

**COMMUNITY BASED LIVELIHOODS RECOVERY PROGRAM (CBLRP)
FOR EARTHQUAKE AFFECTED AREAS OF AZAD JAMMU AND KASHMIR
AND NWFP**

CBLRP-UNIDO

**INVESTMENT OPPORTUNITY PROFILE
FOR
GEMSTONE LAPIDARY
IN
NWFP**

SEPTEMBER 2007

SUBMITTED TO

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1. PROJECT EXECUTIVE SUMMARY

1.1 PROJECT BRIEF

To setup a gem stone lapidary project near Manshera. The gems and semi precious stones will be given required cut and polished using modern techniques. The facility will be setup in Manshera. Modern technique of cutting the stones will be used to cut and polish the stones in order to increase their value. There are abundant sources of gem and semiprecious stone in the area. The proposed project aims at filling this gap of value adding facilities in the gems industry. The finished products are gem stones of different weight (carats), sizes and cuts. Gem stones of ruby, topaz, emeralds and peridot are included in the finished products.

It is expected that 3,300 stone of different weight, shapes and sizes will be cut and polished per annum. The total capital cost of the project is Rs 1,200,000. The raw gem stones are readily available in the area that can be converted in to valuable gem stones. 15 employees will be employed directly with on the project. The civil works and installation of plant is estimated to be complete in 12 months.

1.2 FINANCIAL SUMMARY

- Sales Rs 4 Million
- Gross Profit Margin 44%
- Net Profit Margin 12%
- Internal Rate of Return 30%

Foreign collaboration sought	<input type="checkbox"/> Joint – Venture <input type="checkbox"/> Loan <input type="checkbox"/> Market access <input type="checkbox"/> Sub contracting <input type="checkbox"/> Buy – back arrangement <input checked="" type="checkbox"/> Equipment purchase	<input type="checkbox"/> Management expertise <input checked="" type="checkbox"/> Technical expertise <input type="checkbox"/> Marketing expertise <input type="checkbox"/> Technology transfer <input type="checkbox"/> Joint R&D <input type="checkbox"/> Other :-
Studies Available	<input type="checkbox"/> Feasibility study <input checked="" type="checkbox"/> Other Specify	<input type="checkbox"/> Project description
Date:	25 October 2007	

2. PROJECT RATIONALE

Gems and jewelry is an emerging sector of Pakistan with an immense export potential. In Pakistan the current level of trade, including the vast informal sector is expected to be more than \$50 million annually. Most of the exports are in form of rough stones, mainly because of lack of sophisticated processing industry in the country. The proposed project aims at filling this gap of value adding facilities in the gems industry. Financial analysis shows the unit making profit from the very first year. An enormous export market for the Pakistani gemstones exists in West Europe, USA and East Asia. It is of important significance that the gem industry and the Government of Pakistan are recognizing the potential in the local value addition and consequently import duty on lapidary equipment has been waived off. This proposed unit with modern processing machines is an addition to a gems processing industry where dozens of small players are involved in cutting and polishing by simple and unsophisticated tools which are not preferred by many trader/exporters of gems.

Pakistan is fortunate enough to be strategically located close to some of the major markets such as Thailand and Sri Lanka. Besides, it has one of the largest deposits of gemstone variety, including some highly priced and demanded gemstones like Emerald and Ruby. There is also availability of low cost labor compared to those in other countries. There is no doubt that Pakistan has an enormous potential to increase its exports manifolds, and could become one of the major players in the \$ 40.7 billion world market. There is a large variety in gemstone deposits of Pakistan including Emeralds of Mingora, Gujar Killi and Shamozaï, Pink and Golden Topaz of Mardan and Aquamarine of Chitral and Neelam Valley and Peridot of Dassu, which are well known for their color and clarity. Pakistan's Pink Topaz and Kashmir Ruby, are unique items all over the world, especially the Pink Topaz was considered as one of the second highest valued mineral, that was being smuggled to India in raw form, and then sold in the international market as a refined high cost item by India. Establishment of lapidary for cutting and polishing of gemstone, Topaz other precious minerals could alone increase yields from current \$12 million to over \$1billion. Most precious stones, which were previously being exported from Kabul, are now believed to be going through Peshawar. Pakistan has a potential yield of 800 thousand carats of Ruby, 875 thousand carats of Emerald and 5 million carats of Peridot, which lay unutilized.

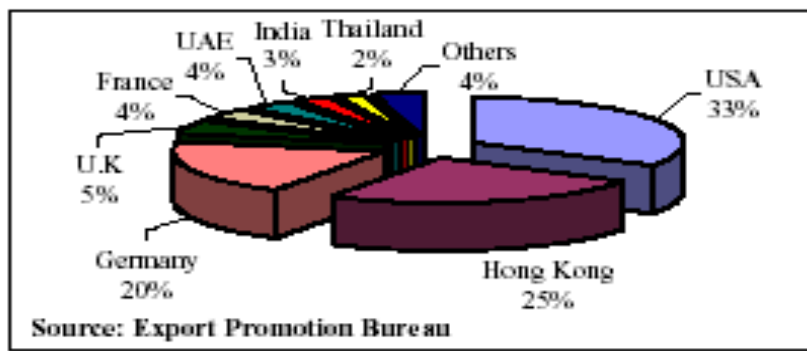
The availability of raw material (gemstones) is good. There are reliable traders that can be contacted easily. The proposed unit is in Proximity to the Gem cluster. The main reason why Pakistan has not been able to boost its exports is due to lack of value addition.

3. MARKET INFORMATION

Pakistan has emerged as the fifth largest country for the occurrence of gemstones on the world map. The total global gemstone exports for the year 2004 are \$57,954 million, \$48,363 million in 2003 and in 2002 \$ 46,369 million. Details of year wise Gems and Jewelry export from Pakistan are given below

Product	Value in million US\$			
	July – June 2002 - 2003	July – June 2003 - 2004	July – June 2004 - 2005	July – June 2005 - 2006
Gems	2.173	3.693	3.430	4.612
Jewelry	22.601	24.489	16.727	16.142
Total	24.774	28.182	20.157	20.754

Major Buyers of Pakistani Gemstone



4. BUSINESS PLAN

The lapidary will be situated near the gem stone cluster, The usage of modern equipment and techniques will ensure marketability at higher prices and attract exports. The capacity is 3,300 stones per annum.

4.1 Product sales.

The gem stone are various sizes and accordingly priced. However, for this study average price is used.

Item	Annual sales quantity	Average sale price Rs	Amount Rs
Gem stones	3,300	1,215	4,009,500

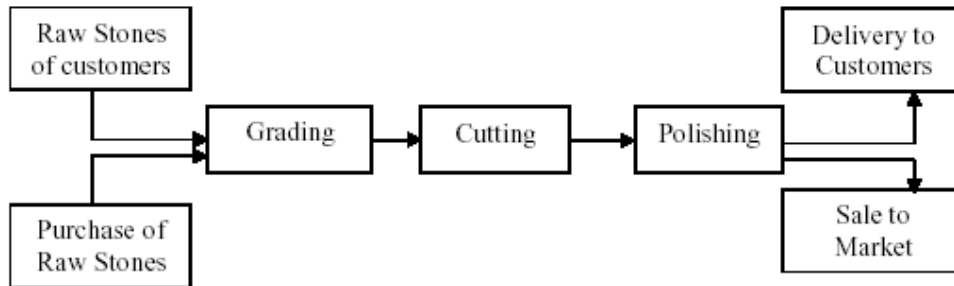
4.2 Raw Materials

Basic raw material required for grinding semi-precious stones that are used for beads making is Carborendum Powder, which comes in three sizes of 220, 400 and 600 mesh. Raw material required for grinding and polishing of precious stones includes Diamond Powder, Aluminum Oxide, Tin Oxide, and Cirium Oxide and Crome Oxide.

Raw Material	Consumption	Price
Carborendum Powder		
220 mesh	100 Kg	\$35/10 lbs.
400 mesh	100 Kg	\$37/10 lbs.
600 mesh	50 Kg	\$39/10 lbs.
Diamond Powder		
1 micron	500 Carats	\$70/100 carats
15 micron	300 Carats	\$100/100 carats
Aluminum Oxide (Raybrit) .	5 lbs.	\$75/lbs
Tin Oxide .	5 lbs.	\$25/lbs
Cirium Oxide.	5 lbs.	\$15/lbs
Crome Oxide	10 Kg	Rs 500/kg
Grinding Laps	12	Rs 8000
Precision Drill	12	Rs 4000
Total		Rs. 1,76,780

4.3 Production Process

The process of Lapidary includes grading, cutting and polishing of gemstones. Raw stones are either purchased from the market or collected from the customers. Individual stone is then examined (graded) and cut into smaller stones along its major line of fracture and inclusions. The smaller pieces are then mounted on cutting tools, which are then faceted on faceting machines. The final operation involves polishing of the faceted stones. Polished stones are then delivered to the customers or sold to the market.

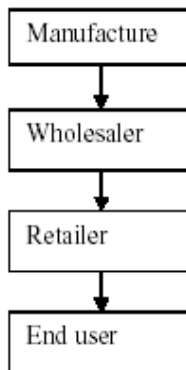


4.4 Distribution/Marketing Channels.

The marketing of the project will be based on the following strong grounds:

- . Contacts with end users and Contractor
- . Advertisement
- . Promotion schemes
- . Point of purchase displays

The final product will directly supplied to wholesaler eliminating role of agencies. Distribution network of product is illustrated below:



4.5 Human Resource Requirement.

For a gemstone lapidary unit of 3300 units per year, the human resource requirement is as follows.

Positions	Number	Salary/month	Salary/annum
Manager	1	20,000	240,000
Supervisor	1	10,000	120,000
Junior Cutter/Assistants	8	3,500	336,000
Accounts/Administration In charge	1	8,000	96,000
Marketing Officer	1	10,000	120,000
Assistants/Peons	2	3,000	72,000
Security Services Fees	1	6,000	72,000
Total	15		1,056,000

4.6 Project Financials

4.6.1 Operational data

The lapidary has the capacity to cut and polish 3,300 precious stone. The lapidary will be working at 100 % capacity through out.

4.6.2 Fixed costs

The project capital cost is detailed below.

Plant and Machinery	1,000,000
Furniture/ Fixture & Equipment	150,000
Pre-operational Expenses ³	50,000
Total Fixed Cost	1,200,000

4.6.3 Working Capital

Initial working capital required for the project is Rs 500,000 as given below.

Raw Material Inventory	260,000
Upfront Building Rent	240,000
Working Capital	500,000

4.6.4 Overhead cost

In the first year following overhead cost are estimated.

Admin and Selling Salaries	144,000
Misc Expenses	60,000
Rent Expenses	300,000
Depreciation	115,000
Maintenance expense	15,000
Distributor retailers margin	1,679,828
Selling and promotional expenses	111,989
	2,425,817