

**Executive Summary
of
HELALIN S. A. Bauxite & Alumina Plant Project
in
Republic of Guinea**



September 2008

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Summary

HELALIN S.A., a Joint Stock Company between 3PL Trade S.A. from Greece and ITOK GmbH from Austria, incorporates under the Laws of Republic of Guinea has concluded an Basic Agreement (“Convention de Base”) with the Ministry of Mines and Geology of Guinea in December 2, 2005 which is ratified by the Parliament of Republic of Guinea on April 4, 2006 to develop bauxite resources of Fria-Telemele area located in western Guinea, about 180 km from Conakry Port. The aim of project is to develop a mining operation to exploit and export the produced bauxite to the international markets at the first step, and to construct a 1.2 million tpy alumina plant to treat bauxite into alumina. The possibility of construction of an aluminum smelter and the related infrastructures and a 500 MW power plant in further steps would be also under investigations.

ITOK GmbH, an international Engineering and Construction company active in the fields of hydrocarbon and mineral industries which incorporates under the laws of Austria and is a subsidiary of ITOK Group has been appointed by HELALIN S.A. as the principle consultant of the Project to perform the Bankable Feasibility Study on development of the bauxite mine and construction of the alumina plant at the engineering phase and to act as the general EPC contractor of the Project at the construction phase.

1. Introduction

HELALIN S. A., a Joint Stock company with 51% equity shares owning by 3PL Trade S.A from Greece and 49% of equity shares belonging to ITOK Technology, Engineering & Contracting GmbH from Austria, is incorporated under the laws of Republic of Guinea and has concluded a Basic Convention with the Ministry of Mines and Geology of Guinea in December 2005 which is ratified by the Parliament of Guinea on 4th April 2006 to develop bauxite resources of the Kindia-Fria-Telemele area located in coastal Guinea, about 180 km from Conakry Port. The aim of project is to develop and establish a mining operation in the mentioned area to exploit and sell the produced bauxite to the international market at the first step and to construct a 1.2 million tpy alumina plant to treat bauxite into alumina. The possibility of construction of an aluminum smelter and the related infrastructures and power plant in further steps is also under investigation.

ITOK GmbH, an international engineering and construction company active in the fields of hydrocarbon and mineral industries and a subsidiary of ITOK Group has been selected by HELALIN S. A. as the principle consultant of the Project to perform the exploration works and conduct the Bankable Feasibility Study on development of the bauxite mine and construction of the alumina plant at the engineering phase and to act as the EPC contractor of the Project at the construction phase.

2. Guinea Bauxite Resources and Industries

The Republic of Guinea (Conakry) is located in western Africa and extends over 245,857 square kilometers.

Possessing 7 billion tons or about one-third of 20 billion tons world bauxite base resources, Guinea stands at the first place among the countries having the largest bauxite resources in the world. There are three major bauxite exploitation sites in Guinea, out of which the Sangaredi and Debele bauxite mines have been put under operation since early 1970's.

CBG, an international consortium, exploits the high grade rich bauxite deposits of Sangaredi mine in Boke region, north-west Guinea. The whole bauxite ores

exploited by CBG with an average annual production capacity of about 15 million tons is exported from Kamsar Port.

CBK exploits the bauxite resources of Debele mine which is located in the vicinity of Kindia City, about 100 km from Conakry, the Capital of the country. The Debele mine is now a Guinean state owned company and the entire exploited bauxite of about 3 million tons per annum is exported from Conakry Port.

ACG (Alumina Company of Guinea), a mining and alumina production company in which the Guinean government has a full interest (previously 49% interest) exploits the bauxite reserves of Fria region located about 145 km North-east Conakry. The exploitation of Fria bauxite resources has commenced in early 1960 decade and is continued to now with an average production rate of 1.5 million tons per annum. The exploited bauxite from Fria deposits is fed to an alumina treatment plant having a nominal annual production capacity of 600,000 and the produced alumina is exported through Conakry port.

Assuming the total production rate of bauxite equals to about 20 million tons per annum, Guinea is ranked as the second largest bauxite producing country in the world, after Australia.

The Government of Guinea has extensive plans to develop the rich mineral resources of the country specially the bauxite resources which are still undeveloped. The Guinean Government has reached to a principle agreement with HELALIN S.A., to develop the bauxite resources of a distinguished area of 2,003 square km in Fria-Telemele region.

3. Bauxite and Alumina Plant Project of HELALIN S.A.

HELALIN S.A. has planned to implement a mining operation and construct a 1,200,000 tpy alumina plant to supply the produced bauxite and/or alumina to the highly demanding world market. For this aim and to distinguish the most suitable location to implement the project, HELALIN has conducted several investigations to prospect the adequate bauxite resources as the proper raw material resources to sell to international market and to feed to the projected alumina plant.

HELALIN S. A. has concluded a Basic Agreement (Convention de Base) with the Ministry of Mines and Geology which is ratified by the Parliament of Republic of

Guinea and has acquired an exploration and exploitation license over 2,003 square km bauxite resources within a rectangle territory surrounded in the Fria-Telemele region, the center of which is about 180 km from Conakry. The location map of HELALIN S.A. bauxite resources (former 3PL bauxite prospects) is shown in Figure 1.

According to the Basic Convention, HELALIN will conduct exploration and a Bankable Feasibility Study (BFS) on development of a bauxite mining operation in the first phase.

The geological surveys and preliminary prospecting and exploration works on Fria-Telemele area as a part of general minerals prospecting program conducted in 1968 to 1970 under the auspices of the Government of Guinea have indicated the existence of rich bauxite resources in this area.

Based on the reports prepared as the results of prospecting and geological surveying works, there are 14 bauxite plateaus scattered in Fria-Telemele bauxite resources covering the area of 2,003 sq km over which the exploration and exploitation license is awarded to HELALIN S. A. The total indicated and inferred bauxite reserves of the area is estimated 500,000,000 tons bauxite ore with the average alumina grade of forty five percent ($Al_2O_3 @ 46\%$) and average silica content of two percent ($SiO_2 @ 2\%$).

4. Project Planned & Predicted Phases

The first Phase of the Project will include Bankable Feasibility Study on development of a bauxite mine operation with an annual production capacity of 3,000,000 tons. If the studies and investigations show the further phases of the Project being feasible, the subsequent phases of the Project will be implemented. The different phases of the Project are summarized as follows:

Phase 1: Conducting exploration works and a Bankable Feasibility Study (BFS) on development of a bauxite mining operation with an annual capacity of 3,000,000 to 7,000,000 tpy.

Phase 2: Developing a bauxite mining operation (Bridge Project) with an annual capacity of 3,000,000 tpy, construction of a 30-40 km transportation mean to

connect mine to Fria-Conakry railway, constructing required loading and unloading equipment; and improving infrastructure and port facilities for exporting bauxite.

Phase 3: Conducting a Bankable Feasibility Study (BFS) on construction of a 1,200,000 tpy alumina plant.

Phase 4: Construction of a 1,200,000 tpy alumina plant.

Phases 5 & 6: Conducting a Bankable Feasibility Study (BFS) and if feasible, construction of a provisional 240,000 tpy aluminum smelter and an associated 500 MW power plant.

5. Explorations & Engineering Studies

HELALIN S.A. has conducted the essential parts of preliminary exploration and engineering studies of the Project which facilitates and enables efficient and fast track progress of field exploration works towards the completion of the Feasibility Study. The main engineering studies and works of the Project performed to date are as follows:

- Preparation, submission and getting approval of Complementary Scope, Program and Schedule of Engineering and Exploration Works and Bankable Feasibility Study (BFS);
- Determining the capital investment required to develop different phases of the Project and preparing the budget program for exploration works and feasibility studies;
- Collection and preparing data bank of all data, information and documents of the Project including but not limited to topography maps at scales 1/200,000 and 1/50,000, aerial photos at scales 1/100,000 and 1/30,000, photo mosaics, geology maps and reports, satellite reconnaissance photos, etc.
- Selection and concluding Engineering Services Contract with ITOK GmbH, the principal consultant of the Project;
- Conducting Satellite Imagery studies and preparing the assessments interpretation report;
- Recognizing the boundaries of bauxite plateaus and selecting the most promising and priority indexes for prospecting and exploration works;
- Performing exploration survey and surface sampling of bauxite plateaus;
- Chemical analysis and mineralogical study on surface samples;
- Preparation of core-drilling program;
- Preparing scope and schedule of BFS on 1,200,000 Alumina Plant;

- Conceptual study on transportation means and infrastructures and port facilities to connect and utilize the Friguia Existing Infrastructure of Fria-Conakry railway and Conakry port for the "Bridge Project";
- Designing the path of proposed spur line to connect to Fria-Conakry Railway.
- Securing financial resources from international funding institutes and reaching to principle agreements with financiers and bauxite & alumina off-takers.

6. Progress of the Project

HELALIN S.A. Bauxite & Alumina Plant Project in Fria-Telemele has achieved great technical and financial progress in development of the Project summarized as follows:

6.1. Technical Progress

From technical point of view, HELALIN S.A. has completed the 1st phase of exploration works and conceptual study of the Project and has submitted 2 progress reports to CPDM under the following topics:

- 1.1. Progress report No.1 dated December 2007: "The Results of Satellite Imagery Study";
- 1.2. Progress report No.2 dated March 2008: "Program of Preliminary Exploration & Core-drilling in Telemele Bauxite Resources";
- 1.3. The Progress Report No. 3 containing the results of surface exploration and sampling of Telemele Bauxite Resources is under preparation and will be shortly submitted in due time.

The results of chemical analysis and mineralogical study on surface samples have proven the existence of high quality and quantity of bauxite resources in the territory of HELALIN bauxite resources.

6.2. Financial Achievements

Where the financial progress of the Project is concerned, HELALIN S.A. has reached to principle agreements with financial institutions and off-takers including but not limited to the most reputable funding firms from Canada, Switzerland, Austria, UAE, Iran, India and Bahrain to secure the financial resources required for implementation of the Project.

7. Project Main Technical and Financial Features & Advantages

The main technical and financial features and advantages of the Project are as follows:

Project Location: About 180 km north-east Conakry, the Capital.

Distance from Projected Exporting Ports: Less than 100 km to Buba port; and less than 10 km from Koba through Friguia railway.

Project Owner: HELALIN S.A., a company incorporated under the laws of Republic of Guinea and established to develop the bauxite and other mineral resources of a 2,003 square km area surrounded by Kindia, Fria and Telemele cities the concession of which for exploration & exploitation has been granted by the Ministry of Mines & Geology of Guinea to HELALIN S. A.

Project Consultant: ITOK GmbH, a company incorporated under the Laws of Austria and a subsidiary of ITOK Group. ITOK will act as the Principle Consultant of the Project at the Engineering Phase and the EPC Contractor at Construction Phase.

Exploration and Exploitation Licenses: Over an 2,003 square km Area (54*37 km rectangle), surrounded by Kindia, Fria and Telemele cities, about 180 km from Conakry;

Bauxite Resources: Total indicated and inferred bauxite resources in the Area are estimated to be 500 Million tons @ 45% average alumina grade (AL₂O₃) and @ 2% average Silica content (SIO₂);

Bauxite Mineralogy: Gibbsite bauxite ore suitable to be treated to alumina through Bayer Process;

Mine Capacity: 3,000,000 tpy bauxite in the first Phase and 7,000,000 tpy in the second phase

Plant Capacity: 1,200,000 tons per annum Smelter Grade Alumina (SGA);

Anticipated Capital Investment:

- Phase 1: US\$ 10,000,000 for exploration works and conducting a Bankable Feasibility Study on development of a bauxite mining operation with an annual capacity of 3,000,000 to 7,000,000 tpy.
- Phase 2: US\$ 70,000,000 for developing a bauxite mining operation (Bridge Project) with an annual capacity of 3,000,000 tpy, construction of a 30-40 km transportation mean to connect mine to Friguia railway, improving required loading and unloading equipment, infrastructure and port facilities for exporting bauxite.
- Phases 3 & 4: US\$ 950,000,000 for Bankable Feasibility Study, Basic Engineering and construction of a 1,200,000 tpy alumina plant including required infrastructure and utilities
- Phases 5 & 6: Not yet analyzed

Project Implementation Schedule:

- Stage 1: 20 months for exploration and Bankable Feasibility Study on bauxite mine
- Stage 2: 18 months for mine development and mobilization and construction of 30 km connection railway, required infrastructure and possible increase or modification of loading and un-loading facilities at Conakry port or other potential exporting ports;
- Stage 3: 18 months for Bankable Feasibility Study on the 1,200,000 tpy alumina plant
- Stage 4: 36 months for construction of the alumina plant including required infrastructure and utilities
- Stage 5: Not yet analyzed

Note: Stages 1 and 2, and stages 3 and 4 to be conducted simultaneously.

Available Infrastructure: Vicinity to the main city of Fria and the Friguia Alumina Plant, Conakry-Fria asphalted road, manpower, water and power resources available; access to the existing transportation means of Fria-Conakry

metric railway of Friguia alumina plant, possible utilization of alumina and bauxite storage, and unloading and loading facilities of ACG company at Conakry port; access to Bufa and Koba projected ports.

Project Advantages: Beneficiation of Massive Bauxite Resources of Guinea in general and of the allocated Area in particular, quality and quantity of bauxite resources, easy treatment of bauxite into alumina through Bayer Process, existing infrastructure and roads, water and power resources available; low manpower costs, existing railways and port facilities, vicinity to the Atlantic ocean to easily supply the produced bauxite and alumina to the world market, no environmental significant impacts, resulting in improvement of sustainable development of Guinea country and human community, etc.

8. Conclusion

The first phase of exploration works and engineering studies of HELALIN bauxite mine and alumina plant project will include the preliminary and detailed exploration of the area comprising surface sampling; digging pits, trenching, core drilling, carrying out geological, topography, geotechnical and hydrological surveys, ore samples assaying and analysis, bulk sampling, metallurgical tests, etc. The studies also will include the investigation on the utilization and expansion of the existing railway for transporting bauxite to Conakry and unloading and ship loading facilities at Conakry Port.

7. Contact Addresses

The inquiries for further information and getting deal with participation in development of the Project may be forwarded to the address indicated on the letter-head of this report and/or to the following addresses:

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ANNEX 1

Scope of Explorations & Mine Feasibility Study

ANNEX 2

Explorations & Mine Feasibility Study Time schedule

ANNEX 3

General Map of Guinea

ANNEX 4

Maps of HELALIN Exploration License Area

ANNEX 5

Decrees of HELALIN Exploration License