PRELIMINAY
CHROMIUM MINING FEASIBILITY REPORT
(Chromite Ore Production and Export Proposal)

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A. Introduction

1) Our chrome mining sites are located in the district Türkoğlu of the city Kahramanmaraş and in the district of Nurdağı in Gaziantep, Turkey. The production line will take place in these regions.

2) The production line in this project involves the licensed chrome mine site whose operating rights are owned by our company.

3) The requirements for the mining sites' production activities include the following operating licenses that we already have:

a) Mining business licenses and operating permission issued by the Turkish Republic's Ministry of Energy,
b) Business license issued by the Governorate of the province in the region where the mine is located,
c) Environmental impact assessment report documents as approved by the Provincial Department of Environment,
d) Several forestry and production licenses issued by Kahramanmaraş Regional Directorate of Forestry.

B. Project Evaluation and Assessment

4) This chromium mining feasibility report covers three critical assessments, namely, the economical, technical and financial sections.

5) **Economic Evaluation**:

a) **Nature of Investment**: Chrome mine production and exportation.

b) **Production Line:** Producing Chrome ore that has 42% to 54% tenor. (Tenor is the rate of the ore that exists within the whole rock). Low tenors between 5% and 25% would also be produced and enriched.

c) **Market Position:** The Chrome ore is the main raw material used in many metallurgical, casting, refractor, and chemical industry applications and thus represents huge world industrial use. The annual world production of Chrome is about 20 million tons, with 2 million tons, or 10% of world's market, produced in Turkey.

d) **Demand Status:** There is a considerable world demand for the Chrome ore, which is increased annually, and as a result its price has also been increasing. Today the 40-42% tenor is sold for $250-$410 (depending on the season), and the 46-48% concentrated ore may be sold for over $450 (Concentrated ore is the ore that is enriched from 5-25% tenor to 46-48% tenor).

e) **Export status:** This Chrome mining site is only 200 km from the Mersin seaport. We could export our production directly from Mersin (mainly to China, U.S. and Europe) or we could sell it to intermediary companies already in existence in Mersin.

6) **Technical Evaluation**:

a) **Employment**: Employment could be expanded gradually in direct proportionality to the mine's production. But at first it would involve the hiring of 52 people, in addition to the management team, as follows:

2 Mining Engineers
5 Mining Supervisors
4 Operators
5 Drivers
2 Foremen
2 Cooks
2 Security Officers
30 Miners

b) **Production technique methods:** The production activities of the mine would go on as far down as possible, but would start with an opencast mining (a surface mining technique of extracting rock or minerals from the earth.) Currently there are two galleries ready and they could be extracted immediately. But as soon as the surface mining's costs increase, the underground mining would start. Meanwhile, low-grade ore would be transferred to the plant for enrichment.

c) **Production capacity:** It is estimated that when the production line is fully operational, a minimum of 3,000 tons per month will be extracted. This amount would certainly increase over time.

d) **Production flow:** The production of ore is mostly done using the drilling and blasting techniques. The most effective method for production shall be determined in the field and the ore production would consequently start in a systematic way. The produced ore shall be transported daily to the stockyard. The sale process shall take place in the stockyard where the ore is stored.

e) **Machines and Equipment:** The following equipment shall be procured:
For the production line: 1 engineering vehicle, 2 excavators, 1 loader, 1 backhoe loader, 1 tractor, 4 trucks, 2 pick-up trucks, mines' power plants, cranes, rail wagons, compressors and their drills, as well as other equipment and facilities needed for the site offices, dining hall and other accommodations.
For the enrichment plant: 1 mobile stone crusher @ 90 km per hour with the ability to crush with the front, two roll mined and spiraled chrome enrichment unit.

f) Other equipment and machines would also be procured. Since this is a very complicated plant, the full technical specifications and drawings could be made available upon request.

7) **Financial Evaluation:**

a) **Investment Amount:** The investment amount for a 45% ownership of the mine, production and enrichment plant, equipment, facilities, business, and assets, as well as entitlement to 45% of net profits, shall be $3,000,000 ($3 million).

b) **Operating Expenses:** is estimated to be $350,000 per month or $4,200,000 per year.

c) **Annual Production:** For an annual Chrome production of 30,000-36,000 tons.

d) **Annual Gross Income:** Depending on the season, the price of Chrome would fluctuate between $250-415 per ton. Assuming an average of $333/ton, and production line of 30-36K tons, the annual gross income shall be $10-12 million.

e) **Economic life of the mine:** 10 years

f) **Annual Depreciation and Amortization:** $300,000.

g) **Gross Profits:** Gross Income - Expenses- Depreciation = $5.5-7.5 million.

h) **Taxes:** At a 20% rate, taxes are estimated to be $1.1-$1.5 million.

i) **Net Profit:** Gross Profit – Taxes: $4.4-6 million.

j) **Annual Return on Investment:** $2.0-2.7 million [@45% ownership]

k) **Mine's Life Return on Investment:** It's estimated that over the 10-year life of the mine, the return of the $3 million investment with price appreciation and production increase shall exceed $30 million.

C) Conclusion

8) When the plant is fully operational, the monthly Chrome ore production shall average at least 3,000 tons.

9) The mine and production line shall be operational within three months after the initial capital investment. The enrichment plant shall also be operational within six months.

10) Within the first 6 months there shall be a production of at least 10,000 tons. In the next 12 months there shall be a minimum 36,000 tons. Subsequently the production shall also be increased.

11) The cost of the chrome ore production is estimated to be a maximum of $100/ton.

12) The sale price shall be $250-415/ton for an average of $333/ton.

13) The gross profit within six months of operation shall be $2.3 million.

14) The gross profit within 18 months of operation shall be $10.7 million.

15) The net profit within 18 months of operation shall be $8.2 million.

16) Return on investment of $3 million after 18 months shall be $3.7 million.

17) All estimates are conservative, with maximum production cost and minimum production level and selling price.