a graph.



If we look at the above pie chart, we can easily understand that 65% of the cements used in Bangladesh in the year 1998 were imported. Among the local cements Chittagong Cement and Meghna Cement both have 6 % market share where as Hyundai and Mongla follows them with 5% each.

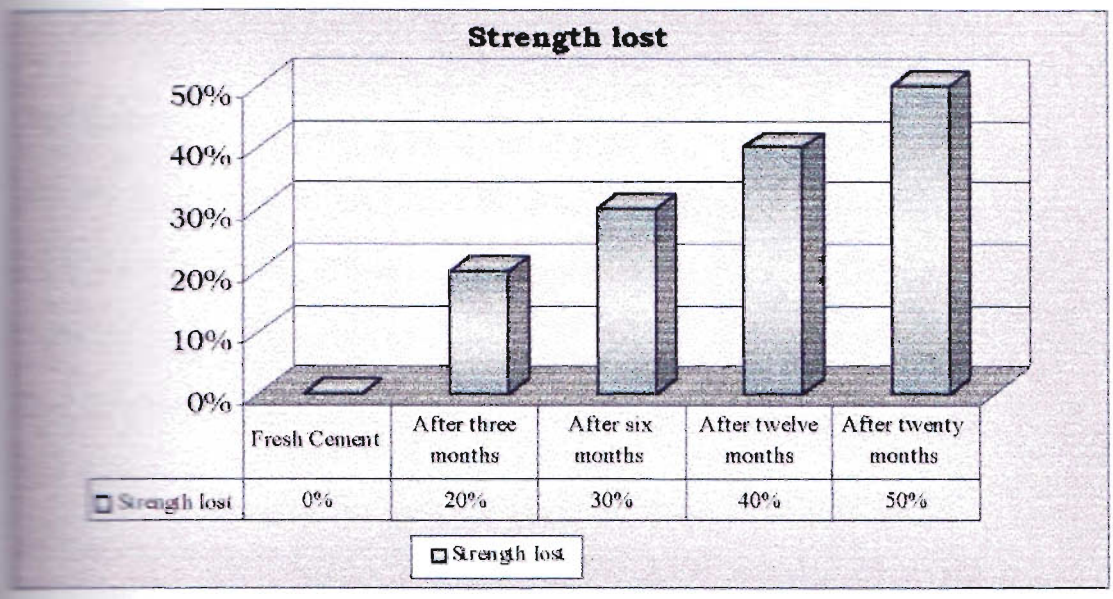
4. FOREIGN VS LOCAL CEMENT

Due to the huge demand-supply gap locally, imports have traditionally dominated the cement market in Bangladesh. At the same time, however, local producers

have always found it relatively easy to sell the their products as local cement enjoys considerable advantages over imports.

The main factor in favor of local producers is quality. It is estimated that cement losses 30% of its strength after being stored for six months and an additional 20% if stored for a year. Local cement reaches retailers an average of two to three months after it is produced, while imported cement can take up to a year. There are also allegations that some unscrupulous importers use lower quality "fly-ash" cement, which they pass off as Portland cement. All local cement is tested for strength and quality by government, while imported cements are not. This is why local cement producers charge 5-10% higher than imported cement. The loss of strength according to the lapse of time is as follows:

Period	Strength lost
Fresh Cement	0%
After three months	20%
After six months	30%
After twelve months	40%
After twenty months	50%



The domestic sector is also protected by the government's tariff structure. A 30% duty is levied on imported cement while the duty on clinker is only 15%. Furthermore, local producers enjoy some advantages in transportation costs. Cement is always expensive to transport because of its weight, but the cost of transportation to Bangladesh is particularly high. This is because both of the main entry ports in Chittagong and Mongla are on narrow deltas and this often causes delays in off-loading freight.

Despite these advantages, local producers have faced short-term problems from imports being dumped onto the local market. Cement companies in India and China are limestone based and therefore generally enjoy higher margins. Moreover as a result of their higher capacities, Chinese and Indian producers enjoy considerable economies of scale. Finally both countries are set to have fairly large cement surpluses in the next three years

5. THE INDUSTRIAL PROGRESS

The main raw materials used in the production of cement are limestone, clay, iron oxide, aluminium oxide and gypsum. Limestone accounts for about 65% of the total composition of cement, clay for 25%, iron oxide 3-4%, aluminium oxide 2-4%, and gypsum the remaining 2-4%.

To make cement, limestone, clay and iron oxide are crushed into fine particles and sent through a kiln for firing. At around 1,338 degrees centigrade the particles start to melt and at around 1,450 degrees centigrade four compounds are created. If this melted product is cooled quickly, clinker is formed. In Bangladesh all cement factories, except for the state-owned plant in Chhatak and a small plant in Ayenpur, import clinker, as it is not economically viable to extract large amount of limestone in Bangladesh.

To convert into cement, the clinker is crushed and mixed with gypsum to reduce the reactivity of aluminium oxide. The amount of gypsum used in the final process depends on the amount of aluminium oxide in the clinker and the type of cement being produced.

There are four kind of cement:

1. Ordinary Portland Cement
2. Rapid-hardening Portland Cement
3. Slag Cement
4. White Cement

All Bangladeshi manufacturers produce the first two types of cement. Rapid-hardening Portland consists of finer particles than ordinary Portland cement

therefore strengthens more quickly. It is often used in the construction of high-rise buildings as it reduces overall construction time. Mixing ordinary cement with slag, the waste product of steel factories, makes slag cement.

According to industry guidelines, up to 65% of this product can consist of slag, which greatly reduces overall costs. Slag cement is not produced in Bangladesh, as the country does not have any developed steel industry. Slag cement is imported in fairly large quantities and local cement companies complain that imported slag cement is sometimes fraudulently sold as ordinary Portland to unsuspecting consumers. White cements are used for decorating walls and ceilings. There are no white cement manufacturers in Bangladesh.

6. ScanCement In Bangladesh

6.1 Company Overview

Scancem Bangladesh Ltd. is at present, importing bulk cement from Malaysia and Japan. They have started the work to set up a clinker-grinding factory with 750,000 metric tons per annum capacity. Scancem Bangladesh Ltd. is a part of Scancem group. The Scancem Group, the largest cement and building materials company in Europe with over 125 years experience and knowledge was, founded in 1996 through the merger of the cement and building material companies of Euroc (Sweden), Aker (Norway). Today Scancem has activities in approximately 30 countries around the world. Scancem has approximately, 11,000 employees and annual sales exceeding of USD 2 billion.

Scancem Bangladesh at a glance

Established: 1998

Sector: Construction Materials.

Industry: Cement Trading & Producer

Organizational Type: Global

Product:

a) Grey Portland Cement
b) Mineral based Building Material

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No. Of Employees: 75

Country Representative:

Crister Eriksson
Vice President, Marketing & Sales

and sell mineral based building materials. These products include cement and clinker, ready-mixed concrete and aggregates, concrete products, premixed masonry products and bricks, lightweight aggregates and plasterboard. The cement business accounts for about half of the Group's sales. Scancem Group's important markets for cement activities are certain areas of the United States, Africa, and the Nordic countries, the Baltic, Poland and the United Kingdom. The group intends to expand primarily through acquisitions and partnerships as well

as through structural changes and organic growth. Scancem strives for an increased level of value-added process in selected product areas.

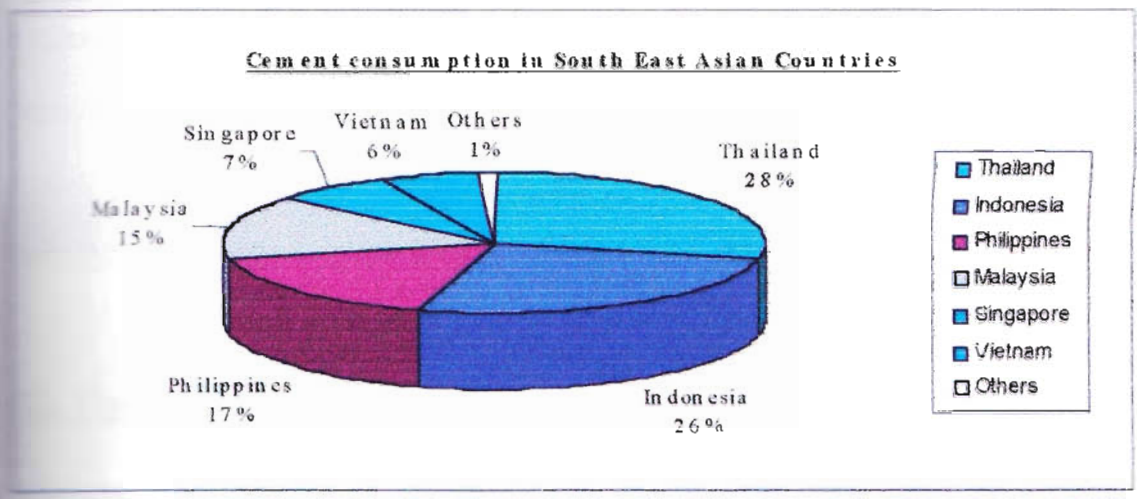
6.2 The Strategy of Geographic Diversification:

The strategy of geographic concentration has proven to be a poor strategy for cement manufacturers. For example in the United States where the economy is revered to be gigantic and strong there remains less growth opportunities for cement industry. Most of the requirement is for maintenance and repair work as opposed to erection and construction of new structures. Unless there is a preference for cement as the chosen construction material, and low per capita consumption, investment in cement industry becomes useless. Low per capita consumption and a developing economy promises tremendous growth opportunity once the economy picks up and people start using cement to better their living standards.

The market in North America therefore lacks growth opportunities and are less lucrative grounds for investing if compared with Asia. Therefore by geographically diversifying and spreading in Asia ScanCement has ensured that its long-term need for growth is protected. In order to this ScanCement did not hesitate to take over Asian companies and incur the cost of extensive post merger integration processes.

South East Asia was chosen as the region of consideration. From the chart that follows we can see that cement consumption is very high in Indonesia and

Philippines, accounting for 26% and 17% of the regions total cement consumption. Per capita cement consumption in the two countries are respectively 170kg and 96kg. By acquiring the big cement producers in the region ScanCement has established a strong hold in the shortest possible time.



7. THE FACTORS THAT BROUGHT SCANCEMENT IN BANGLADESH:

Bangladesh is the only and first country in Asia where ScanCement is implementing its operation from the scratch. Bangladesh has been an attractive investment ground for ScanCement since it was identified that the government is prepared to give various incentives to foreign investors who bring in much needed foreign capital for the long term development efforts of Bangladesh. The limited impact that Bangladesh had during the Asian crisis also made Bangladesh a place ideal for large investment.

7.1. Ownership/ consortium

Scancem Bangladesh Ltd. is setup its local company to run the operation in Bangladesh. This consists of a Joint Venture between foreign partners and local partners. ScanCement International Ltd. took the major equity in this company and the other equity holders are:

- CDC (Commonwealth Development Corporation)
- Multimode Group
- A.K.M Jahangir Khan & Family
- UCC (Union Cement Company)

7.2. Market Factors

7.2.1 Supply side Analysis

To analysis the supply side of cement industry for the last few years I needed to collect information from two points of view. If I can collect the data on Import of cement and local production of cement then it is possible to have the complete picture of the supply of cement in the country. I have collected this data 90-91 to 98-99, the fiscal year, instead of the calendar year has been used for this purpose, because the data collected from National Board of Revenue (NBR), Bureau of Statistics (BBS), customs and the Bangladesh Bank keep their record on the basis of the fiscal year.

I tried to collect from different sources. I went to Bangladesh Bureau of Statistics (BBS), National Board of Revenue and Bangladesh Bank. I collected data on the import of cement and clinkers. The National Board of Revenue could not give the quantity of imported cement and clinker. They could only provide the value of imported cement and clinkers and the duty that they collect on these imports.

The Bureau of statistics could provide with the data of import of cement and clinkers from 1990-91 to 1998-1999. They have furnished with the quantities of import as well as the value of the imports. From the Bureau of Statistics, I collected the data for import annually. Regarding the production of cement, I

visited the offices of all the factories and along with their production figure I also collected a short profile on their factories.

The import of cement & the local production of cement for the year 90-91 to 97-98 are shown in the following table:

Quantity in Metric Tons

Year	Import of cement	Production (Grinder)	Production (Limestone Based)	Total
90-91	1, 466, 767	160, 000	110,000	1,736,767
91-92	1, 434, 285	180, 000	108, 000	1, 722, 285
92-93	1, 972, 310	165, 000	115, 000	2, 252, 310
93-94	2, 626, 509	203, 000	112, 000	2, 941, 509
94-95	3, 123, 863	126, 000	147, 000	3, 396, 683
95-96	2, 444, 009	520, 000	153, 000	3, 117, 009
96-97	2,445,171	890, 000	170, 000	3, 505, 171
97-98	2, 605, 140	1, 195, 000	160, 000	3, 960, 140

7.2.2 Demand for Cement

Per capita cement consumption of Bangladesh at about 330 kg, is one of the lowest in the world. Neighboring India has a consumption of 65 kg per capita and

the Philippines 85 kg per capita. Overall cement demand has growth at an average of 7% per annum during the last 10 years or so.

It is stated that for a developing country at Bangladesh's stage of economic progress, demand of cement, in the medium term, will increase by 1.5 X GDP growth rate. Government of Bangladesh has set 7% GDP growth rate during the 5th 5-year plan (1997-2002). On this basis, we may assume that cement demand, at least, in the immediate future, may be around 10%.

There are two main factors driving increasing demand for cement, housing and infrastructure development. On account of urbanization and massive migration of rural people, particularly, to the capital city of Dhaka, coupled with acute shortage of land, there has been a boom in the construction of houses, with a distinct shift towards high rise apartment buildings in Dhaka. It is estimated that there will be demand for over 500,000 apartments per year for the next 5 years.

Again, on account of existing low level of infrastructures facilitates, government is under obligation to significantly increase expenditure on infrastructure development including roads, bridges, embankment, culverts, power stations etc. the frequent occurrence of floods causes substantial damages to the infrastructural facilities.

This is also necessitates increased allocation of government funds including aid from donor agencies, to the infrastructure sectors. Constructions of factory

buildings including those in the expanding export processing zones, shopping complexes, and big hotels, may also looked upon as significant consumer of cement.

Demand of cement is countrywide with Dhaka, Chittagong, Sylhet, Khulna, and Rajshahi comprising the main markets, while Dhaka with nearby regions accounts for about 50% of the market, Chittagong about 15%.

Production of 1.205mec tons in 1997-98 when installed capacity in the country, was 2.489 mln. tons, shows an average capacity utilization of 48.41%. This level of capacity utilization is poor by any standard of industrial performance, particularly, if we consider the fact that most of this production comes from grinding of imported clinker, which is relatively a simple process.

However, on examination, it is found that the main reasons for such low capacity utilization, may be attributed to the following:

- Poor logistics management and failure in timely supply of clinker.
- Interruption of power supplies.
- Difficulties in clearance of cargo in port.
- Customs delays and lack of rationalization of tariff.
- Work stoppage and labor problem.
- Unfair competition from poor but cheap imported cement.

Although there are many indicators showing that there will be very high growth in the demand for cement, on the basis of annual growth rate of 10%, the total year wise demand of cement up to 2004-5, has been estimated as under:

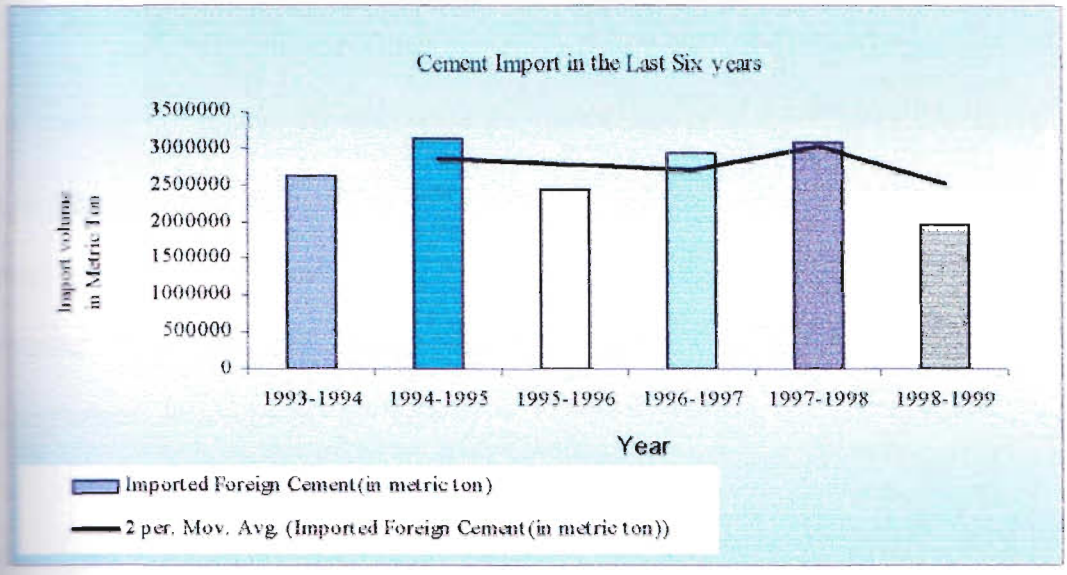
(Fig. In "000 mt)

YEAR	DEMAND
1998-1999	4356
1999-2000	4792
2000-2001	5270
2001-2002	5798
2002-2003	6378
2003-2004	7016
2004-2005	7717

Bangladesh with its expanding demand and a continuing demand-supply gap in cement is an obvious choice for large multi-national companies to explore the possibility to operate. The excellent incentive package for foreign investors, incorporated in the industrial policy of government, has also encouraged these companies to take positive interest in cement industry in Bangladesh.

Growth in construction sector in Bangladesh stands at 7% per annum. It is expected that the demand for cement would increase at a rate of 6%-7% over the medium term. Estimated demand for cement per year in Bangladesh is about 4 million metric tons per annum[1]. The per capita cement consumption is 35 kg (National Average).

Currently there are 16 cement-producing plants in Bangladesh. Of these only two are fully integrated cement plants (which are Chhatak and Ayanpur in Sylhet). The rest are cement-grinding plants that import clinker and grind the raw materials to produce cement. Production capacity of the present plants stand at around 4.9 million metric ton per annum, though none of these plants are running at full capacity. That means that much of the cement that the market badly demands has to be imported from abroad.



Source: National Bureau of Revenue (NBR)

Import of cement has been coming down gradually as more and more cement plants are being erected. Meanwhile people prefer locally produced cement to the imported ones as it is widely accepted that fresh ground cement from the plant is better than the imported ones. The following graph will depict the trend of waning import of bagged cement.

If we follow the trend line of the graph above we can see that demand for imported cement has been decreasing gradually. In 1994-1995 the demand for cement was about 3.12 million metric ton where as it shrank to 1.96 million metric ton in 1998-1999. Companies like Scan Cement predict that the importers of cement will be completely driven out once efficient production of cement takes place in the next five years. It is forecasted that in the next five years or so 50% of the local cement market will be controlled by big multinational player like Lafarge and Cemex, as they will produce high quality cement with efficiency.

7.2.3. Manufacturing Factors

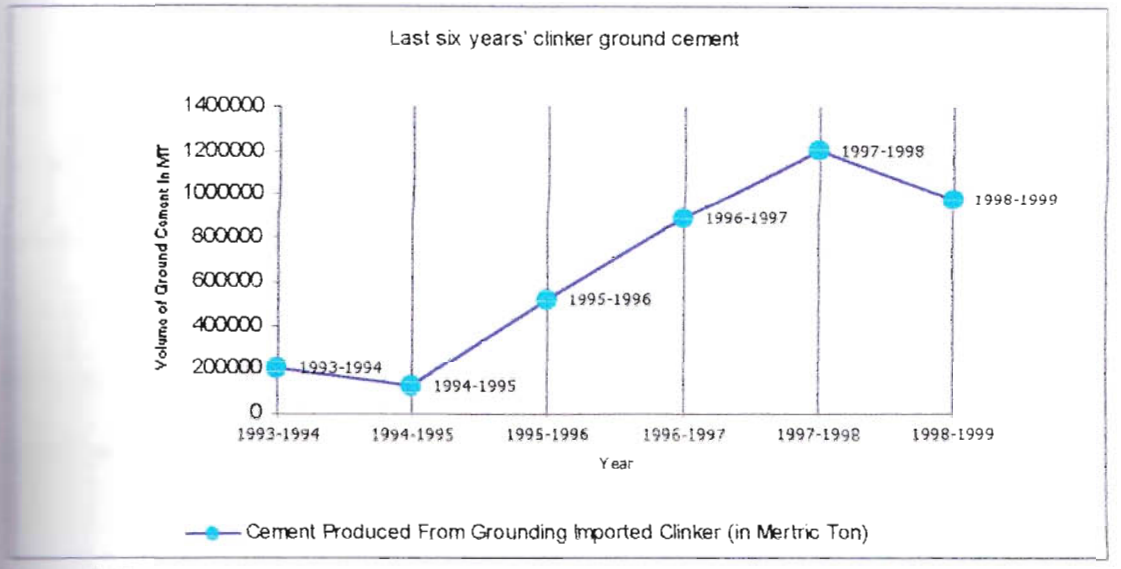
It is difficult to obtain limestone in Bangladesh and that works as a hindrance to commission a fully integrated cement plant. Therefore the most logical step is to erect a grinding plant and import the raw materials that would be ground to make cement. That has been the time-honored way of manufacturing cement in Bangladesh as far as private industrial enterprises are concerned.

For Scan Cement it is very advantageous to erect a grinding plant since it can readily import clinker and gypsum from Malaysia where its sister concern produce it in plenty. Government of Bangladesh is also considering reducing tax in import of clinker as it is widely recognized as an industrial raw material.

The graph in the following page depicts[2] that how sharply import of clinker has increased within the last six years as more and more clinker grinders have been in the market.

Year	Cement Produced From Grounding Imported Clinker (in Metric Ton)
1993-1994	203063
1994-1995	126284
1995-1996	519287
1996-1997	888608
1997-1998	1204820
1998-1999	974359

Source: Harbour Master's offices (Mongla and Chittagong Port Authority)



If we follow the trend line we see that a very steep line illustrates the sharp increase in the demand of clinker. Cemex is investing U.S.$ 26 million to erect a clinker grinding plant where as for an integrated cement plant one of it s global competitors, Lafarge, in Bangladesh is investing 240 million U.S. $. Given the cost of phasing in an integrated plant it is much efficient to erect a grinding project.

8. Human Resources

8.1 Nature of Management

To become a truly world class company ScanCement is working hard to break down geographic borders and cultural barriers. ScanCement people must have a multinational and multicultural perspective to succeed in the global market place. Accordingly the company brings together managers and employees from its offices all over the world to exchange ideas, present problems and discuss

issues of concern to the entire organization. The management style in ScanCement is essentially 'Y' type.

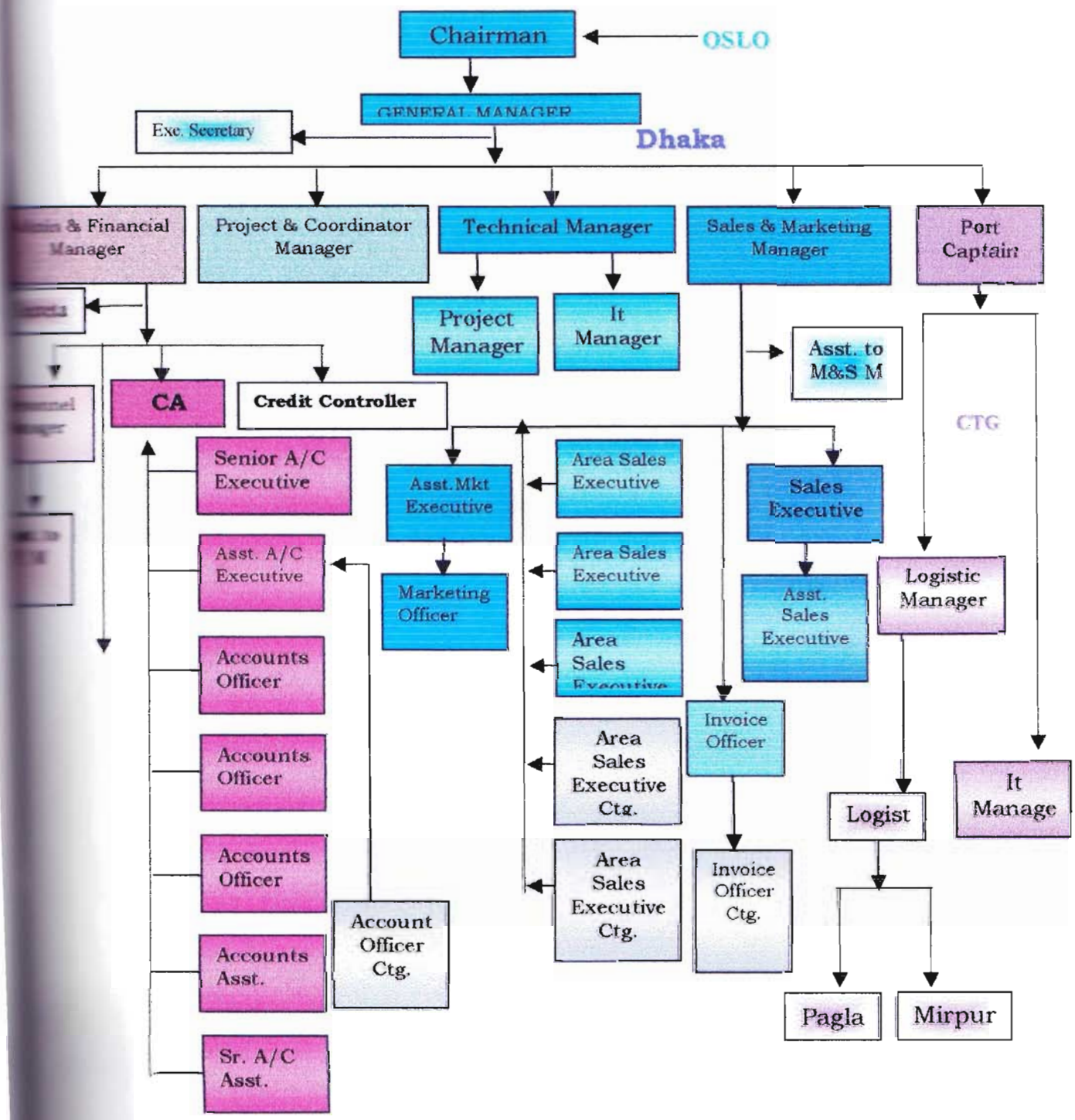
It is heavily dependant on teamwork and at all costs a congenial and cooperative working environment is aimed at. Very elaborate guidelines and code of ethics remains that is followed when it comes to the management of Human Resources. The compensation and benefits package that ScanCement offers throughout the world is outstanding in the industry and encourages the employees to adhere to ScanCement principles.

In Bangladesh no exception has been made with regard to the human resources. Scancem Bangladesh Ltd. from its very inception recognized that it requires highly skilled and qualifies individuals to succeed in the market.

It had a Human Resource Manager from the very beginning and according to ScanCement policies all recruitment has been made. Headed by a General Manager Scancem Bangladesh Limited at the time has over 75 employees. Since the company is very much in the implementation stage, many of the services that they need have been contracted.

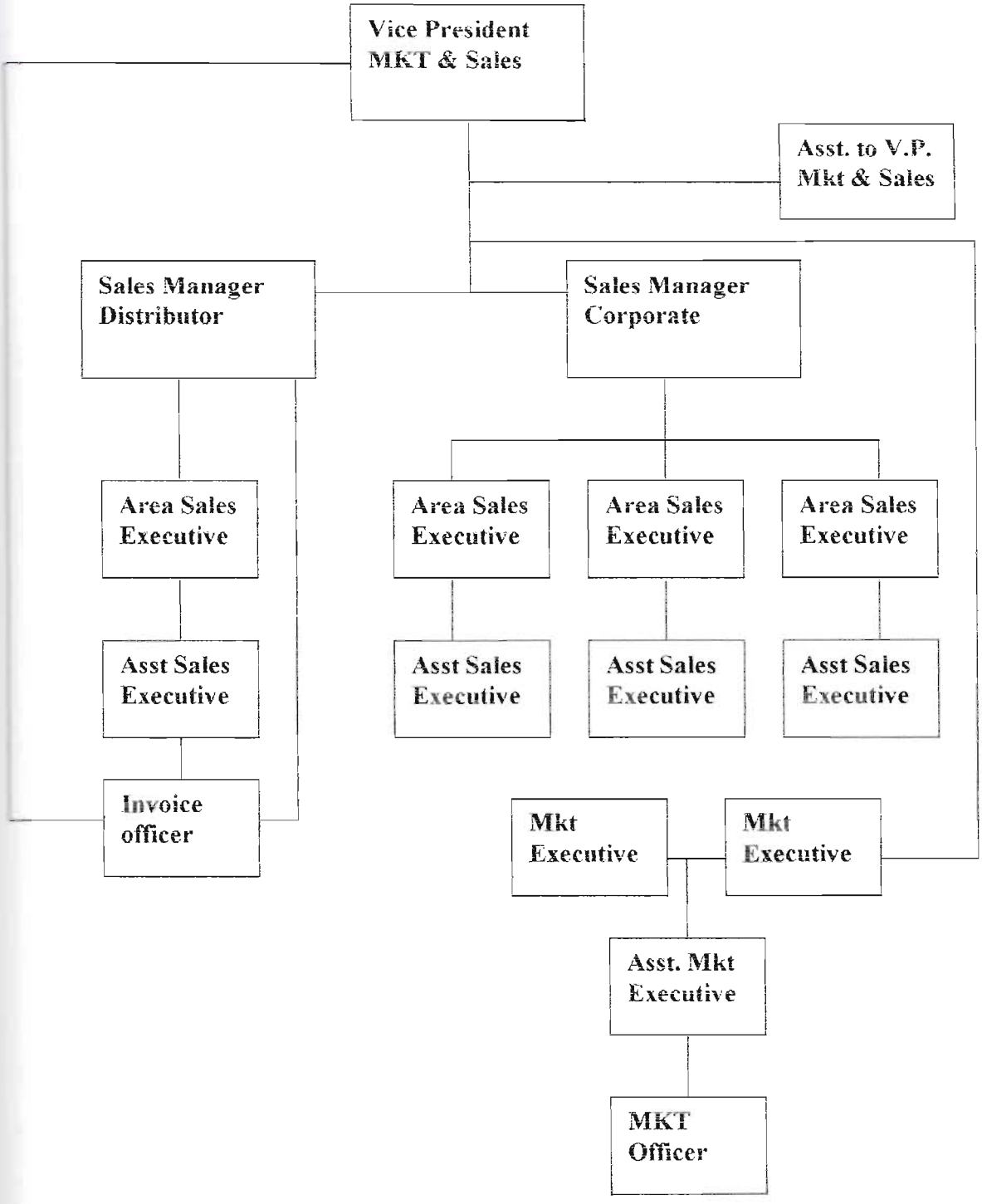
8.2 Present Organ gram

The organ gram of Scancem Bangladesh Limited is shown here:

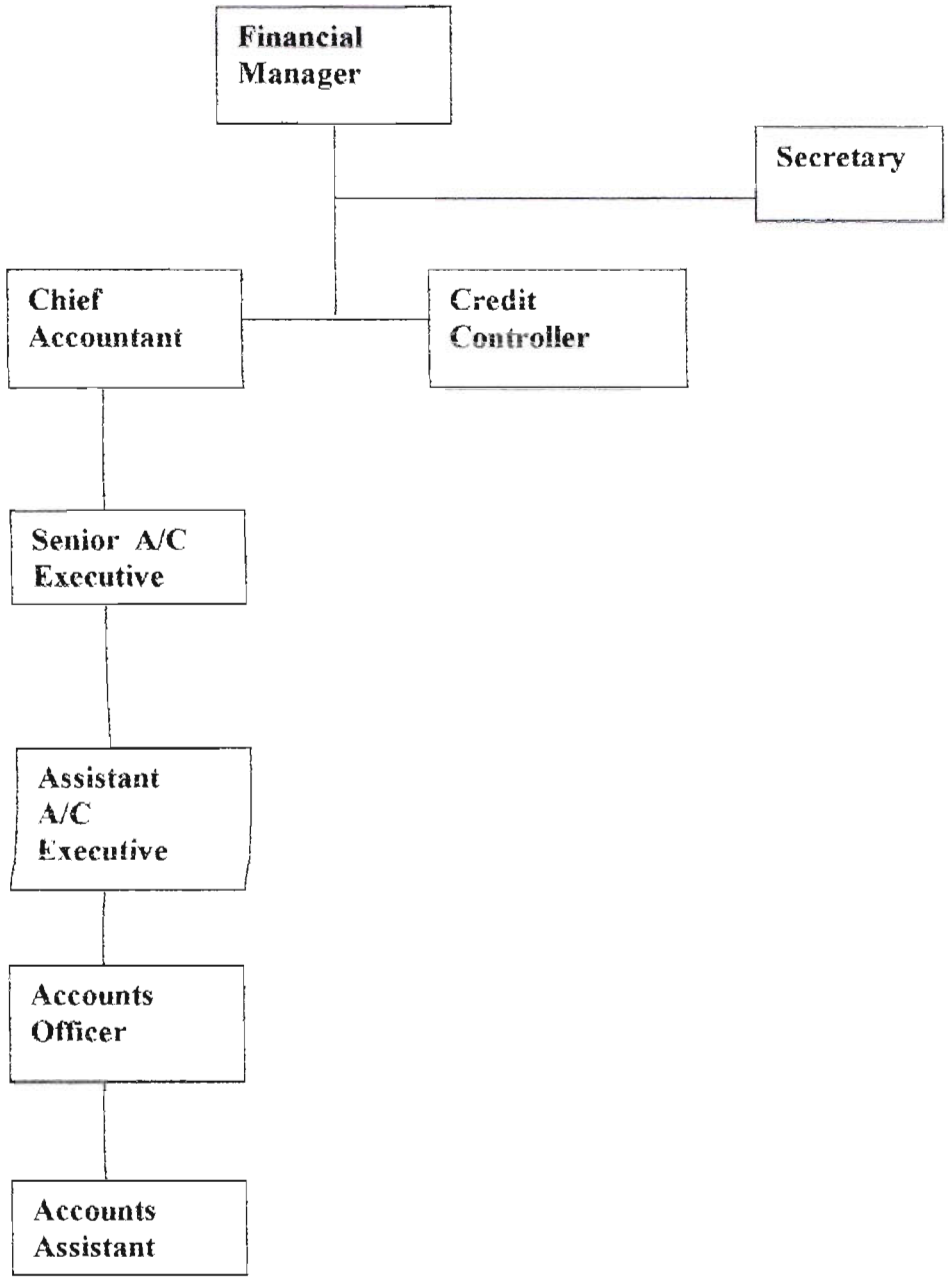


As discussed previously Scancem Bangladesh Ltd. is headed by General Manager who is the chief of the entire operation overlooking the plant erection and the business operation that is being run by importing cement. Under the General Manager there are five managerial positions. They are respectively Administration &Financial Manager, Technical Manager, Sales & Marketing Manager and Port Captain as shown above. It is worth noting that under the Administration &Financial Manager Administration &Financial Manager, all the posts that remain are Manager posts (Personal Manager, Admin & Co-ordination Manager, Finance & Accounts) and they have staff relation between themselves. This clearly depicts the team concept in managing. However, in Bangladesh this organ gram has been constructed on an ad hoc basis and will be reviewed and changed when all the personnel become permanent.

8.3 Organ Gram of Marketing Department



3.4 Organ Gram of Financial Department



9. Technological Competency and Competitive Advantages

For any multinational company competitive advantage is the key strength that allows them to enter a market without being seriously threatened by local or other multinational enterprises in the same industry. This is so because the rivals of a firm cannot easily replicate competitive advantages, and that gives a firm definitive edge to stay ahead or compete head to head.

In ScanCement the competitive advantage is mainly technological competency in producing cement efficiently and adapting to local needs and conditions. As a 94 year old company involved in the business of producing cement it has considerable experience and engineering know how in what sort of production arrangements need to be made in order to serve a particular market or region. It knows what is the best machinery that is to be installed in order to get maximum return on its investment.

As the world's largest cement trader it also has experience in logistics of carrying cement from one part of the world to another. ScanCement has bridged the gap of demand when there has been a crisis in a given market by feeding cement from the markets where it is over-supplied. Presently in Bangladesh it is bringing in cement from its Indonesian operation and selling in the local market before the operation of its grinding plant began. That way the local market will be ready to accept this brand, as the brand identification will already be established.

10. Conclusion

As an organization ScanCement is very new in Bangladesh. It is yet to deploy it s full resources and enter the Bangladesh market effectively. All its necessary components are just being put in places whereto they are needed. The plant erection is only half way through and will be commissioned by the March of year 2001. Much of the human resources and departmental services that a business needs are being met by outside contractors. In the next five years depending on the demand ScanCement plans to erect three cement factories in the geographically advantageous areas. After a the successful implementation and phasing in of the current plan it can be hoped that ScanCement will be able to meet much of the demand for quality cement that the country needs. At the time it has to be said the organization has all the right people and the right technological know-how that it requires to succeed in Bangladesh.

11.Literature Review

The market of the oil well cement in Bangladesh at the moment is very small. In fact, presently there are only 3 oil and gas exploration companies that are consuming oil well cement. These are Shell, Unocal and Bapex. There are also two drilling and cementing organizations, Schlumbereger and BJ Services, they are engaged in drilling service for the oil extracting organization. Bapex has their own drilling department and is self-sufficient. All companies are using API cement, which is a class "G" Portland cement. The oil well cement are used by the drilling companies, cementing companies and the oil and gas exploration companies.

- **Drilling Company:** The drilling company sets up the entire drilling plat-form for the oil and gas exploration. In the plat-form there are few more organizations that provide services during period of drilling the well and the production time. That are cementing organization, cleaning organization and few more. See appendix section.
- **Cementing Organization:** The cementing organization provide only the specified quality of oil well cement (API standard) to drill the well and to make the casing of the hole on the drilling plat form.

11.1 Usage Pattern

- The oil companies provide a subcontract to the drilling companies and the drilling companies like Schlumberger and BJ Services, purchase the oil well cement for the oil companies. The oil companies mention in their agreement whether they are going to buy the cement or not. Sometimes the drilling companies or the cementing companies purchase it from abroad and sell it to the oil companies for the oil exploration. During the drilling period to drill a normal well 350 MT to 600 MT of oil well cement is needed. **(source Senior Well Engineer of Shell)**

11.2 Purchase Pattern

Usually the cementing organization purchase bulk quantity of Pan Malaysian Cement (PMC) from Singapore, Siam cement from Thailand and Dalmia and

Dikbizoy from India. Usually they purchase the cement for 2/3 years. Normally they purchase it in following two packages

1. 50KG/bag or sack and it is Shrink wrapped
2. 1ton/ bag or sack Shrink wrapped

Standard rule is per bag/sack should contain 94 pound. But the suppliers change the quantity according to their convenience.

The cement is imported to Bangladesh only through Ctg Seaport.

11.3 Price

The price /MT of oil well cement for the year 2000 are:

1. 167USD per MT (according to Shell)
2. 144 USD per MT (according to Unocal provided by the BJ Services.
3. USD 7.5 – 9 per Sack (50kg) from Singapore, Thailand, Malaysia.

11.4 Demand

Based on survey report of oil exploration and cementing organizations the consumption pattern during 1999-2001 as follows;

The demand for the oil well cement is largely dependent on the exploration activities. The consumption of oil well cement fully depends on the shape of the casing and whether it is a normal drill or abnormal drill. The normal drill requires 350 to 650 MT cement and abnormal drill requires 800 MT cement.

- In the year 1999 the total consumption of oil well cement was 4650 MT equal to USD 830000
- In the year 2000 the total consumption of oil well cement was 3300 MT equal to USD 490000.00
- In the year 2001 the total consumption of oil well cement is 600 MT equal to USD 100,200

The total demand for oil well cement decreases because no new exploration is taking place at the moment. Considering the present situation, Bangladesh Government has fulfilled the present demand and also have surplus of inventory.

So the government does not allow them to go for further drilling. Political issues influenced the negotiation process with other oil companies.

12. Background of research

The research paper is done as my internship report on behalf of Scancem Bangladesh Ltd. Scancem has been in this country since 1998 and is a subsidiary within Heidelberger Zement Group, which has entered Bangladesh to supply high quality ordinary portland cement. Considering the present market situation and future prospects, Scancem is considering introducing a well-known brand of oil well cement, which is manufactured within the group.

12.1 Broad objectives:

- To find out the usage rate of oil well cement among users for the last two years in Bangladesh.
- Forecasting the usage rate of the prospective and current users in the next five years in Bangladesh.
- To find out the feasibility of launching the product in the Bangladesh market.

12.2 Problem recognition:

The extraction companies have always used the oil well cement by importing the product directly through the oil companies' purchasing units. As of yet, there has been no localized cement company that provides this category of cements. Scancem is planning to introduce oil well cement in Bangladesh through direct import of finished goods, but it is unaware of the market situation and the prospects the product has in the country.

12.3 Specific objectives:

The following information will be gathered from the organization in operation, which are using oil well cement:

- The total consumption of oil well cement in the drilling phase in quantity units for the year 1999 and the year 2000.
- The total consumption of oil well cement in the production phase in quantity units for the year 1999 and the year 2000.
- The total consumption of oil well cement in US dollars for the year 1999 and the year 2000.
- The total consumption of oil well cement in EX works FOB rate for the year 1999 and the year 2000.
- The total consumption of oil well cement as per CNF (Chittagong / Mongla port) for the year 1999 and the year 2000.
- Per unit price of oil well cement in year 2000.
- The drilling plans from year 2001-2005.

The following information will be gathered from the prospects using oil well cement:

- Plans to be engaged in extraction activities within next five years.
- Plans to use oil well cement in their extraction activities.
- Forecasted quantity of oil well cement to be used for extraction activities in a year.
- Plans to consume oil well cement in the next five years in quantity units.
- Plans to consume oil well cement in the next five years in US dollars.
- The total consumption of oil well cement in the year 1999 in monitory units (applicable for used oil well cement previously but have stopped using temporarily).

12.4 Types & source of information

- Shell / Cairn
- Unocal
- Bangladesh petroleum exploration Co. Ltd. (BAPEX)
- Oakland/Rexwood
- Honodo
- Tullow
- UMC
- Enron
- Maersk
- Pangea
- BJ Services Co. (DRILLING)
- Petrocenter (PETROBANGLA)
- Schlumberger (Drilling)

12.5 Scope of the research

The scope of the research is within the oil, gas, drilling and publicly owned companies that can give us the relevant information.

12.6 Hypothesis of the research

From the secondary data, we have conjectured the following hypothesis:

- The oil and gas companies will consume more than 10,000 MT in 2001.
- The feasibility of launching the oil well cement in Bangladesh depends on the increase in extraction activities.

12.7 Descriptive vs. Causal

Basically the topic of our research comprises mostly the causal aspects. There are various questions concerning the consumption rate of current users and probable consumption rate of the prospects. The study also contains descriptive

aspects as the answers of the questions that will be the most probable prospect for oil well cement.

13. Developing a sampling plan:

13.1 Defining the population:

The population for conducting this research would be all the organizations that are engaged in excavating activities for extracting natural resources from the earth core and the organizations that are planning to perform excavating activities in the next two years. As the population size is smaller and represent entire population, a census research would be more logical and efficient.

As accuracy is a vital aspect in the study, a quantitative study will be more relevant for conducting this research.

13.2 Sampling frame:

As a census is required to conduct the research, all the organization engaged in excavation activities in Bangladesh would be the sample frame and size.

13.3 Methodology:

Interview of representatives related to purchase cement of drilling.

For the study purpose the following persons have been interviewed and data collected

13.4 Limitation:

There had been some limitations that restricted the competence of the study:

- The contents of the study are subject to company confidentiality. So I, as an intern from SBL could directly ask for such information to the organizations, fro which I had to approach as a student of BBA from East West University. When organizations students assistance for academic purposes, they usually provide information in a generalized form, from which the exact picture may not reflected.

- Depth interview that are designed to uncover hidden motivation through probing, requires interviewers with special skills and expertise. I, being a fresh graduate, tried my best, through an experienced interviewer might have been able to do much better.
- Through I was determined to collect information from 13 sample units, at the end I had to be content with 5 organization instead. This is because other 8 companies have no office in Bangladesh.

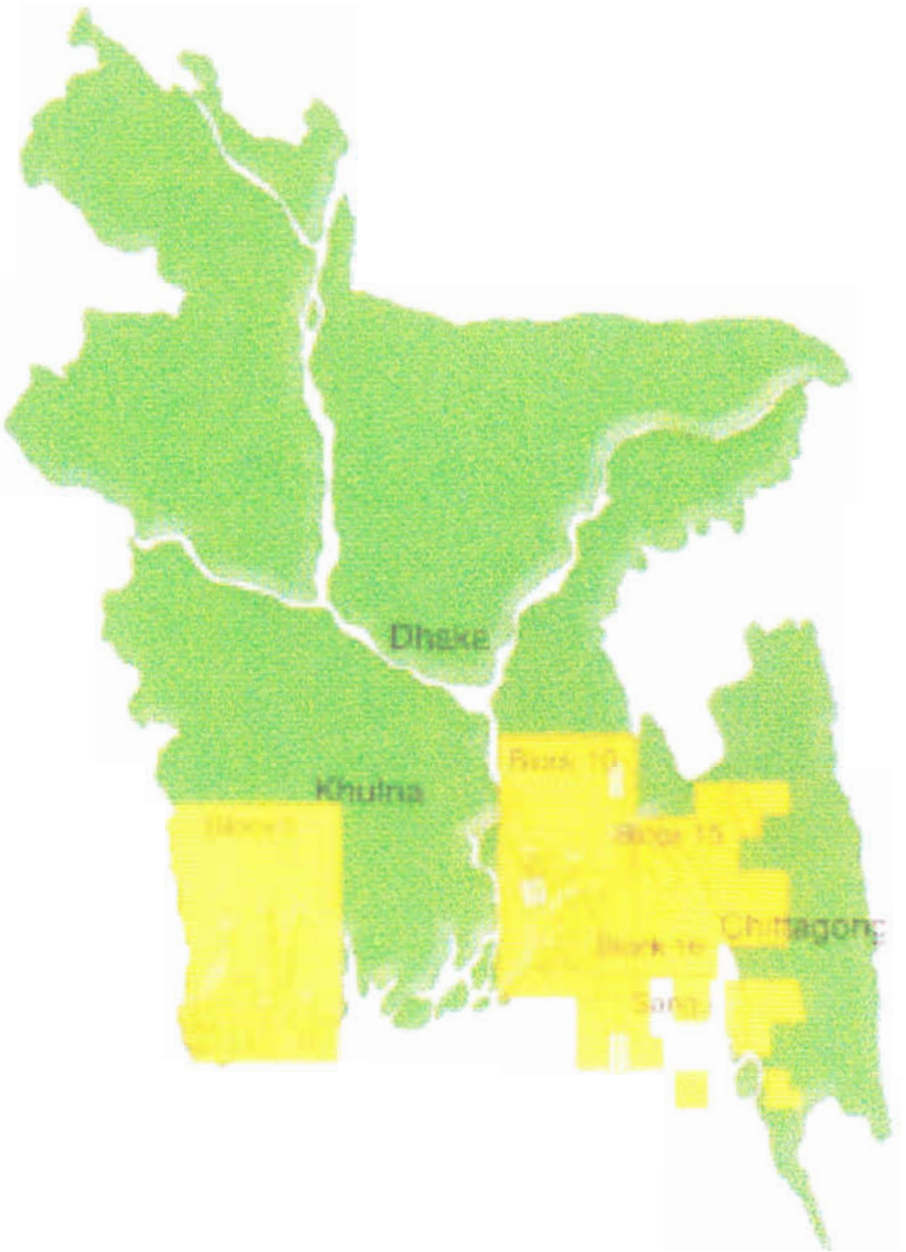
To conduct the study effectively the source will follow the map of Bangladesh comprising of 23 exploration blocks of natural resources mining site and all the organizations engaged in the excavation activities were gathered from the Ministry of natural resources. The awarded oil and gas exploration organizations would be visited to collect information relevant for the study.

The organizations that have recently applied registration for operating excavation activities will also be visited.

13.3.1 Map of Bangladesh (Drilling Sectors)

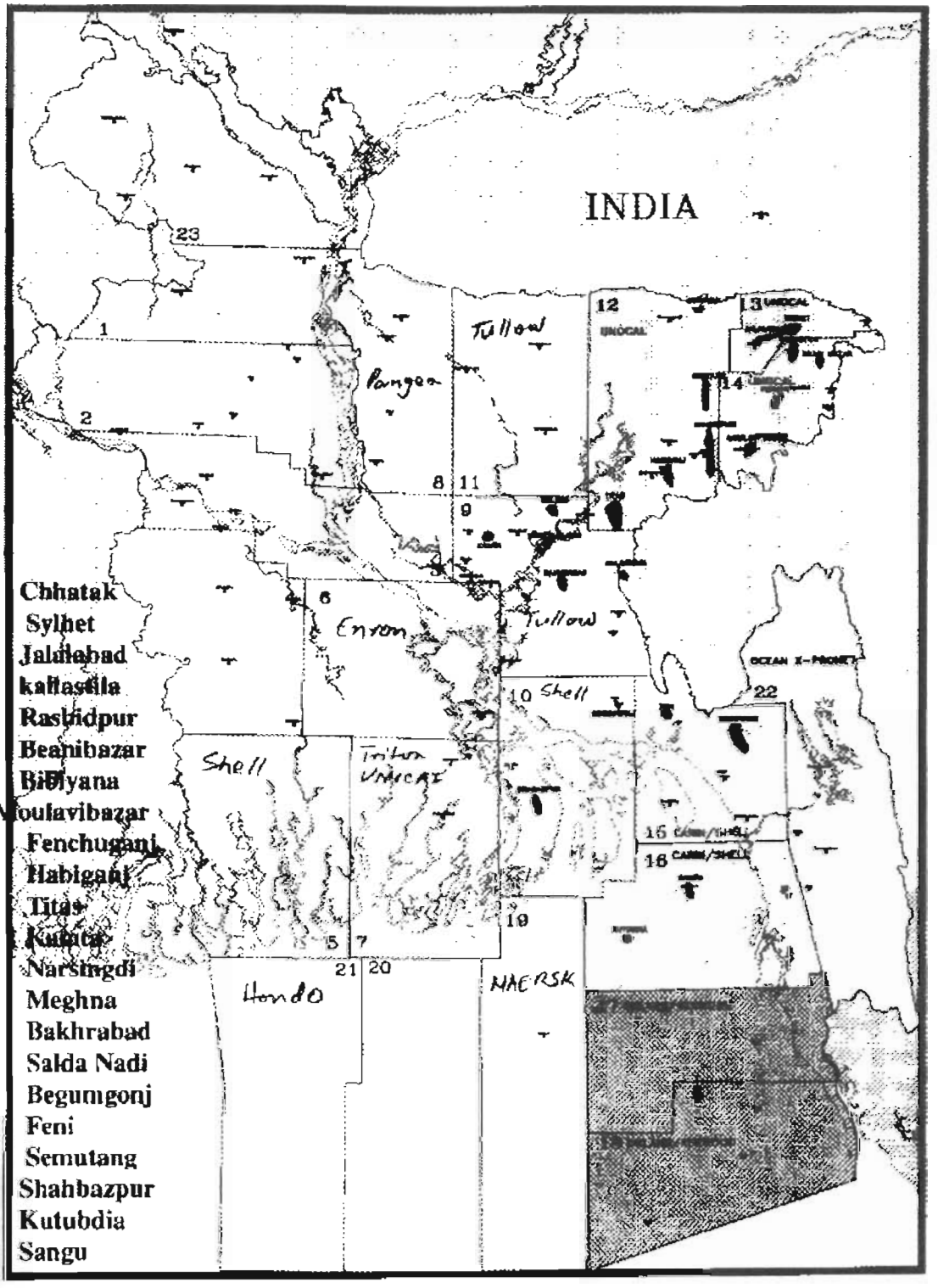
Source : Schlumberger

13.3.2 Shell operation in Bangladesh



Source : Folder published by Shell

13.3.3 23 blocks of oil and gas exploration in Bangladesh



Source : Published map by Petrobangla.

13.4 Data collection method

As quantitative data are required to conduct the study, an extensive depth interview with the purchase officers of these organizations responsible for the consumption of oil well cement will be conducted respectively. A close-ended question would be prepared considering the following information areas.

- Quantity of oil well cement in the past two years.
- The expected increase/ decrease of oil well cement usage rate in the next year by the present actors.
- The expected usage/ consumption quantity of oil well cement in for 2001 – 2005 by the non-users (prospects).

After gathering the relevant data the consumption rate would be forecasted thought some forecasting techniques.

The source of information will be the in charge of exploration activities and related executives.

13.5 Field plan:

The researcher will solely execute the field plan. He will determine the interview procedure regarding the questionnaire. After a pretest the questionnaire will be restructured if necessary.

As the research focus mostly on quantitative data, depth interview will be more appropriate to obtain findings regarding the objectives of the report.

14.0 Analysis

The discrete feature of qualitative or exploratory analysis is that, the researcher has title scope to quantify facts and produce judgement that can be claimed to be universally true. In this method respondents are asked a direct question that produces to the point answers all the time. Sometimes the interviewer even has to by pass the main topic and concentrate on topics that are outside the periphery of the research objective.

Consumption patterns from 1999 to 2001 and estimates the demand of the oil well cement.

How much oil well cement were consumed by the exploration companies in the year 1999 in quantity units and in monetary units.

To gathered the answer of this question the respondent consider few criteria that are
Number of drilling
Casing phase
Soil conditions
Shells consumed 300 MT of oil well cement equivalent to USD 50000 and Schlumberger (Dowell) performed the task of drilling.
Unocal consumed 4000 MT of oil well cement equivalent to USD 700000 and BJ Services perform the task of drilling.
Bapex consumed 350 MT of oil well cement equivalent to USD 80000 and Bapex and performed the task of drilling.

The total consumption of oil well cement in the year 1999 was 4650 equivalent to USD 830000.

There is little difference on quantity units and the US dollar amount among these three organization and it happens because of the drilling units. Some of the

organizations are performed 2/3 drilling activities and some of them one hole only some of them do not perform that's the only reason the companies are consuming in different shape. Not only these but also the agreement between government and the oil companies were not fruitful it had negative effects on through the consumption of oil well cement.

How much oil well cement were consumed by the exploration companies in the year 2000 in quantity units and in monetary units.

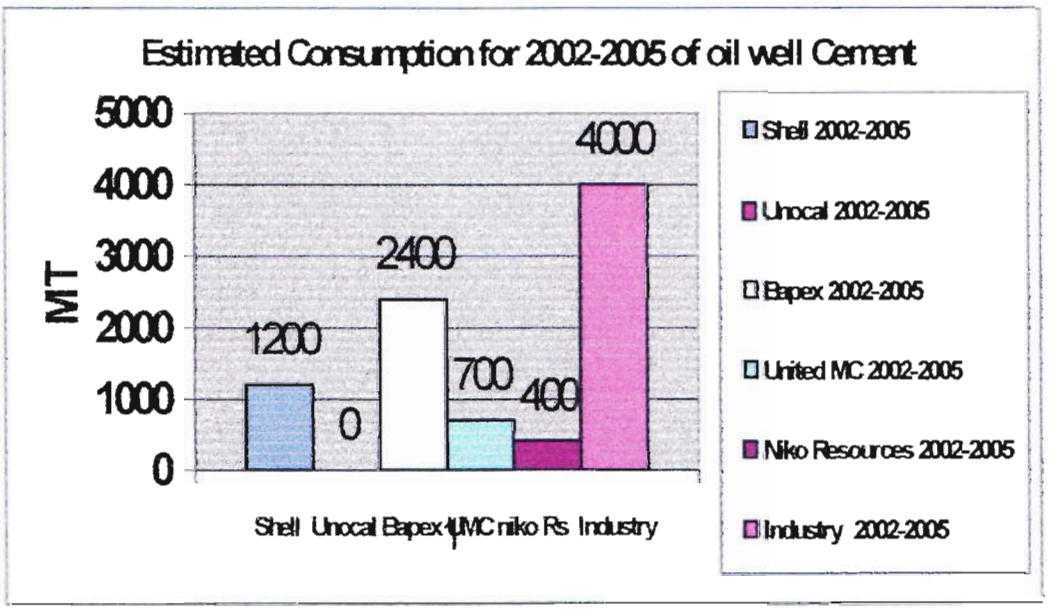
Shell has consumed 1450 MT of oil well cement equivalent to USD 140000 and Schlumberger (Dowell) performed the task of drilling.
Unocal consumed 1850 MT of oil well cement equivalent to USD 700000 and BJ Services performed the task of drilling.
Bapex did not consumed oil well cement because they do not have any drilling activities in the year 2000.

The total consumption of oil well cement in the year 2000 was 3300 MT equivalent to USD 490000.

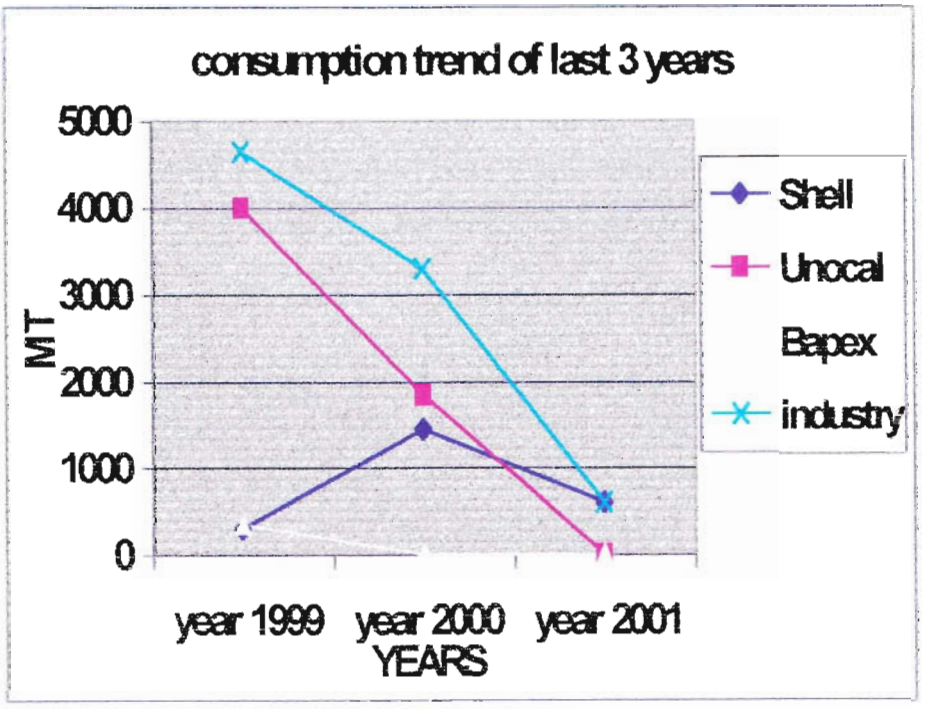
How much oil well cement are consumed by the exploration companies in the year 2001 in quantity units and in monetary units.

Shells consumed 600 MT of oil well cement equivalent to USD 100200 and Schlumberger (Dowell) performed the task of drilling.
Unocal consume did not consumed of oil well cement because they did not have any drilling activities in the year 2001.
Bapex did not consumed oil well cement because they did not have any drilling activities in the year 2001.

Actors	Year	Quantity MT
Shell	2002-2005	1200
Unocal	2002-2005	0
Bapex	2002-2005	2400
United MC	2002-2005	700
Niko Resources	2002-2005	400
Industry	2002-2005	4000



Company	Quantity (MT) Year 1999	Quantity (MT) Year 2000	Quantity (MT) Year 2001
Shell	300	1450	600
Unocal	4000	1850	0
Bapex	350	0	0
Industry	4650	3300	600



Future Plan of oil and gas companies.

Based on the survey report the oil and gas companies forecasted their consumption of oil well cement following by –

1. Shell will require 1200 MT of oil well cement in the years, 2002-2005.
2. Unocal has no plan for exploration in the years, 2002-2005.
3. Bapex will require 2400 MT of oil well cement in the years, 2002-2005.
4. United Meridian Intl Corporation (UMC) will require 700 MT oil well cement in the years, 2002-2005.
5. Niko Resources will require 700 MT oil well cement in the years 2002-2005.

For the year 2002-2005 the total forecasted quantity of oil well cement is 4000 MT. The forecasted consumption rate of oil well cement decreases because, the oil companies failed to made an agreement with the government. Political issues are also involved.

The actors order oil well cement to the suppliers after conforming the agreement with government. Depending on the number of drilling and the size of casing the actors give order for the estimated quantity oil well cement to the supplies.

Brand imported last 3 years through Ctg Sea port and the price per sack

Brand	Source	Price Range	Package pattern	Price Validity
Norcem Class "G" API Specification	Singapore	USD 7.5 – 9 per Sack (50kg)	Shrink Wrapped of four layers (paper & light polythyne)	3 months (the price remains same for 3 months)
Union Class "G" API Specification	Singapore/ Dubai	USD 7.5 – 9 per Sack (50kg)	Shrink Wrapped of four layers (paper & light polythyne)	3 months (the price remains same for 3 months)
Pan Malaysian Cement (PMC) Class "G" API Specification	Singapore	USD 7.5 – 8 per Sack (50kg)	Shrink Wrapped of four layers (paper & light polythyne)	3 months (the price remains same for 3 months)
Rayscut Class "G" API Specification	Singapore/ Dubai / Malaysia	USD 7.5 – 8.5 per Sack (50kg)	Shrink Wrapped of four layers (paper & light polythyne)	3 months (the price remains same for 3 months)
Siam cement Class "G" API Specification	Singapore/ Dubai / Thailand	USD 7.5 – 8 per Sack (50kg)	Shrink Wrapped of four layers (paper & light polythyne)	3 months (the price remains same for 3 months)
Class "G" portland cement API specified	Singapore	USD 7.5 – 9 per Sack (50kg)	Shrink Wrapped of four layers (paper & light polythyne)	3 months (the price remains same for 3 months)

The above brands are mostly used in our country and the size of the bag is given above. Normally the sack contains 50 kg and the price range is USD 7.5- 9. The range does not fluctuate since it is approved by the American Petroleum international (API) which shapes the world price of oil well cement.

15. Findings:

15.1 Actual market findings

15.1.1 Brand imported last 3 years through Ctg Sea port and the price per sack:

Brand	Source	Price Range	CNF	Package pattern	Price Validity
Norcem Class "G" API Specification	Singapore	USD 7.5 – 9 per Sack (50kg)	N/A	Shrink Wrapped of four layers (paper & light polythyne)	3 months (the price remain same for 3 months)
Union Class "G" API Specification	Singapore/ Dubai	USD 7.5 – 9 per Sack (50kg)	N/A	Shrink Wrapped of four layers (paper & light polythyne)	3 months (the price remain same for 3 months)
Pan Malaysian Cement (PMC) Class "G" API Specification	Singapore	USD 7.5 – 8 per Sack (50kg)	N/A	Shrink Wrapped of four layers (paper & light polythyne)	3 months (the price remain same for 3 months)
Rayscut Class "G" API Specification	Singapore/ Dubai / Malaysia	USD 7.5 – 8.5 per Sack (50kg)	N/A	Shrink Wrapped of four layers (paper & light polythyne)	3 months (the price remain same for 3 months)
Siam cement Class "G" API Specification	Singapore/ Dubai / Thailand	USD 7.5 – 8 per Sack (50kg)	N/A	Shrink Wrapped of four layers (paper & light polythyne)	3 months (the price remain same for 3 months)
Class "G" portland cement API specified	Singapore	USD 7.5 – 9 per Sack (50kg)	N/A	Shrink Wrapped of four layers (paper & light polythyne)	3 months (the price remain same for 3 months)

Source: Survey (oil and gas exploration com. drilling and cementing companies)

15.1.2 Quantity consume from 1999 – 2001 by oil and gas exploration companies.

15.1.2.1 Year 1999

Actors	Year	Quantity	US Dollars (USD) FOB	Name of the companies who perform drilling and cementing task for the oil and gas company
Shell	1999	300 MT	USD 50,000	Schlumberger (Dowell)
Unocal	1999	4,000 MT	USD 700,000	BJ Services
Bapex	1999	350 MT	USD 80,000	Bapex
Total	1999	4,650 MT	USD 830,000	-

15.1.2.1 Year 2000.

Actors	Year	Quantity	US Dollars (USD) FOB	Name of the companies who perform drilling and cementing task for the oil and gas company
Shell	2000	1,450 MT	USD 240,000	Schlumberger (Dowel)
Unocal	2000	1,850 MT	USD 250,000	BJ Services
Bapex	2000	Do not consume	N/A	Bapex
Total	2000	3,300 MT	USD 490,000	-

15.1.2.1 Year 2001.

Actors	Year	Quantity	US Dollars (USD) FOB	Name of the companies who perform drilling and cementing task for the oil and gas company
Shell	2001	600 MT	USD 100,200	Schlumberger (Dowel)
Unocal	2001	Do not consume	N/A	BJ Services
Bapex	2001	Do not consume	N/A	Bapex
Total	2001	600 MT	USD 100,200	-

15.2 Future plan of oil and gas companies.

Actors	Quantity	Year	Name of the companies who perform drilling and cementing task for the oil and gas company
Shell	1,200 MT	2002 –2005	Schlumberger (Dowel)
Unocal	-	2002 –2005	BJ Services
Bapex	2,400 MT	2002 –2005	Bapex
United Meridian Intl Corporation (UMC)	700 MT	2002 –2005	BJ Services (Expectation)
Niko Resources	400 MT	2002 –2005	BJ Services (Expectation)
Total	4,000 MT	2002 –2005	-

15.3 Patterns of delivery cement, supply system, agreement system.

15.3.1 Delivery

The actors order for the oil well cement according to their contract with the exploration companies, how many well would be drilled, depend on this the count how much MT of oil well cement they need and then the drilling companies order to their subsidiaries. After receiving the order, subsidiaries send the oil well cement at a time. Some times they order for total delivery some time they order partly it depends on the consumption and the exploration activities.

15.3.2 Supply system

The actors imported oil well cement from Singapore, Malaysia, Thailand, and Dubai and it imported only through Ctg sea port by supply boat, in bulk. One bulk can carry 200 MT of oil well cement. Some times they import it in a 50kg/ sack some time they import oil well cement in 1 MT/sack in form of shrink-wrapped. Only Shell has their own dry dock at Ctg.

15.3.2 Agreement System

The agreement totally depends on the oil and gas exploration companies. There are few pattern of agreement that is as follows

- Long term agreement (next five well would be drilled by one company)
- Short term agreement (one well would be drilled by one company and another would be by another company)
- The drilling companies made an agreement with the oil and gas exploration companies according to their requirements. Once the agreement signed then the drilling companies purchase the oil well cement.

15.4 Standard Quality of oil well cement

world wide the standard quality of oil well cement is controlled by American Petroleum Industry (API). For the quality assurance the drilling companies test the oil well cement as follows-

- **Thickening Time Test (TTT):** drilling companies test the cement solidity in the lab the test the cement in a particular temperature that how long it will take to become solid. Standard time or the acceptable time for oil well cement (class "G" Specified) is 90 – 120 minutes (world wide).

- **Free Water Test (FWT):** The drilling companies take a sample from different stock of the imported cement and mixed it with water and put it in the cylinder for 2 hours then they measure the quantity of the water that has gathered. The quantity of water should be 1.4% of the total quantity of the water (API standard). Normally they mixed with 250 ml and the gather water should be 3.5 ml. (API Standard). They test by the way in every set of cement that has imported.
- **Compressive Strength Test (CST):** The drilling companies test the strength of the oil well cement in two ways that are
    1. Minimum 300 PSI at 100 degree F.
    2. Maximum 1500 PSI at 140 degree F.

Both the test takes 8 hours at atmospheric pressure. (API standard world wide)

These 3 are the most important test for oil well cement (class "G" specified) if these 3 are acceptable by the API specification then the other test does not vary that much.

15.5 General government rules for oil well cement

1. There is no tax and tariff to import the oil well cement.
2. there is not a single importer in this market and the drilling companies use their own supply boat for the shipment so there is no CNF rate available at present.

15.6 Actors performance on this market

- BAPEX - FOB 12,500 USDper ton and CFR (Ctg) 16300 USD per ton in this year (2001).
- BAPEX - In the year 1999 the total consumption of oil well cement CFR (ctg) USD 80,000 and consume 350 MT cement.
- BAPEX – in the year 2000 they did not consume oil well cement.
- SHELL - They purchase oil well cement USD 167 per bag in the year 2000.
- SHELL – total consumption of oil well cement in the year 2000 was 1450 MT in quantity units and USD 240000
- SHELL – FOB rate for 1450 MT was USD 182000.
- SHELL – The total consumption of oil well cement in monitory units USD 50000.
- SHELL – They purchase oil well cement from Singapore and the name of the brand is PMC cement.
- UNOCAL AND BJ SERVICES – In the year 2000 the total consumption of oil well cement in quantity units 1850 MT and in monitory units it was 250000 US$.
- UNOCAL AND BJ SERVICES – In the year 1999 the total consumption of oil well cement in quantity units was 4000 MT. And in monitory units it was 700000 USD.

- UNOCAL AND BJ SERVICES – In the year 2001 the price of oil well cement is 144 USD per ton.
- UNOCAL AND BJ SERVICES – FOB rate was 144 USD per ton and EX works rate was 124 USD per ton. In the year 2000.
- UNOCAL AND BJ SERVICES – They purchase the oil well cement from Dubai.
- From the survey more than 9 drill will be happen in Bangladesh in the next 5 years. And each normal drill requires 350 to 650 MT of oil well cement and each abnormal drill requires 800 MT cements.
- All the oil well companies purchase oil well cement in terms of MT. But it came to Bangladesh in the shape of bag. And different company have different weight of bag such some of them contains 50kg/bag some of them contains 45kg/bag and some of them contains 48kg/bag.
- There are no tariff, no duty and tax on cement and machineries for the oil and gas exploration.

15.7 Identify the actors at the present moment and the prospects

Current users

- Shell / Cairn
- Unocal
- Bangladesh Petroleum Exploration Co. Ltd. (BAPEX)
- BJ Services Co. (Drilling)
- Schlumberger (Dowel, Drilling)

Prospects (Expected)

- Oakland/Rexwood
- Honodo
- Tullow
- UMC
- Enron

- Maersk
- Pangea
- Petrocenter (PETROBANGLA)

16. RECOMMENDATION

Since there is not a single importer or producer of oil well cement and the target market is also very small. Fro the oil and gas exploration activities the actors required huge quantity of oil well cement, so it might will become an opportunity for Scancem Bangladesh Ltd. to launch the product to the users of oil well cement in Bangladesh.

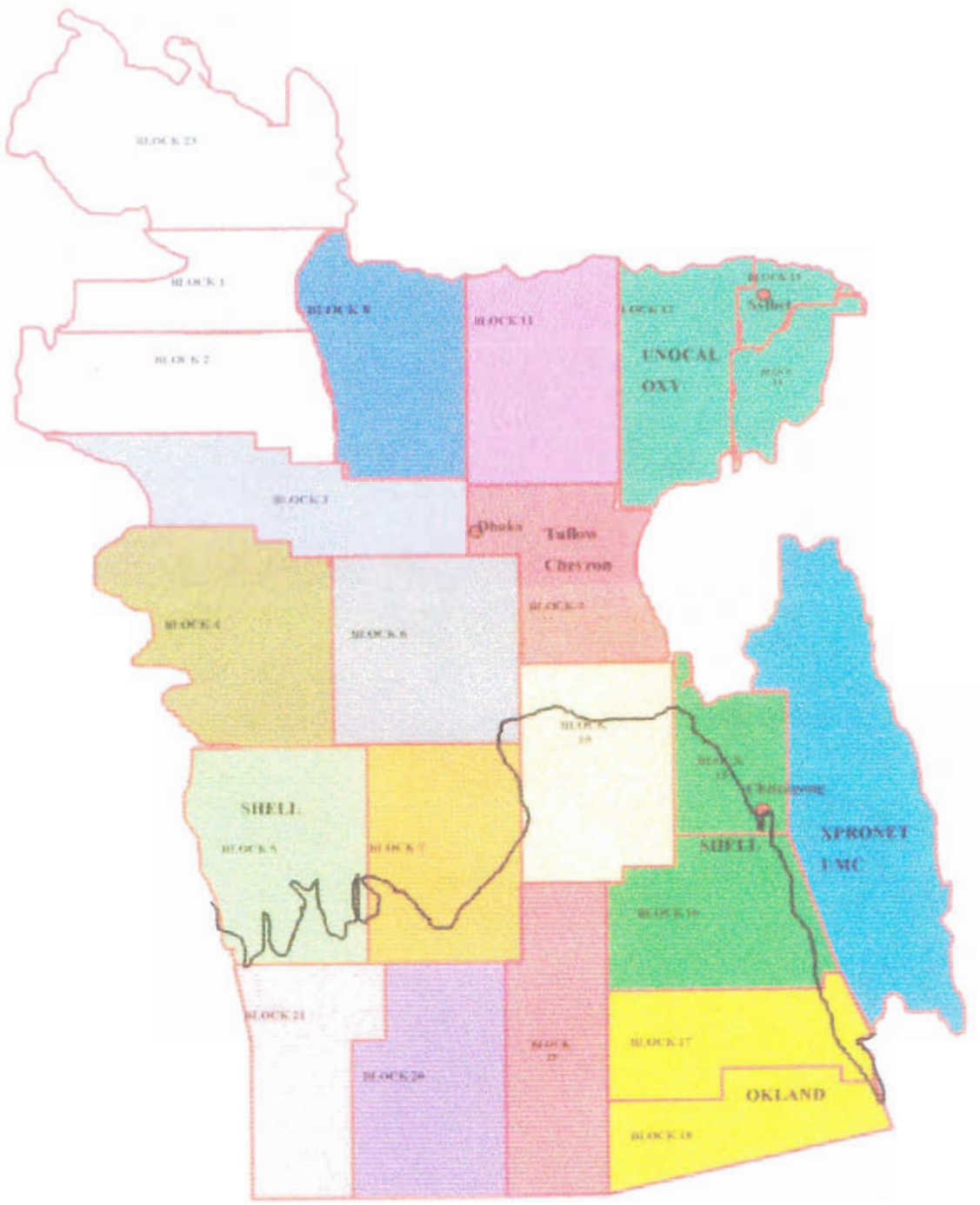
The possibility fro SBL to launch the product will be as follows-

1. Scancem Bangladesh Ltd. can launch the product to the OWC users if they can offer the selling price at 8.5 to 10 dollars per sack (50kg/sack). And provide the services after sales but it will be expensive for Scancem Bangladesh Ltd. because the user do not have to pay for freight or shipment
2. Scancem Bangladesh Ltd. will provide the oil well cement to the drilling and cementing companies so the service and cementing organization does not need to purchase it from abroad. Scancem Bangladesh Ltd. can make a long term contract with the cement users. The package can take place 50kg per sack or 1 MT per sack in a form of shrink-wrapped.

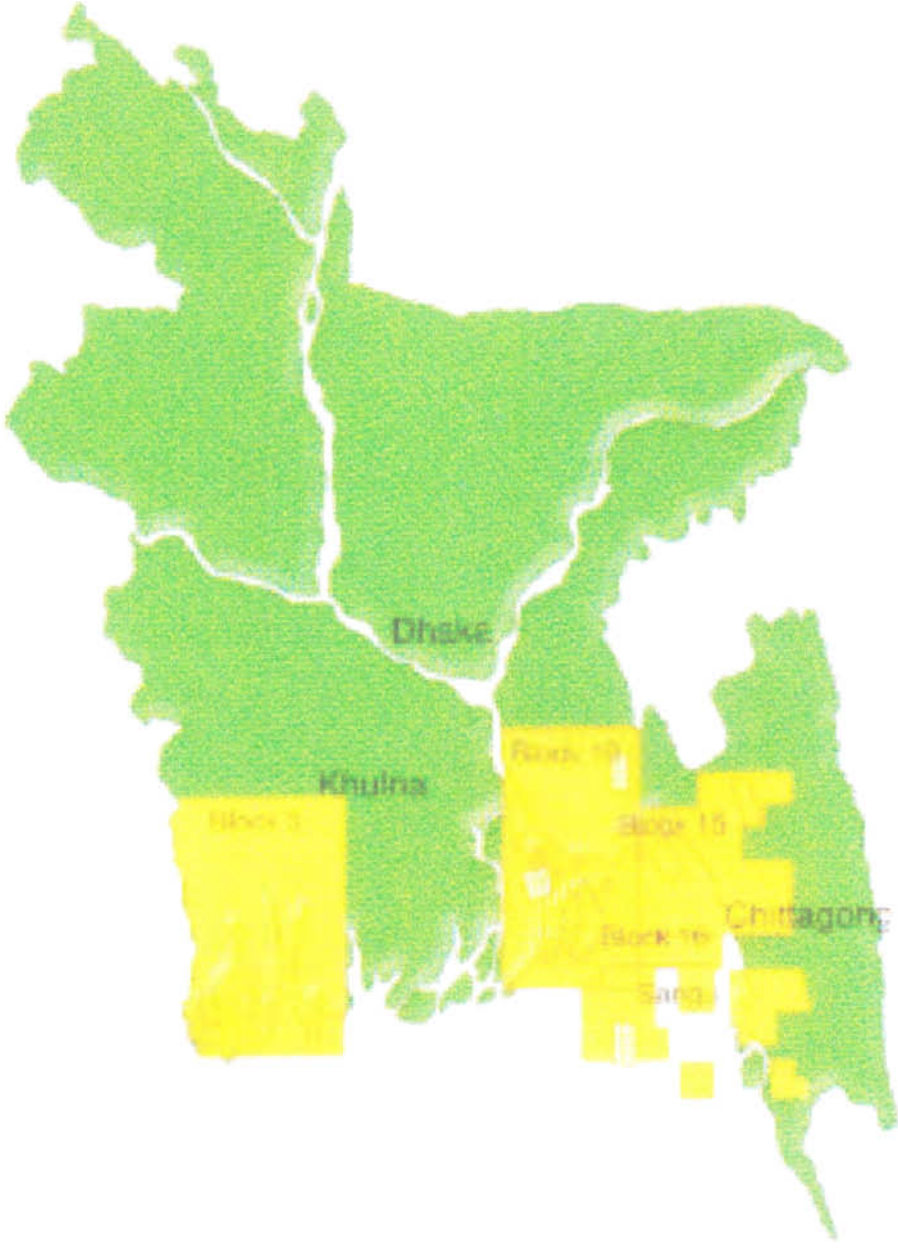
As because the product quality is approved by the API specification worldwide and the price is almost same in allover the world so no personal link can take place other than the quality. So the quality assurance at low price is very important to enter into the market.

6. APPENDIX

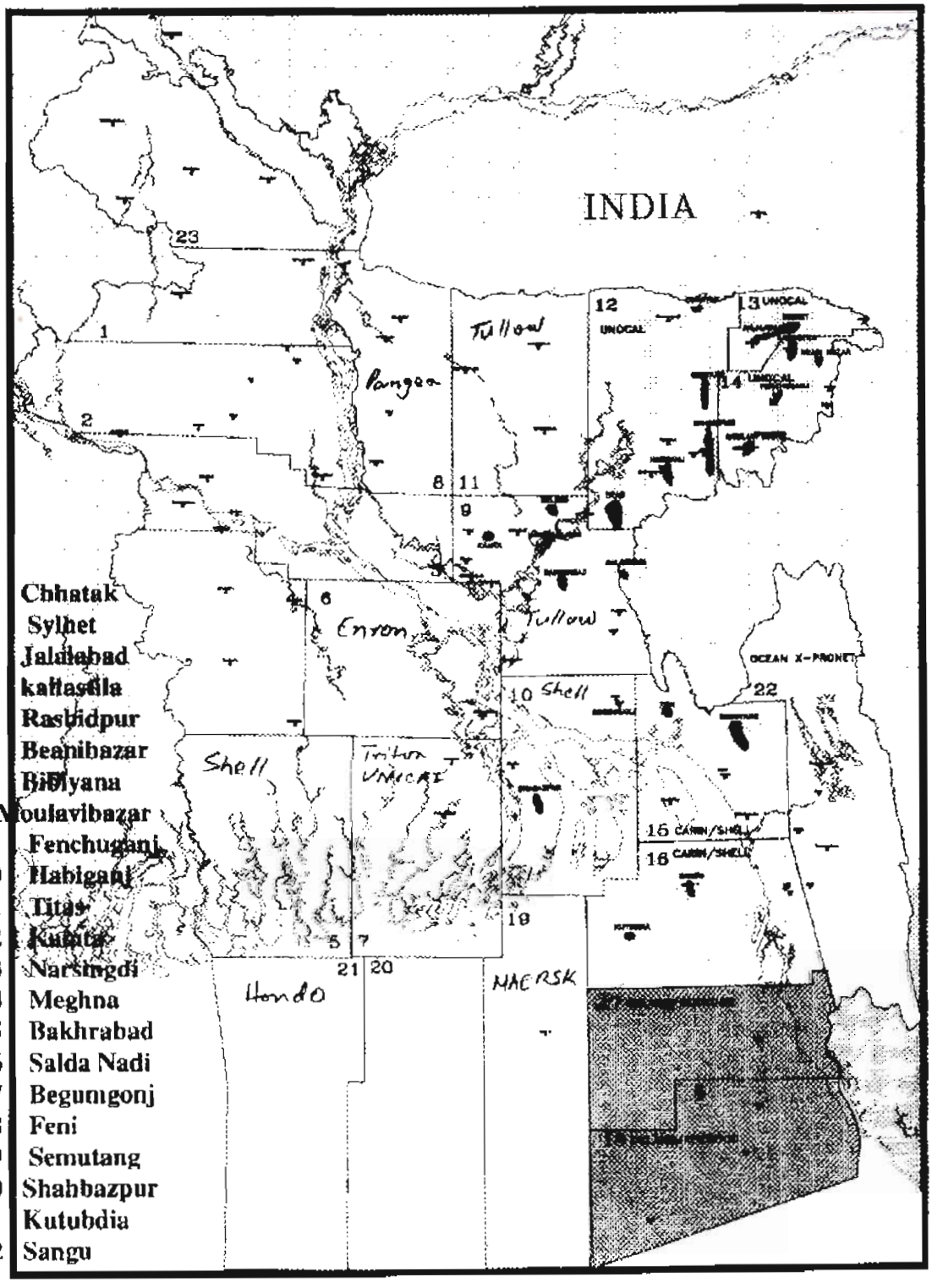
Map of Bangladesh (Drilling Sectors)



Shell operation in Bangladesh



23 blocks of oil and gas exploration in Bangladesh



Brand imported last 3 years through Ctg Sea port and the price per sack

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Oil well cement

Quantity consume from 1999 – 2001 by oil and gas exploration companies.

Actors	Year	Quantity	US Dollars (USD) FOB	Name of the companies who perform drilling and cementing task for the oil and gas company
Shell	1999	300 MT	USD 50,000	Schlumberger (Dowell)
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Bapex	1999	350 MT	USD 80,000	Bapex
Total	1999	4,650 MT	USD 830,000	-

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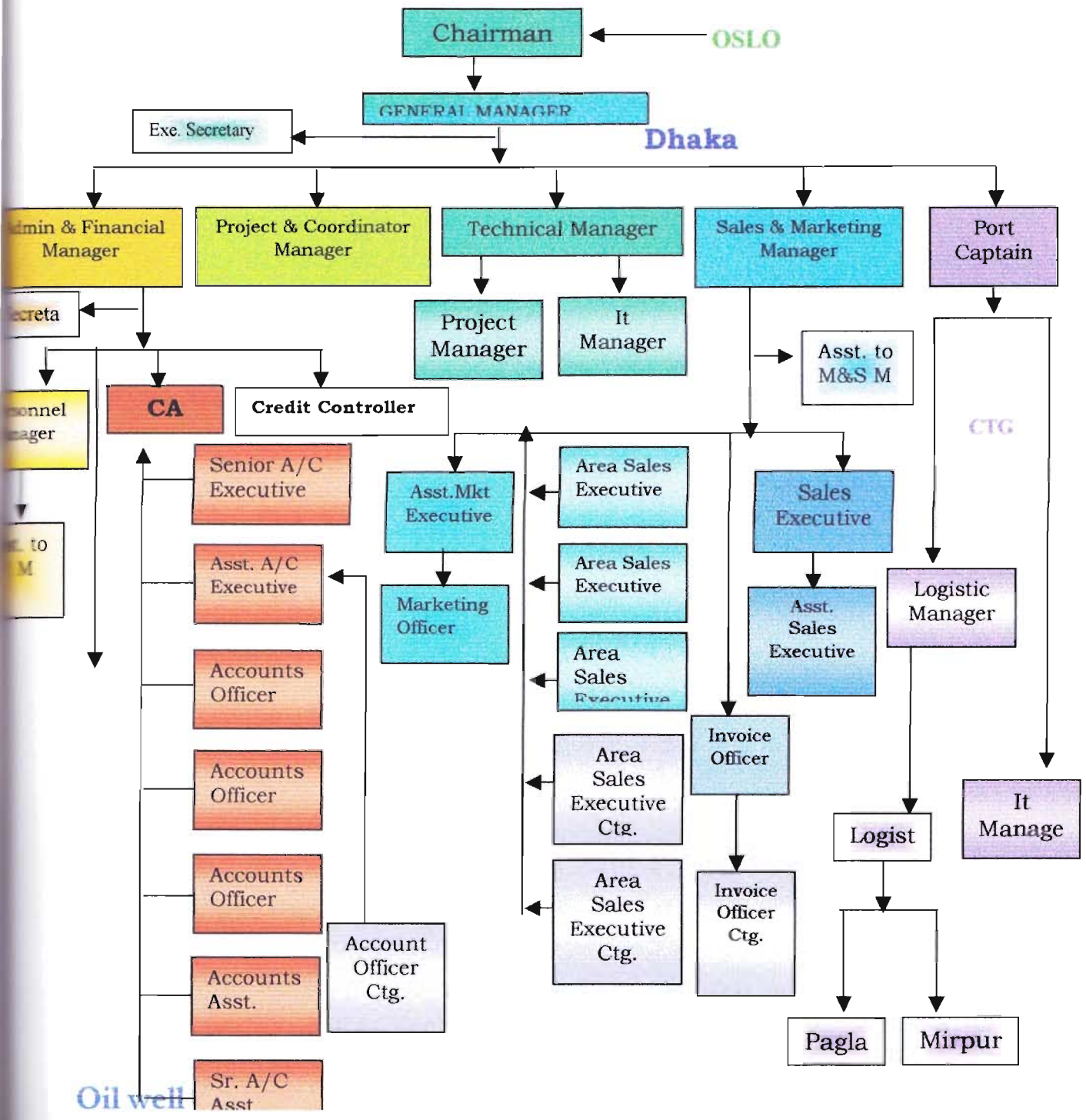
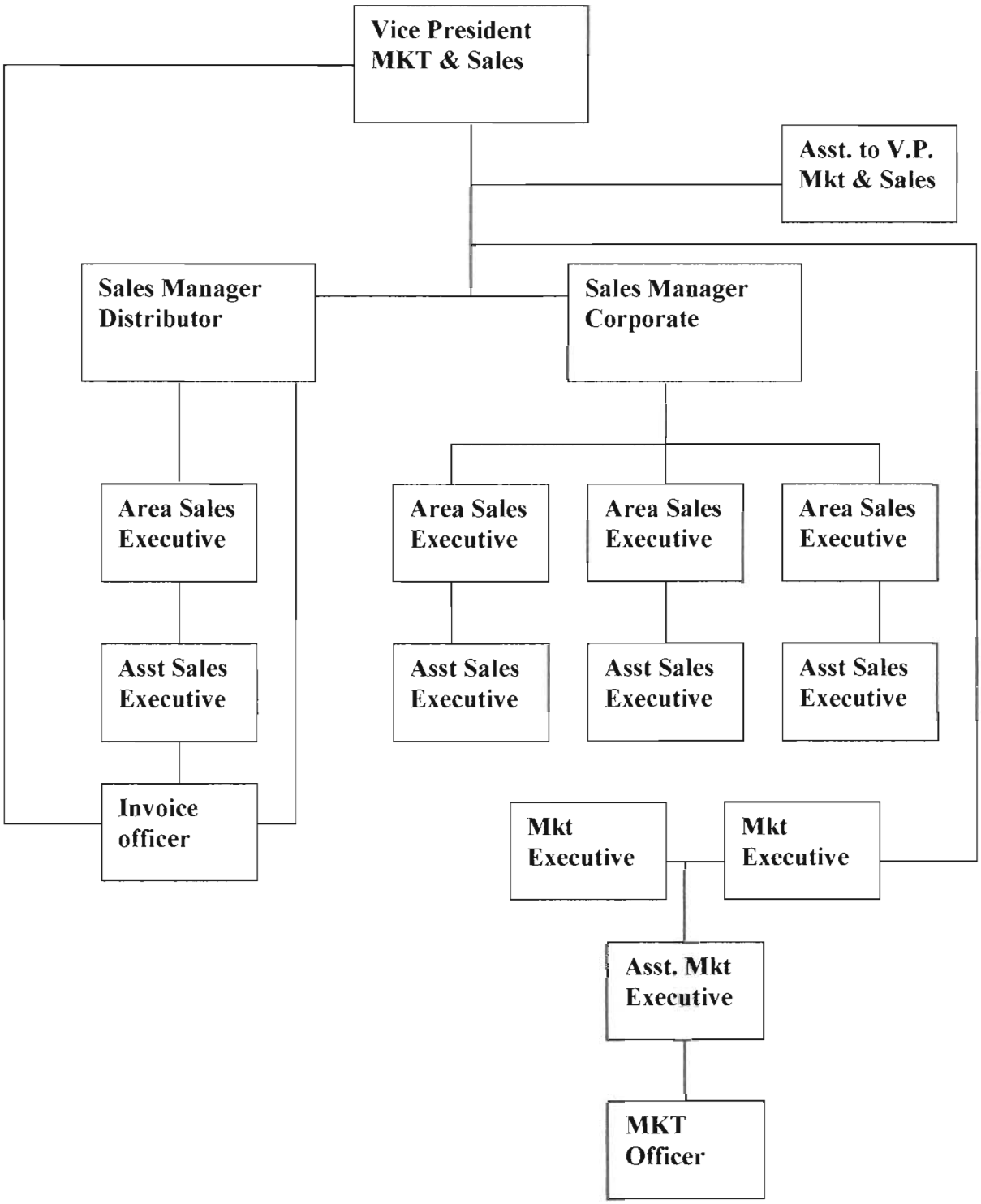
United Meridian Intl Corporation (UMC)	700 MT	2002 –2005	BJ Services (Expectation)
Niko Resources	400 MT	2002 –2005	BJ Services (Expectation)

Total	**4,000 MT**	**2002 –2005**	**-**

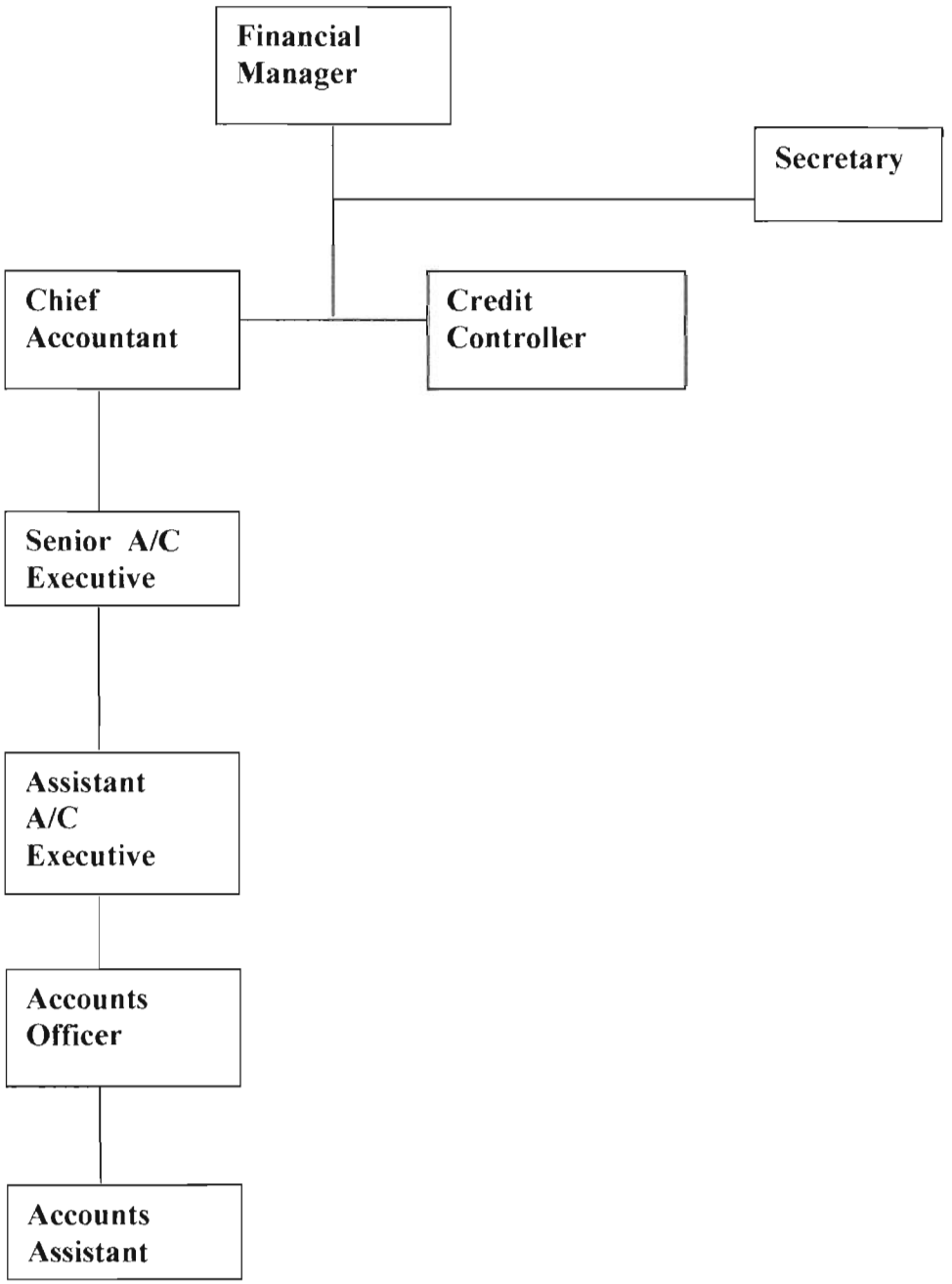
Organ Gram of Scan Cement



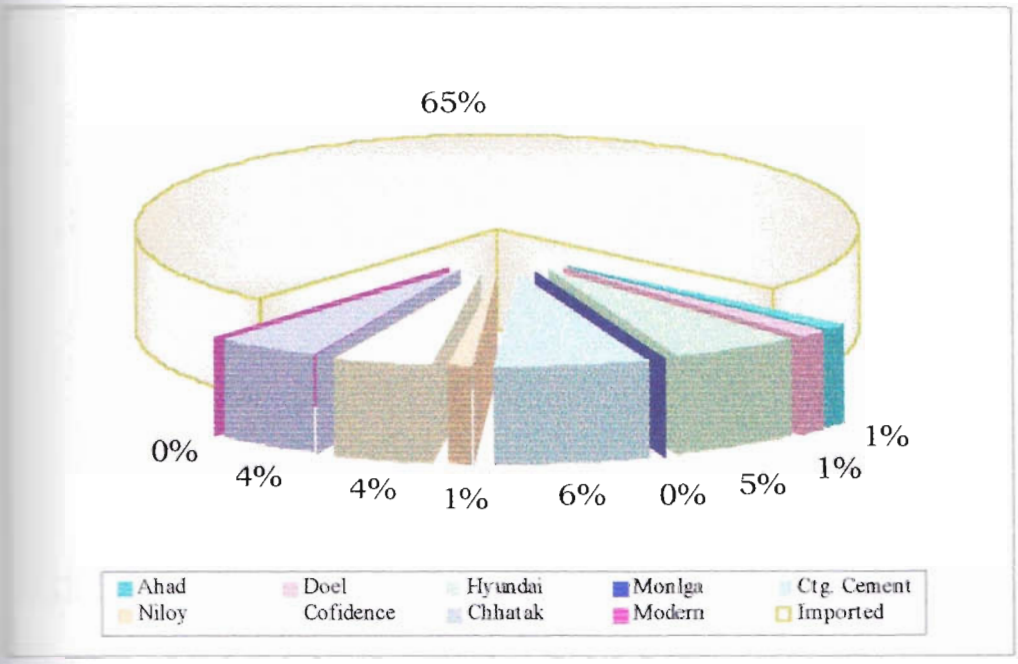
Organ Gram of Marketing Department



Organ Gram of Financial Department

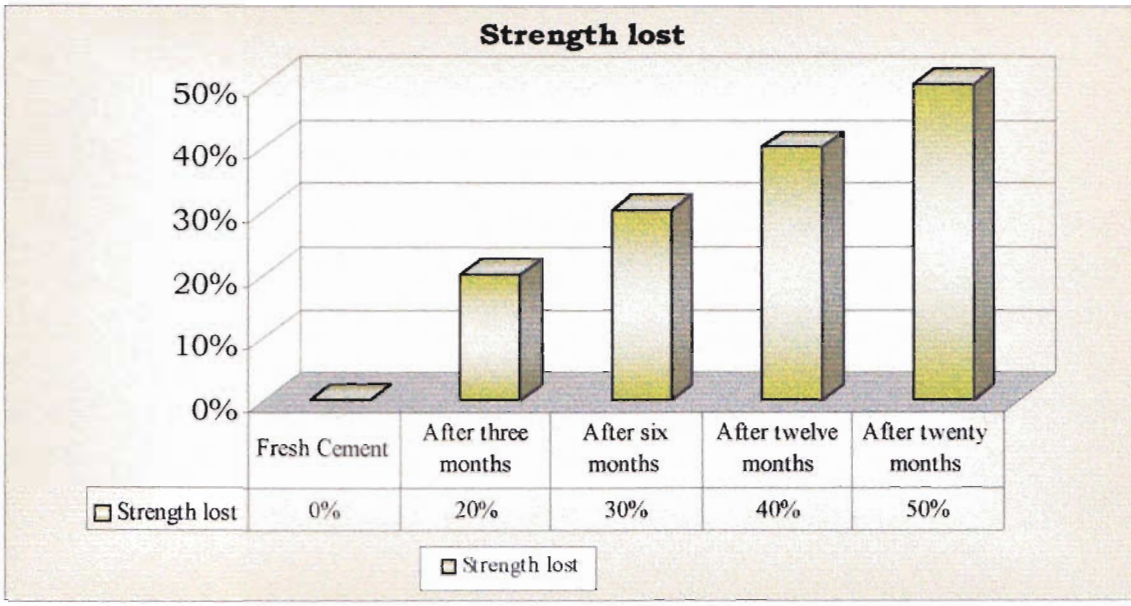


Market Share of Local cement

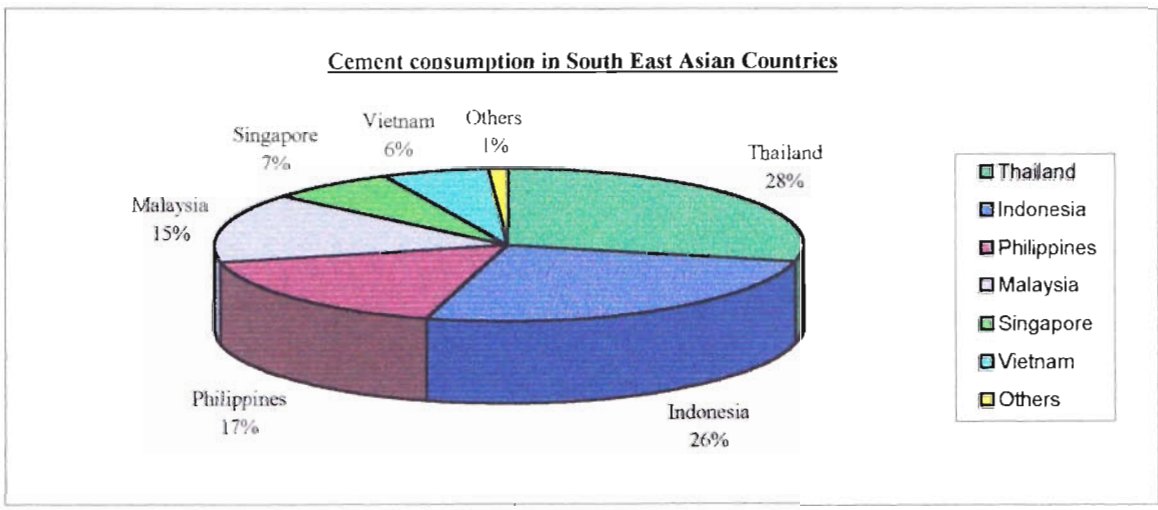


Period	Strength lost
Fresh Cement	0%
After three months	20%
After six months	30%
After twelve months	40%
After twenty months	50%

Oil well cement



Cement consumption in South East Asian Countries



Oil well cement

Market situation of Local production and imported company

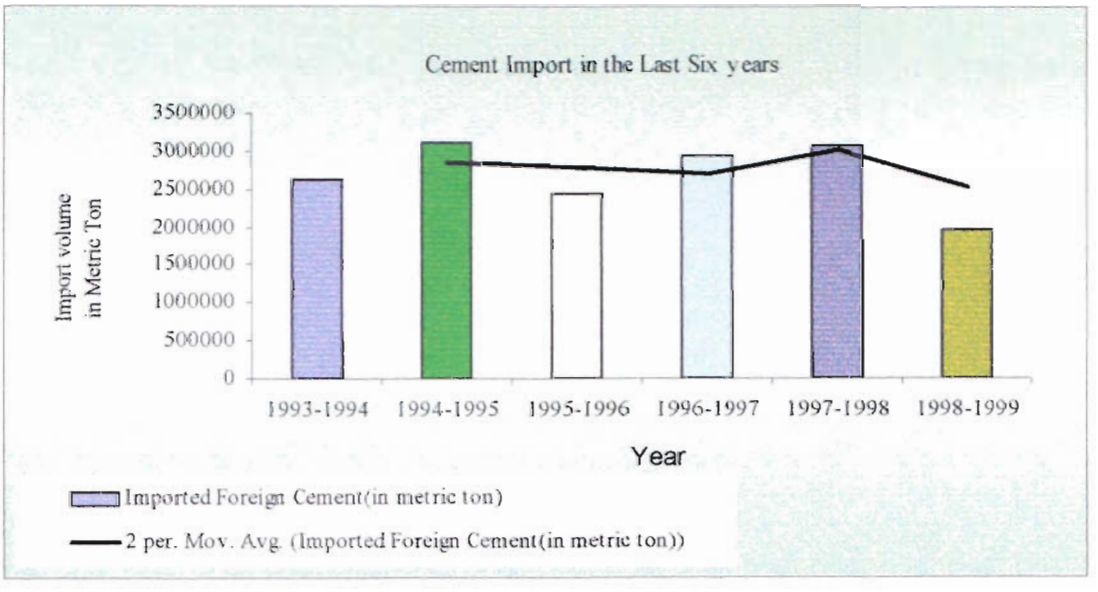
Year	Import of cement	Production (Grinder)	Production (Limestone Based)	Total
90-91	**1, 466, 767**	**160, 000**	**110,000**	**1,736,767**
91-92	**1, 434, 285**	**180, 000**	**108, 000**	**1, 722, 285**
92-93	**1, 972, 310**	**165, 000**	**115, 000**	**2, 252, 310**
93-94	**2, 626, 509**	**203, 000**	**112, 000**	**2, 941, 509**
94-95	**3, 123, 863**	**126, 000**	**147, 000**	**3, 396, 683**
95-96	**2, 444, 009**	**520, 000**	**153, 000**	**3, 117, 009**
96-97	**2,445,171**	**890, 000**	**170, 000**	**3, 505, 171**
97-98	**2, 605, 140**	**1, 195, 000**	**160, 000**	**3, 960, 140**

YEAR	DEMAND
1998-1999	4356
1999-2000	4792
2000-2001	5270
2001-2002	5798
2002-2003	6378
2003-2004	7016
2004-2005	7717

Demand fore casting up to 2005

Demand fore casting up to 2005

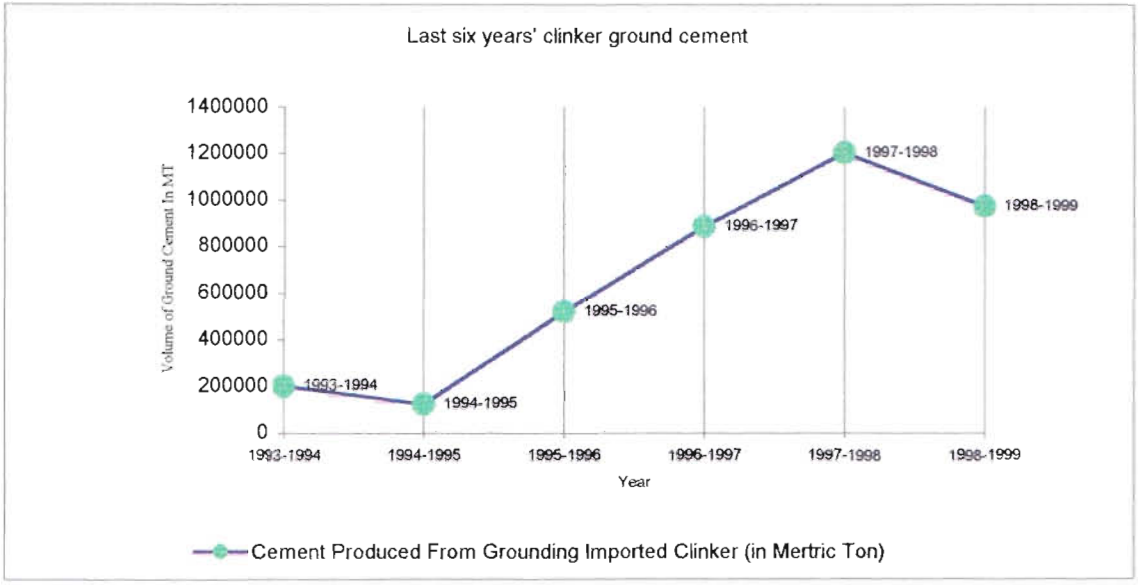
Cement import in last 6 years



Oil well cement

Cement Produced From Grounding Imported Clinker (in Metric Ton)

Year	Cement Produced From Grounding Imported Clinker (in Metric Ton)
1993-1994	203063
1994-1995	126284
1995-1996	519287
1996-1997	888608
1997-1998	1204820
1998-1999	974359



Actors performance on this market

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- BAPEX - In the year 1999 the total consumption of oil well cement CFR (ctg) USD 80,000 and consume 350 MT cement.
- BAPEX – in the year 2000 they did not consume oil well cement.

Oil well cement

- SHELL - They purchase oil well cement USD 167 per bag in the year 2000.
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- There are no tariff, no duty and tax on cement and machineries for the oil and gas exploration.

Oil well cement

Identify the actors at the present moment and the prospects

Current users

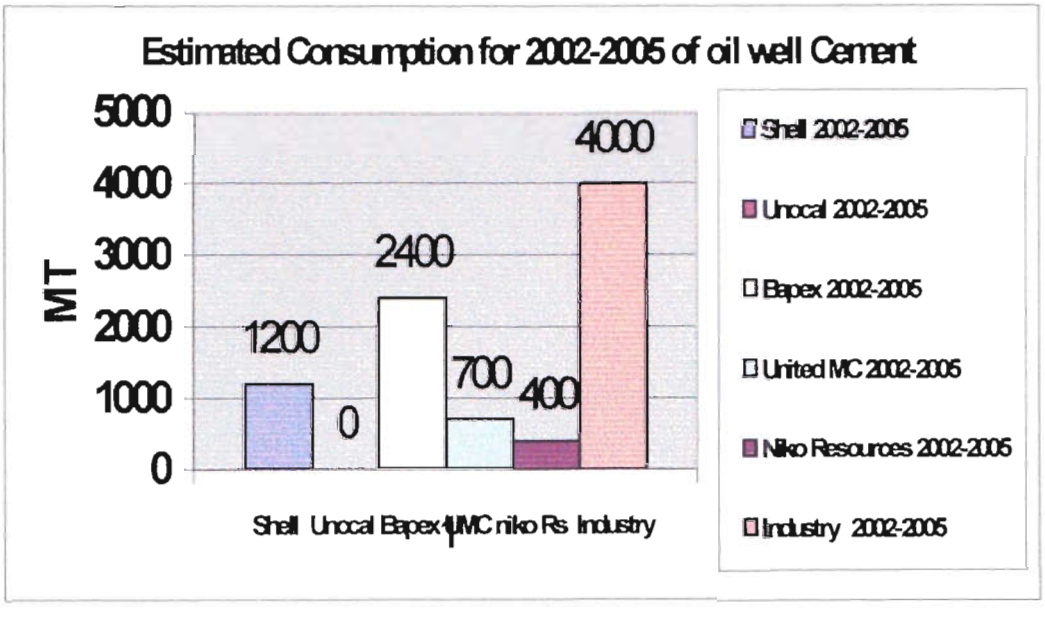
- Shell / Cairn
- Unocal
- Bangladesh Petroleum Exploration Co. Ltd. (BAPEX)
- BJ Services Co. (Drilling)
- Schlumberger (Dowel, Drilling)

Prospects (Expected)

- Oakland/Rexwood
- Honodo
- Tullow
- UMC
- Enron
- Maersk
- Pangea

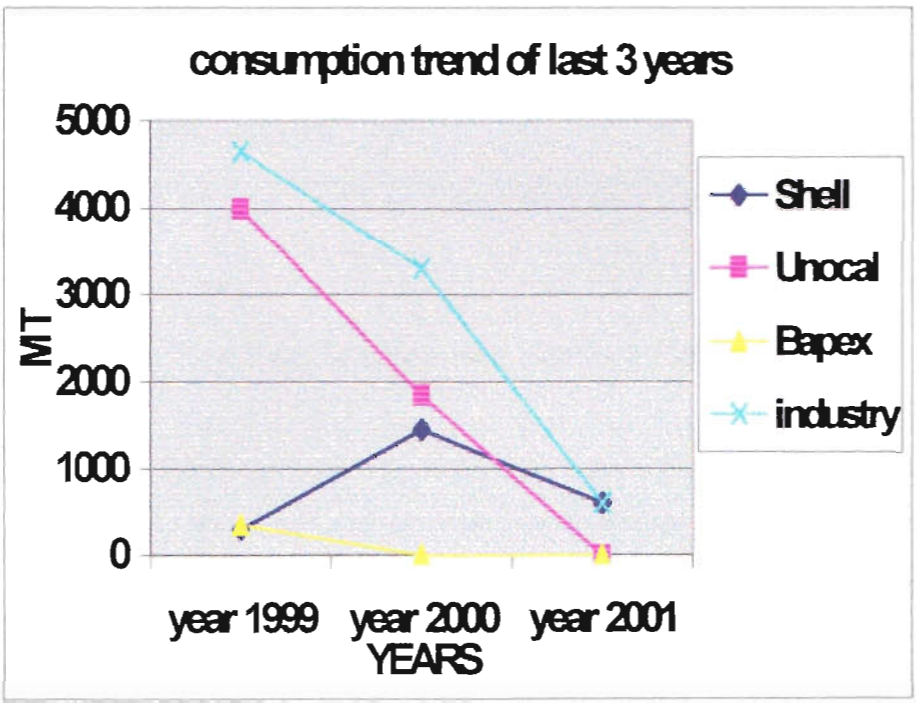
Petrocenter (PETROBANGLA

Actors	Year	Quantity
Shell	2002-2005	1200
Unocal	2002-2005	0
Bapex	2002-2005	2400
United MC	2002-2005	700
Niko Resources	2002-2005	400
Industry	2002-2005	4000



Oil well cement

Company	Year 1999	Year 2000	Year 2001
Shell	300	1450	600
Unocal	4000	1850	0
Bapex	350	0	0
Industry	4650	3300	600



Questionnaire for the oil well cement users

Section 1: Screening Questionnaire:

Show card A:

Please have a look at this card and state which statement expresses your opinion most accurately (more than one answer is receivable)

You are directly involved in the purchase related decision of oil well cement in your organization.	1
You are able to provide the consumption quantity of oil well cement in your organization in the last two years.	2
You are not involved in the purchase related decision of oil well cement in your organization.	3

If 1& 2 is circled, he/ she can be considered eligible for taking interview.

If 3 is circled, ask for the person who is directly involved in the purchase related decision of oil well cement and can provide you consumption related information.

Productn 20'
Sample

Section 2: Questionnaire:

Repeat the introduction part

Respondent name: _____ Job title (please record in detail) _____

Code job title: Soil Engineer…1 Exploration officer …2 Purchase officer…3

Others (please specify).....4 ☐

Company name (Please record in detail): _____

Address: _____

Interviewer name: _____

Date: _____ Time starts: _____ Time ends: _____

Length of interview: _____

Contact/appointment	Interviewed
1st	1
2nd	2
3rd	3
4th	4

Section 3: Main questionnaire

Please place a tick mark in the appropriate box

1. In the year 2000 the total consumption of oil well cement (in quantity units) for drilling phase in your organization was-
   a) 100-200 Tons
   b) 201-300 Tons
   c) 301-400 Tons
   d) above 400 Tons.....(please specify)

2. In the year 2000 the total consumption of oil well cement (in quantity units) for production phase in your organization was-
   a) 100-200 Tons
   b) 201-300Tons
   c) 301-400 Tons
   d) above 400 Tons.....(please specify)

3. In the year 2000 the total consumption of oil well cement (in US Dollars) in your organization was-

   Please specify .....

4. In the year 2000 the total consumption of oil well cement (EX workers FOB rate) in your organization was-

   Please specify .....

5. In the year 2000 the total consumption of oil well cement (as per CNF Chittagong/ Mongla port) in your organization was-

   Please specify .....

6. What is the price per unit (Per ton) of oil well cement this year (2001)?
   Please specify .....

7. In the year 1999 the total consumption of oil well cement (in quantity units) for drilling phase in your organization was-
   a) 10000-200 Tons
   b) 201-300 Tons
   c) 301-400 Tons
   d) Above 400 Tons.....(please specify)

8. In the year 1999 the total consumption of oil well cement (in quantity units) for production phase in your organization was-
   a) 100-200Tons
   b) 201-300 Tons
   c) 301-400 Tons
   d) above 400 Tons.....(please specify)

9. What was the per unit (bag) price of oil well cement last year (2000)?
   Please specify .....

10. In the year 1999 the total consumption of oil well cement (in US Dollars) in your organization was-

    Please specify .....

11. In the year 1999 the total consumption of oil well cement (EX workers FOB rate) in your organization was-

Please specify .....

12. In the year 1999 the total consumption of oil well cement (as per CNF Chittagong/ Mongla port) in your organization was-

Please specify .....

13. Do you have any drilling plan in the year 2001?

Yes ☐ N ☐

14. Do you have any drilling plans within year 2002 to 2005?

Yes ☐ N ☐

Thank the respondent and end interviewing.

	Owner/M.D/ G..M	Soil Engineer	Exploration in-charge	Purchase Officer	Others
3.1	1	2	3	4	5
3.2	1	2	3	4	5
3.3	1	2	3	4	5
3.4	1	2	3	4	5
3.5	1	2	3	4	5

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   Morris Philip.