

Full Length Research Paper

Historical timeline, global positioning and economic performance: the case of a Tunisia Public Mining Firm

Mohsen Brahmi¹ and Sonia Ghorbel-Zouari²

¹University of Sfax, Faculty of Economics and Management, FEMS of Sfax, Tunisia

²University of Sfax, Higher Institute Business Administration, HIBAS of Sfax, Tunisia

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The purpose of this paper is devoted to present one of the main nerves of the Tunisian economy, which is the deposit of phosphate rocks in south-western Tunisia wholly owned by the largest Tunisia Mining public Firm (T.P.G.C), which is actually the only industrial pole in the Gafsa Mining Basin region of Tunisia. In fact, Tunisia is more than a century in the Mining sector, this expertise has been put in the forefront of major countries phosphates rocks producing in worldwide. Although, Tunisia has qualified the second country in the world has deputed the recovery of phosphate fertilizers with an experience that exceeds a half-century in this business. However, despite intense competition, the Tunisian phosphate industry has recorded in recent years, mostly late 2008-2009 following the unprecedented overview of commodity prices in world market for phosphate fertilizer WMPF, efficiency remarkable gains improving the financial base Mining sector and which have direct consequences on the country's economic performance.

Keywords: Largest Tunisia mining public Firm, Industrial pole, Tunisian phosphate, Expertise, Competition, Efficiency gains.

INTRODUCTION

The natural deposits of ground Phosphate Rocks located in north of Africa are closely linked chains of mountains of the producing countries phosphates dealers (mainly Tunisia, Morocco and Algeria). These channels are spread over a large area where the starting point is the chain of mountains *south-west of Gafsa in Tunisia*, passing by Algeria to settle finally in front of the Atlantic Ocean in Morocco. Considered the *first* and oldest in the exploitation of these mineral deposits *in North African, Tunisian industry phosphate* (the discovery of Tunisian phosphate was in 1897) was able to acquire for that purpose, hot *knowledge* in this area mining activity that exceeds more than a *century* of exploitation and international marketing of this product gray (Returning to history since antiquity, the region of Gafsa Mining Basin (G.MB) in Tunisia was totally invaded by the sea, but we have attended several geological changes in northern Africa, in the case of Tunisia, where the level of the sea in the said period began to sink deeper and eventually the whole region (G.MB) has become Tunisian land

without water. It remains in this region, according to geologists, the underwater environment (the various types of fish skeletons, seaweed, algae, various marine plants etc.). Organic substances in water rooted mountains led by following the) sub-field which is fully localized in the Mining Basin Gafsa in Tunisia (MBGT). Thus, with the Tunisian independence in 1956 until today, the Tunisian phosphate industry (TPI) which is represented by the large public Firm TCGP (Tunisian Company Gafsa Phosphates) has continued to proliferate more to finance a large share of other economic activities in the country. Although, like other sectors of economic activity, the global Tunisian phosphate industry has made some economic shocks in times of crises such as oil seventy years and debt in the mid-eighties.

Yet, the Tunisian mining industry has resisted facing this very difficult international situation for any mining company exporting whatever their economic size. As soon as the late eighties - under the efforts of Government assistance, through various policies to encourage research into new fields, exploration of markets and partnership - the Tunisian phosphate sector (TPS) has regained its vitality through *the technological modernization* of working tools and could therefore gen-

*Corresponding Author E-mail: brahmi.mohsen@gmail.com;
Sonia.ghoari@hotmail.com

erate a significantly positive outcome and that is really real date overview of this industry for a more phosphate promoter since the mid-ninety today.

In this context, the Tunisia Phosphate Gafsa Company (TPGC) was engaged in a program of reorganization (The real objective was compression costs of production, while encouraging more in search of new mineral deposits by the mining area, in part cons acceleration for the closure of underground mines where the cost operation was very high) and technological upgrading to significantly enhance its profitability, to handle to allow him to compete with foreign (Morocco the main competitor in the North Africa) more intense global and precisely address this global economic environment nowadays, unfavorable to the exporters, despite the plan of support and backup in various forms of aid by the Government.

How has this manifested Tunisian phosphate industry cope with this latest world economic crisis of 2008? Strongly observed (Tunisian Central Bank report, 2009-2010) that Tunisian phosphates Sector TPS, presented by the Leader Company TPGC and subsidiary Group Chemical Tunisian where recovery is phosphate fertilizer, has continued its vigorous development in the global economic crisis of 2008. Although, the price of phosphate has more *triple* from \$ 45 per ton in early 2007 to more than \$ 324 per ton in 2008 (USGS 2008-2009, World Bank 2009).

This has generated highly remarkable efficiency gains leading to strengthening the financial base of TPS and improved accordingly Tunisian national GDP (GDP indicator: Gross Domestic Product). Despite the significant level of current sulfur imported (\$ 810 per ton in late 2008), the latest global economic report (Davos Economic Report 2009 to 2010, Fitch Rating Agency 2010) showed that the wisdom of the Tunisian economic governance, and case here Tunisian phosphate industry, brought to fruition in the event of crisis and cyclical changes to cope with any economic damage and circumvent these adverse effects for advocates.

We chose to structure this research paper into three sections, namely:

- In the first section §1 of this article, we outline the general historical overview of this large public Firm Tunisian TCGP more than a century in its mining field, is taken as the framework for implementing our research study in this paper.
- The second section §2 of this paper is devoted to showing the rank occupied by this large global firm public before Tunisian TPGC world's leading producers of phosphates (such as USA, Morocco, China ..) with their economic weight in the global market phosphate fertilizers (GMPF) through their production potential of this ore. In presenting its contribution to the Tunisian economy in terms of various mineral products exported on a significant

period of time with a deduction of the results achieved and future perspectives of these ores and those imported.

The final section §3 will focus on development and economic performance of the Tunisian Industry phosphate. We focus on the reputation and image of this Tunisian Company of phosphates in the eyes of global Rating organizations, especially the annual contribution of the agencies Fitch Ratings 2006-2009, dealing with change current international cyclical". The opinion of the International Monetary Fund over economic policy in Tunisia is very positive and is doing well despite the global financial crisis and the severe fluctuations in oil, metals, mining and food. We don't have no fears for next year 2009, although in global, it will not be easy. In Tunisia, it works properly (Mr. D. Strauss-Kahn, Managing Director of the International Monetary Fund, November 2008).

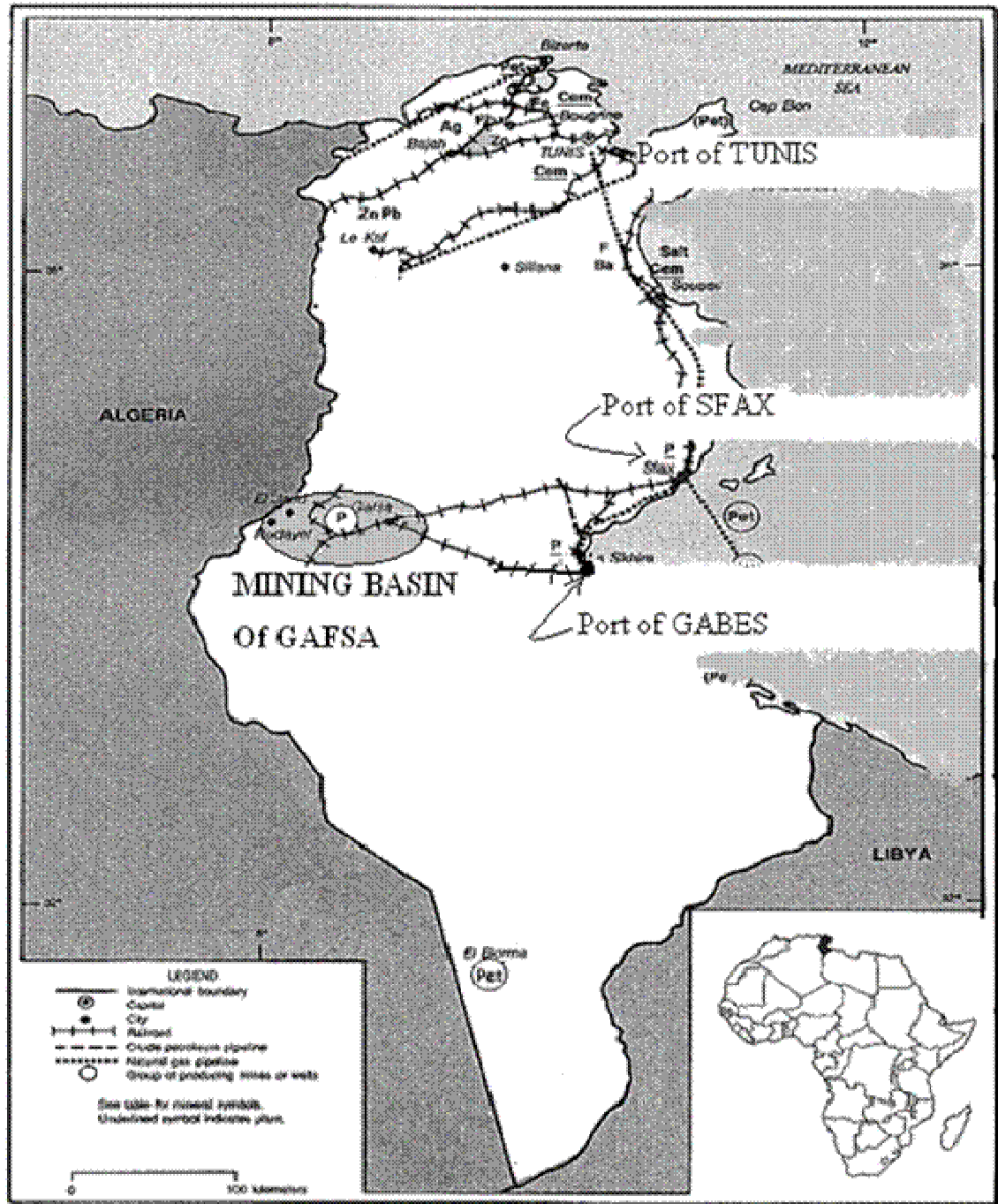
Generalized overview

Activity of this great Tunisian public Firm, TPGC: Tunisian Phosphate Gafsa Company

Tunisia is a *pioneer* in the world regarding the field of extraction of phosphates and industry phosphate fertilizer. This is connected directly to the prestigious and oldest Company in Tunisia, namely, TPGC: Tunisia Phosphate Gafsa Company (*in French called CPGT*). It occupies the first places (Tunisia is the 2nd country in the world in the exploitation of phosphate fertilizer after Morocco. In addition, Tunisia occupies the 3rd place in terms of export of the product phosphate (2009) and 5th place for the production of that "underground-gray" (According to latest statistics from the Association of Industries fertilizer, USGS 2008-2009) in the world in terms of the production of phosphate (5th place) with an annual production in late 2009, which exceeds 8.5 million tones of phosphate raw (INS, Tunis, 2009) exported to fifty countries worldwide.

Thus, in order to witness the historic quality of the Tunisian phosphate and Ports in Basin Mining of Gafsa Armiger (Armiger H and M. Fried., 1957, 'the plant availability of Various Sources of phosphate rock. Soil Science Society of America proceedings', pp183-188. (1957) and M. Fried. (1957), have compared 12 sources of phosphate rocks in terms of quality organic ...they could finally work out of such research as the Tunisian phosphate in region south-west of Gafsa is the best among the other samples of phosphates rock, it becomes after him the phosphate rock of South Carolina in the United States`.

Tunisian phosphate and Ports



Box 1. Foundation and localization of Tunisian industry Phosphate in Mining Basin in south-west
Source: USGS, Map. 2010. "Tunisian Phosphate in Mining Basin of Gafsa"

Brief History of T.P.G.C

Tunisia Phosphates Gafsa Company

In 1885, in the Gorge "THELJA" near Metlaoui in Gafsa, a

French paleontologist, *Philippe Thomas (1885)*, prospecting rocks was found a *layer of lime phosphate*. Born then, the *Tunisian Phosphates Gafsa Company TPGC*. (See graphics card with the delivery of Gafsa phosphate to the ports of embarkation for export below).

Table 1. Chronology of the time of foundation of Company Phosphate Gafsa Tunisia since the discovery of mineral deposit in 1885.

1885	Date of discovery of mineral deposits in Tunisian south-western near the mountains of Métlaoui Gafsa by the French geologist "Philip Thomas".
1897	Appointment of the Gafsa Phosphate Company and Railway Gafsa (CPGCFG) as the first operator of mining offices Métlaoui. Followed by the first line linking ferrate Métlaoui to seaport of Sfax.
1899	Date of opening of the first under-ground mine Métlaoui (Gafsa)
1903	Date of opening of the second under-ground mine at Redeyef (Gafsa)
1904	Date of opening of the third under-ground mine at Moulares (Gafsa)
1905	Creation of the 'Stethos' (Tunisian Company operating phosphate) (Gafsa)
1920	Opening of M'Dhilla mine operated by the Company of Phosphate Tunisia.
1948	Turning SIAPE (Subsidiary industrial phosphoric acid and fertilizers)
1956	Progressive Nationalization of different Companies under the direction of the one leader Tunisian Company.
1962	fully capitalization of Tunisian Phosphates Company Tunisian M'Dhilla
1966	End alignment Railway-Gafsa Sfax, so that it becomes independent from that date.
1969	Merger between the "CPGCFG" Company and phosphates M'Dhilla
1970	Date opening of the mine Shib-Mrarta and starting in 1975 the career of mining Moulares
1975	Start the quarries of mining Moulares
1976	The merger between Stethos 'CPGCFG' and under the sole appointment of the TCGP wholly owned by the Tunisian Government.
1978	Switching quarries mining Kef-chfaire
1980	Start mining quarries of Umm-lekhcheb
1986	Start mining quarries of kef-dur
1989	Switching quarries mining Redeyef
1991	Start of mining quarries DJelebba
1994	Appointment of a single director general for TCGP and subsidiary chemical group
1996	The merger into a single business management.
2008	Signing of Partnership with Indian Companies, where TCGP and chemical group that holds more than 70% of capital.
2010	Date to Enter into force of this Tunisian-Indian partnership (the Company TIFERT Indian) for the recovery of phosphate fertilizers, largely intended for export.

Source: CPGT, documentation and planning center, 2010.

Founded in 1897, Tunisia Company of Phosphates Gafsa, TCGP, is a company more than a *century*, which is the public operator of phosphates in Tunisia. Its expansion is unprecedented in the underground opening that extends to other areas of the mining area of Gafsa. Indeed, extraction of phosphate product began in Tunisian Mining Basin more than 110 years ago. Although, in global level, Tunisia is the second country after Morocco which began to recover in the last fifty years in the Tunisian Chemical Group in Sfax, which is a subsidiary company directly linked to the parent TCGP, a remarkable share nearly 80% of this natural product in phosphate fertilizers quality (phosphoric acid, DAP, TSP .. etc..) very competitive and great demand in World Market phosphate fertilizers WMPF.

Tunisia exports a large share of phosphate fertilizer into European Union EU saw bilateral trade well as geographical proximity Mediterranean, while the other is destined for other countries from four continents. (See illustrative diagram in the box below).

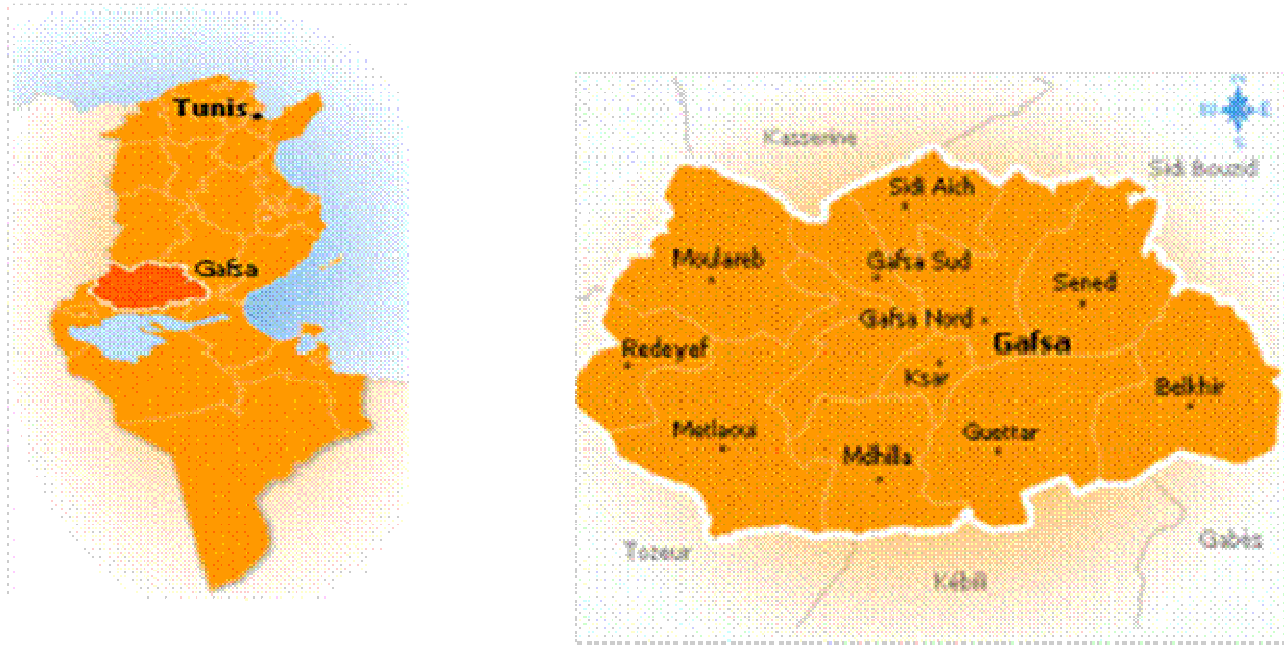
This Company is owned 90% by Tunisian Government, the Tunisian Company Gafsa Phosphates

T.C.G.P was founded in effect:

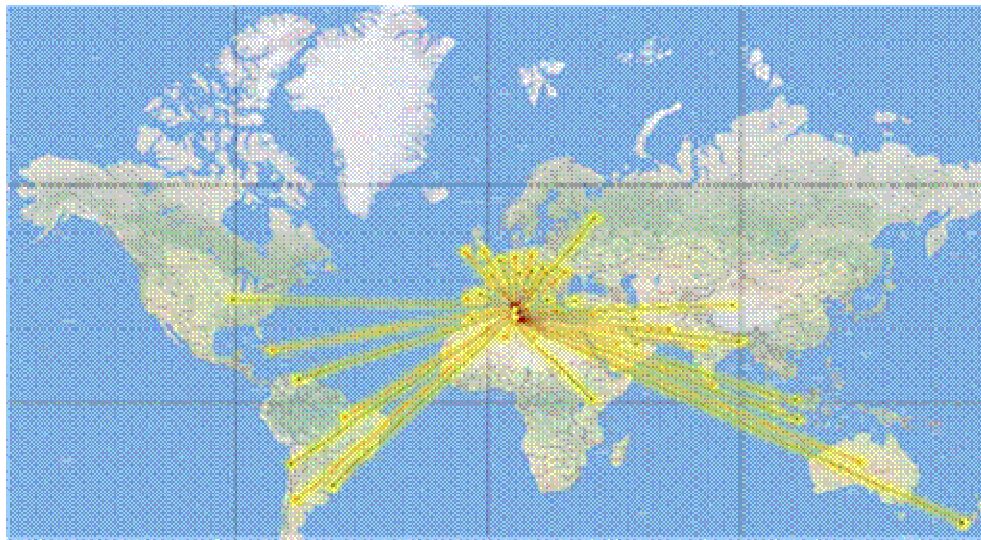
- To exploit phosphate reserves in the Mining Basin of Gafsa in particular.
- Undertake enrichment of ore to obtain a marketable quality.
- To commercialize the phosphate product in the most favorable economic conditions possible.
- To conduct surveys and geological research.

Thus, the TCGP Company of Tunisian phosphate had long been and so far as the single most major industrial center located, over one hundred years in the Mining Basin into southwest Gafsa in Tunisia where the lives of over 380,000 family homes Gafsa mining basin. This largest citizen Company currently employs in 2010, more than 5,200 employees including 512 managers (top and middle) and ranks fifth in world production, although the third place among countries exporting large phosphate product.

However, this position of this large Tunisian Company mining (T.C.G.P) worldwide, is caused by its potential reserves estimated at 1.300 Million tones with a very rare quality, its very popular with customers in the world



Box 1. Graphics of the mining area of Gafsa, where Tunisian TCGP Company operates phosphate mining.



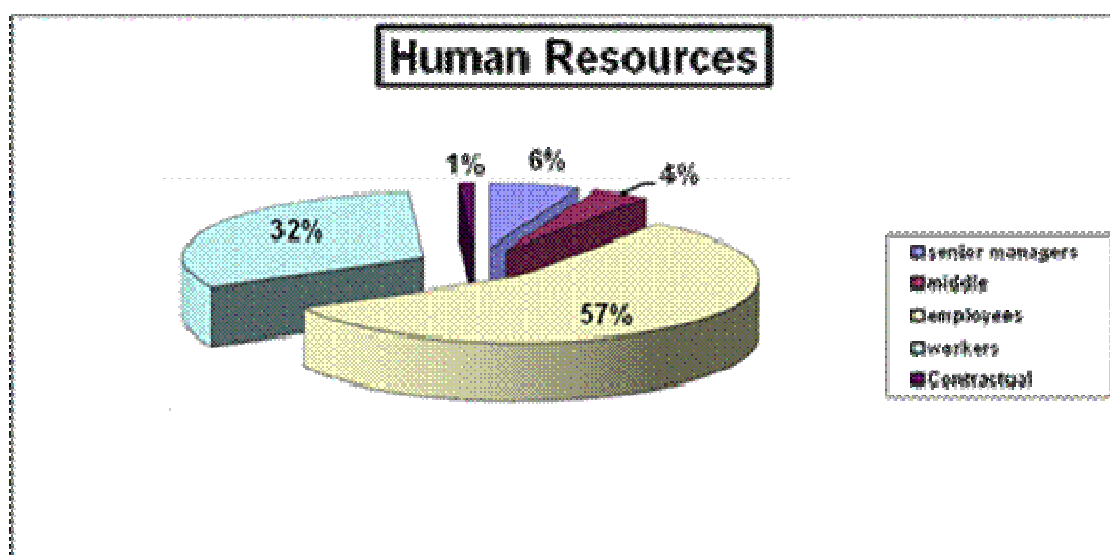
Box 2. Export of Tunisian phosphate fertilizer to some fifty countries around the world.

market for fertilizers and phosphate, its yearly production is 8.5 million tones of phosphate merchant in 2010 and projected 9.5 million tones from that product for years according to forecasts (The Centre for Research and Exploitation in Métlaoui Tunisia (CRVM) is one of the main nerves of the Great Tunisian Mining Company TCGP. Its main task is to predict the annual production rate, while applying predictive models of means and long term (generally over periods of 10 years and over). The center promotes the research and also to exploit other

areas of geological mining Gafsa Tunisia to maintain the one hand, and increase the volume of production of phosphate, on the other hand, through the new Technology ICT resources used and operational considered the most modern used by the world's leading producers such as Morocco (1st world producer) of medium and long term research into development center of T.C.G.P in Metlaoui Tunisia. (See box below on the production of Tunisian phosphate Merchant from 1900 to 2010).

The identity card of the T.C.G.P Mining Company of Tunisia.

Name	Tunisian Company Gafsa Phosphates (T.C.G.P). (in French : Compagnie des Phosphates de Gafsa Tunisienne (CPGT))
Headquarters	City Beeches, 2100 Gafsa, Tunisia.
Legal Form	Limited Company, which the Tunisian Government is the majority shareholder.
Turnover (Annual Report Echoes mining TCGP. Tunisia, 2009.)	1854 Million dinars in 2009.
Staff	5,200 people divided by the pie chart below



Box 3. Graphics card on the allocation of human resources by the Tunisia Company Gafsa Phosphate.

Based on the shape of the graph on the production of natural phosphate on a time interval that exceeds more than a hundred years (1900 to 2010), most strikingly, two periods of sustained growth:

First phase (1900-1938) who in 1938 reaches peak near 3.2 million tones of phosphate produced. Another time the most remarkable stretches over a longer period, from 1946 to graphically present with growth typically continues until 2010, which is mainly due to good cost control by the company TCGP and by using modern ICT technology tools most sophisticated mining ores and recovery the Tunisian phosphate product. All these assets held by the Tunisian Mining public enterprise, contribute much to growth unprecedented production volume of Tunisian phosphate fertilizers until today.

Although, a difficult time passing (1938-1946) between the two periods when the production rate was tilted to the lowest level, the most shocking noted throughout the economic life of this great Tunisian public Mining Firm (TCGP) up until today. While, the causes are well known in fact that are related to the crisis (Crisis 1929 (Black Thursday on October 24, 1929) is the worldwide

economic depression which was evidenced by the collapse of several global macroeconomic indicators such as: the worst economic recession in the history of the world economy, an unprecedented deflation followed by a significantly higher rate of unemployment, falling stock prices and the bursting of the speculative bubble leading a stock market crash) in 1929 and very serious disruption affecting all sectors of global economy.

Mining plant

Currently, the TCGP Company holds four mining centers consist of two underground mines and seven surface mines provide over seven laundries Tunisian phosphate enrichment. Mining activities in the TCGP Company are located in five main sectors in mining region of Gafsa Tunisia which are distributed as follows: For the region of Mining Métlaoui, there were two areas which are:

- The sector "Kef-Métlaoui Schfaier" includes quarries

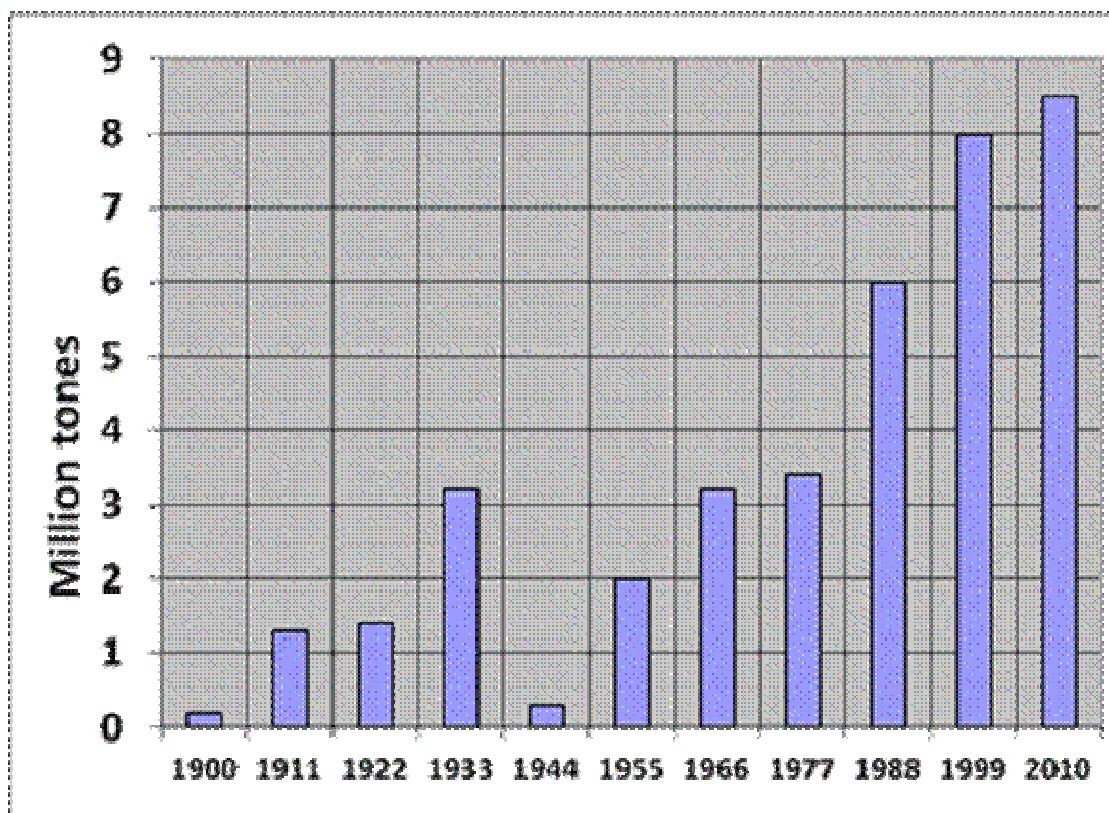


Figure 1. Evolution of yearly Tunisian natural phosphate between (1900-2010).

Source: Direction T.C.G.P, Management center of phosphate production, 2010.

Note: graphic representation by simple weighted average for each period of 11 years in simple smoothing until 2010, it forecast at predetermined by the previous two years 2008-2009.

- Kef Shfaier and laundries of Métlaoui.
- The sector "Kef-Métlaoui Eddour" includes quarries and Laundromat of kef Eddour
.For other regions of the mining area:
- The sector "Redeyef" includes mine Erg-Lasfar, quarries and laundry Redeyef
- The sector "Moularès" includes mine Mrate, quarries and laundry Moularès.
- The sector "M'Dhilla" includes quarries and Jellabia Mzinda-andTHE M'Dhilla of laundries.

Global positioning and contribution to the national economy

In regard to his rank in the world who can be classified as a *fifth* Tunisia powerful producer (USGS 2009) to the world's leading producers (The world's leading producers of phosphate product are classified as follows: MOROCCO (1st), the United States, China and the Russia. So, Tunisia in 5th place worldwide) of phosphate products and its ability to employability, as large industrial center in the mining region of Tunisia. This prestigious Tunisian citizen mining Company has a remarkable

contribution to the gross value added of the Tunisian economy and the trade balance. Its turnover rose from 403Millions dinars in 2007 to 1,406 million dinars in 2008 and 1854 the following year. (Annual Report of the Finance Department of the TCGP, 2009).

Extraction of 12 million tons of high quality of phosphate requested

The extraction of phosphate raw -gross- reached in 2009 (INS Tunisia, late 2009), 12 million tones is currently extracted from 10 units and is transported to processing units into Sfax for enrichment, which resulted in the production of nearly 9 million tones of phosphates commodities (merchants).

TCGP Company has placed Tunisia with this production of phosphate as the 5th largest global wholesale producer countries of phosphate immediately after Morocco, the United-States of America, China and the Russia. And the third largest exporter of the product.

The TCGP Company operates sedimentary deposits of phosphates multilayer separated by spacers' marl and limestone. The operation of these pools which was

Table 2. Ranking of the eight major producers of phosphate rock by volume and world share in 2006: Natural phosphate of Tunisia on Fifth Rank.






Major phosphate producing Countries	Natural Production volume (In million tons)	World share in percentage (%)
United States (1)	36300	24.69
China (2)	30400	20.68
Morocco (3)	25200	17.14
Russia (4)	11000	7.48
Tunisia (5)*	8500	6.18
Jordan (6)	6320	4.24
Brazil (7)	6100	4.15
Syria (8)	3500	2.38

Source: USGS, May 2006.

*Data are for Tunisia in 2009 (BCT.2009) who ranked fifth place in the world. Other data are attributed to the USGS in 2006, given the lack of data by country of origin.

Note: (1) to (8) is the descending order in terms of production volume of natural phosphates by the major global producer.

Table 3. World production of phosphate commodities between 1996-2008 (Millions tones of ore): Tunisia to 5th place worldwide.

	United-States 	China 	Morocco 	Russia 	Tunisia 	Other	World
Phosphate	41,2	26,4	25,7	11,2	8,1	35,2	143,8
P ₂ O ₅ *	14,6	8,2	8,3	4,8	3,7	11,6	47,3

Source: Association of Fertilizer Industry, USGS 2008

Note: The production of phosphates indicated by the Fertilizer Industry Association are slightly superior to those statistics from USGS, but the proportion of phosphoric anhydride (P₂O₅) in phosphate remains the same (31.2%).

* The rate of phosphorus pentoxide (P₂O₅) in the phosphate is 31.2% on average.

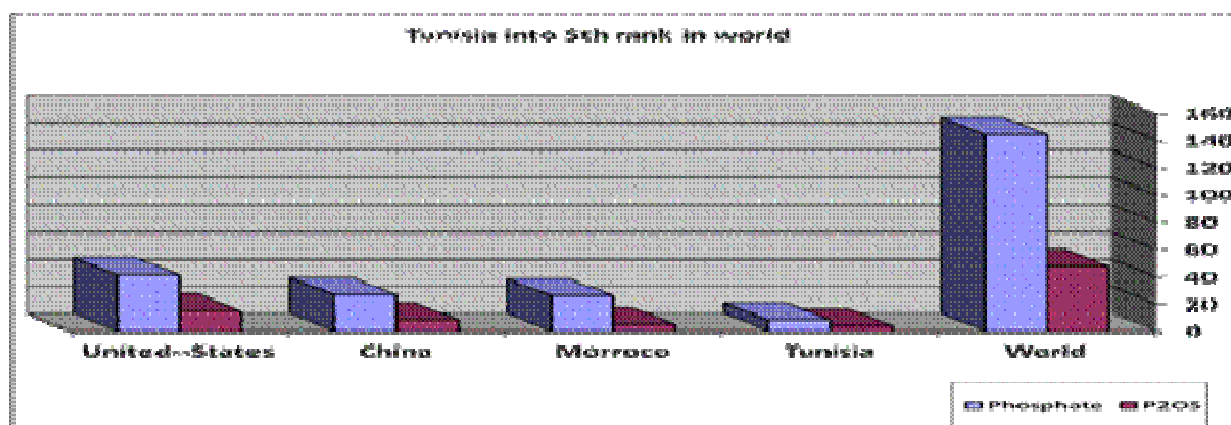


Figure 2. World production of phosphate -1996-2010 (Million tones of ore).

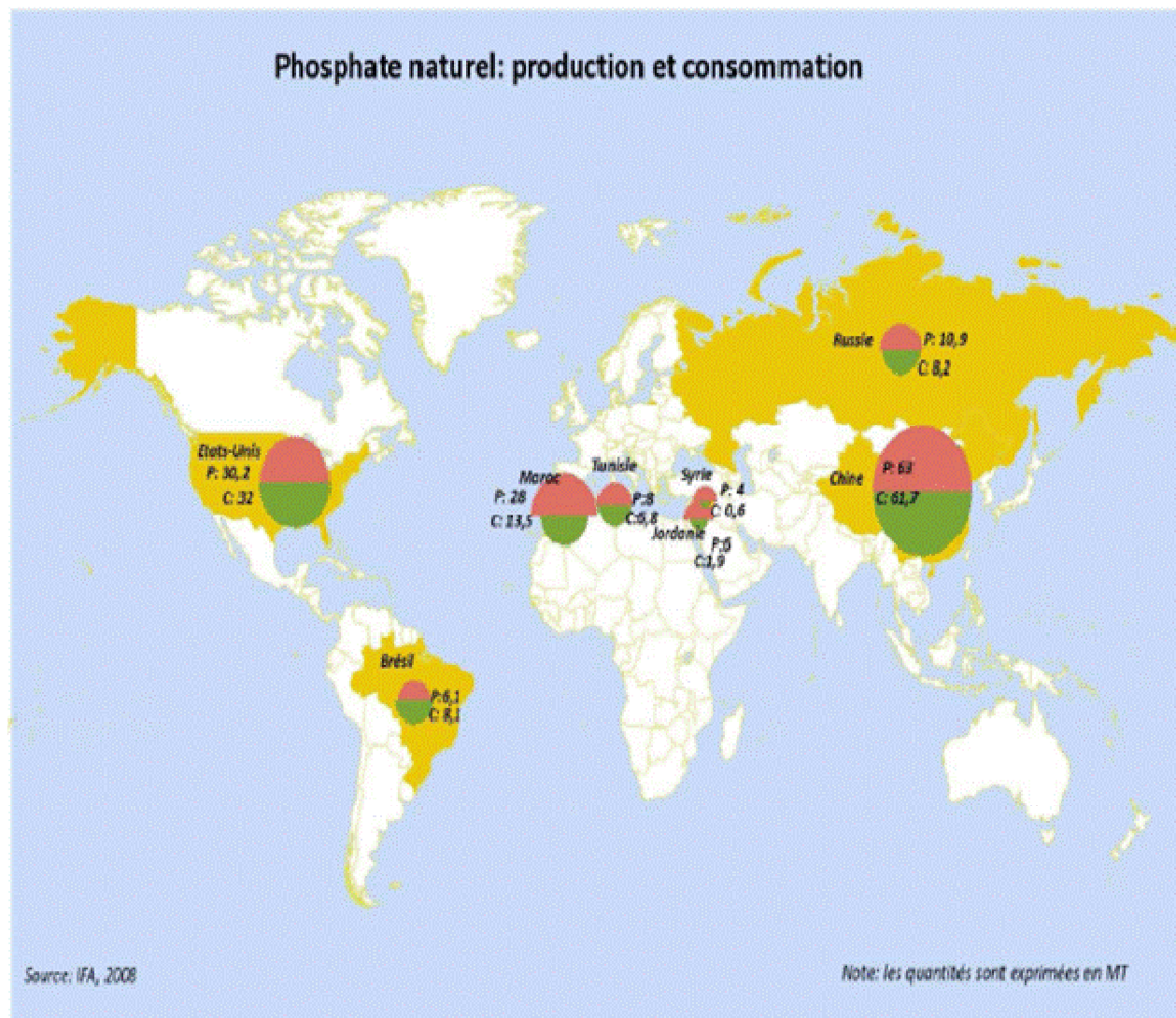
entirely in underground mines has been gradually transformed to a current open pit from which currently reaches more than 87% of the total extraction.

Export world

Nearly 15% of phosphate rock extracted by the TCGP

Mining Company is exported to 15 countries located in Asia (the largest share to India as the main customer in this region), mainly in Latin America and Europe.

The remaining 85% is processed locally in Sfax Chemical Group factories (GCT) to phosphoric acid and rich variety of fertilizers most of which is exported to these countries by port of Sfax.



Source: IFA, 2008.

Box 5. Natural Phosphate : Production & Consumption.

According to statistics from the Association of Fertilizer Industry, USGS 2008, Tunisia ranked fifth worldwide by two indicators of production (yearly production volume of crude raw phosphate and the level of the ratio of phosphorus pent oxide P_2O_5 phosphate in Tunisia). However, 2008 has shown a greater demand for Tunisian phosphate rock with an export volume has more than doubled in 2008 to about 180.5 Million Tunisian Dinars, against only 71 in Million Tunisian Dinars 2007. (cf, Table 3 below).

An overall view on the evolution of various phosphate ores exported from Tunisian Mining Basin Gafsa (Mining area) displays an increasing rate of world exports of raw phosphate and its various components in mineral fertilizers as shown in the chart above.

Strongly held in 2008, flying over the price of phosphate fertilizer in the World Market PFWM, the trade

balance is highly comfortable with these surplus yields gains generated by these products and derivatives exported phosphate (phosphoric acid 887.2 Million Dinars, 180.5 Million Dinars raw phosphate, DAP 1074.3 Million Dinars and Triple superphosphate 767 Million Dinars). But this export volume is almost halved in 2009 for these various phosphate fertilizers with a return to the state of price stability in the market PFWM after the unprecedented rise in prices in the end 2008.

Moreover, since 1994, the Tunisian government has decided the unification (In 1994, under unification, the phosphate raw reached 32.9 Million Dinars TUN. (Echoes Tunisian Gafsa Phosphate, 1994) of the general direction of the TCGP and Chemical group by appointing a single president. It was followed in 1996 by the merger of the two sales divisions (exported raw phosphate posted in 1996, worth 35.7 Million Dinars TUN), hence the rate of

Table 4. Main exports (Mining, Phosphate and derivatives)

Unit: Million of dinars

Years	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Phosphate rock raw	32.4	32.9	32.0	35.7	45.6	38.2	39.9	46.6	48.5	45.7	31.1	24.6	34.5	35.6	71.0	180.5	54.9
Phosphoric Acid	120.8	170.2	190.8	218.2	281.3	278.9	276.0	242.2	236.3	214.3	158.3	225.6	282.9	317.4	343.9	887.2	418.0
D.A.P	103.1	118.2	154.8	188.5	180.3	202.8	212.8	215.8	273.8	267.3	297.3	349.5	328.6	389.3	508.6	1074.3	502.2
Triple Superphosphate	75.0	103.0	110.5	119.7	122.1	135.6	133.8	142.2	130.5	137.3	142.8	185.3	205.0	200.8	324.9	767.0	377.6
Salt	5.1	6.3	7.0	7.6	6.1	6.9	7.1	8.8	11.7	11.1	14.7	13.9	18.0	17.2	13.8	18.8	31.3
Zinc	0.8	3.4	19.6	16.1	1.8	7.6	17.7	28.2	19.9	15.3	15.5	14.9	14.6	-	0.1	-	-

Source: Institut National de la Statistique (INS), Tunis. 2010.

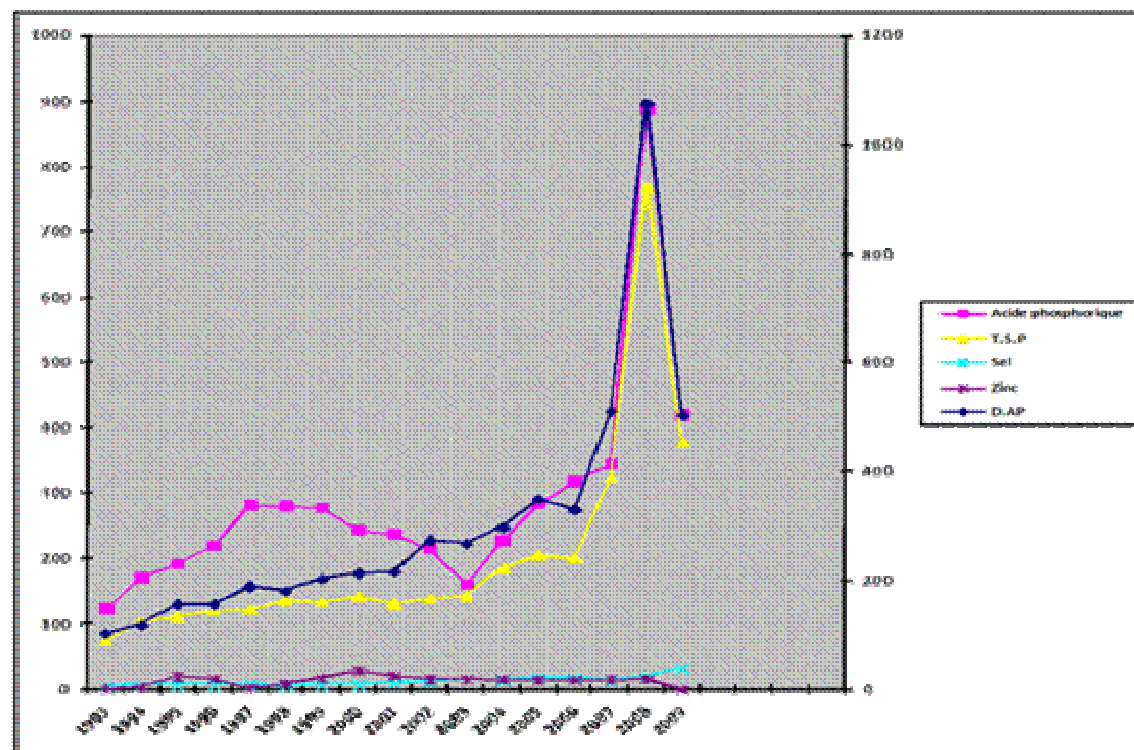
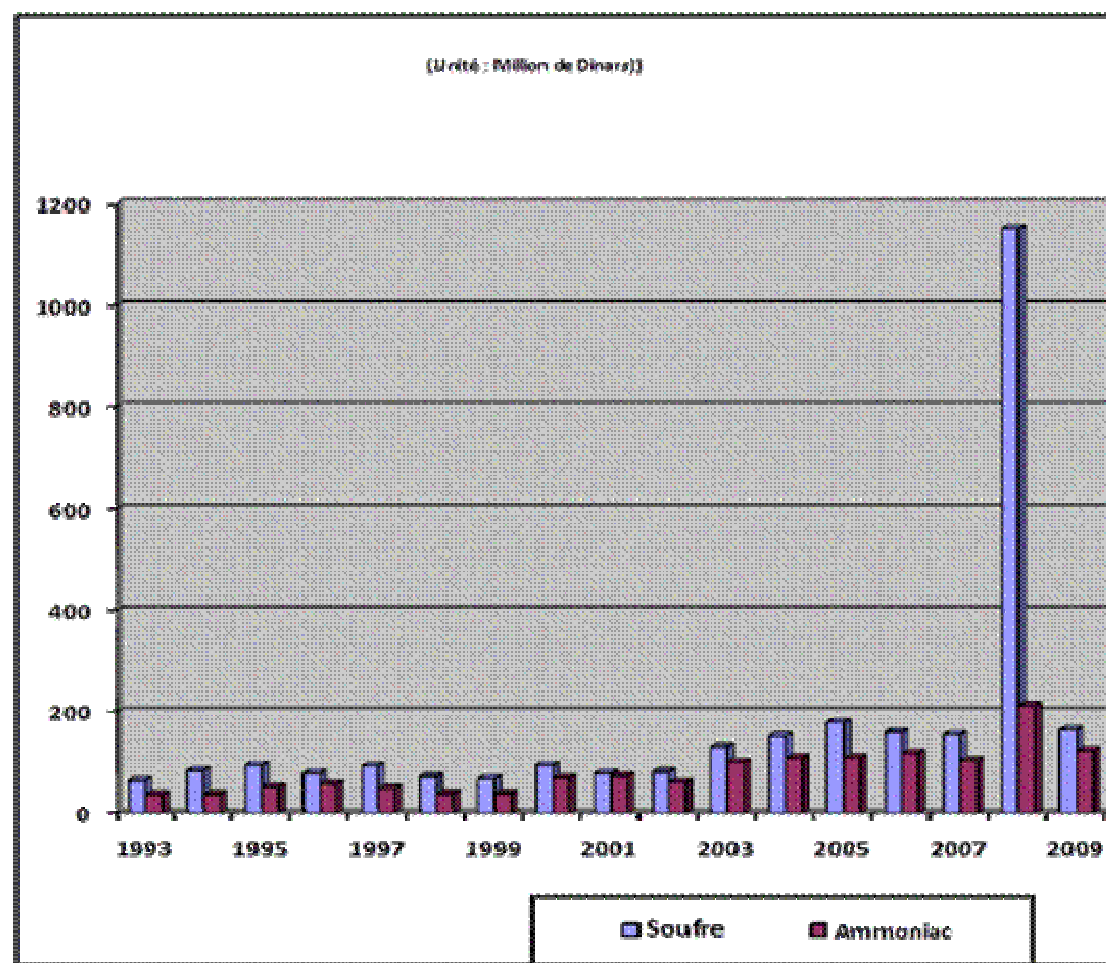
**Figure 3:** Evolution of the main exports: Mining Phosphate and derivative (1993 - 2009).

Table 5. Major Imports (Mining, phosphate and derivatives)**Unit:** Million of Dinars

Years	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Sulfur	64	83.4	95.1	78.4	92.9	71.8	67.6	94.8	78.3	81.1	131.2	151.2	179.0	159.2	154.1	1150.2	163.5
Ammonia	37	37.7	51.5	57	48.8	38.3	39.3	69.5	72.7	60.5	101.5	109.3	109.7	119.2	104.2	212.4	124.1

Source: National Institute of Statistics (INS), Tunis. 2010.**Figure 4.** Main products imported between 1993-2009.

export of this product moderately accentuated to around 40 Million Dinars TUN, reaching in 2008 the highest price 180.5 Million Dinars TUN.

In 2009, prices for exported raw phosphate product were recovered near 59.9 Million Dinars TUN, after 2008 qualified more comfortable, its profits from the export of various phosphate fertilizer mining Tunisia, for this great public enterprise Tunisian mining TCGP. All these difficult global economic conditions, in contrast, conferred on the Tunisian industry phosphate more cohesion, efficiency and profitability made by exporting the phosphate product and its derivatives in the world market for phosphate fertilizer PFWM. (See the following table on the main products imported mineral enrichment between 1993-2009)

By analyzing the values of sulfur and ammonia (cf Table 4 and Figure 7 above) imported to enrich the Tunisian phosphate fertilizer for export; we note that average prices of both imported goods for the period (1993-2002) are around, respectively, 75 Million Dinars for the sulfur, and 52 Million Dinars for ammonia.

But from 2003 until now there has been a rise in prices on the world fertilizer market; the respective mean values of ammonia and sulfur are in the order of 289 Million Dinars and 125 Million Dinars. However, the highest peak of these two products is displayed in 2008 (1150.2 Million dinars for sulfur and 212.4 Million dinars for ammonia) of course year of world financial and economic crisis.

Moreover, most strikingly in 2009 from the graph that the prices of those products are down almost the same damping averages from previous years 2006 and 2007.

Development and economic performance of the Tunisian industry phosphate

Role assigned to the leader mining company

The phosphate industry in Tunisia will experience a great development in the coming decades with very large potential reserves of rare quality and the future investments already made, also to the restructuring program upgrade already followed. (Report of the BCT, 2009-2010).

For its development, TCGP Tunisian Mining Company has planned investments of around 128 million Tunisian Dinars, under the 10th structurally plan, which has already helped to achieve the horizon of the plan with production of 8.5 million tones of Tunisian phosphate rocks. The TCGP will have in future prospects, at least maintain production at current levels, improve productivity and compress costs of production and consumption of energy.

The extraction of 12 million tones of phosphate quality

Facts and Estimates

The extraction of phosphate rock is estimated to reach finally 2010, 12 million tones (phosphate Tunisian TCGP, 2010), which will produce 9 million tones of phosphates rocks.

In addition, chemical, radiological, and mineralogical conducted by several laboratories around the world (Research group phosphate rock, Fertilizer Industry Association, USGS 2009) indicate that the Tunisian phosphate Gafsa, produced by the largest public Company Tunisian citizen TCGP, is one of the most high quality rare phosphates in the world strongly requested. This places Tunisia in the world's third largest export phosphate mining product compared to leader exporter of phosphates (USA, Morocco etc.).

Uranium phosphate Tunisian Energy Source

Morocco in 2022, Tunisia provided in 2025

Seen the rollover and the non-stability of the hydrocarbons (112 \$ a barrel end Apr. 2011), a search for an alternative energy resource constitutes an essential growth for the Maghreb countries. That is, as well in 2005, that the Morocco due to the partnership with the group " French AVERA " has provided the actual outbreak of the first civilian nuclear power in 2022.

Well the Tunisia has done an association agreement with the same French group for the extraction of uranium from the Tunisian phosphate, as in the case of neighbors Maghreb, and the installation of its first nuclear power plant planned for 2025 with a capacity of 900 MGW. Costly Strategy, but pleads in favor in the long term for reducing its energy bill and toward the export of uranium. (Tunisian Ministry of industry, energy and small and medium-sized enterprises, March 2010).

Development efforts and contribution of TCGP economic performance against the world economic crisis

International Notes issued by Fitch Ratings Agency to phosphate Tunisia

The Tunisian phosphate industry is one of the main nerves to the Tunisian economy. This is illustrated by the notes (The confirmation notes to the TCGP Tunisian Mining Company by Agency Fitch Ratings (2009) are:

- * For the Long Term (LT): AA (TUN)
- * For the Short Term (CT): F1 + (TUN)

Table 6. Financial situation of the CPGT between 2006 - early 2009.

	2006	2007	2008
Incomes of the company (in Million Dinars)	295.2	414	1420,4
Operating Margin EBITDA * in %	23.7	37,5	78,1
Level of debt (in million Dinars)	109.5	91,3	54,8
Treasury Business (in Million Dinars)	178,9	215,4	961

Source: Annual reports of Fitch Ratings (2006, 2007, 2008, early 2009)

Note: * EBITDA can be calculated from the account of the result in two ways:

- Additive Method (EBITDA = Net income + interest expenses + tax + depreciation expense)

-Subtractive method: (EBITDA = turnover-shopping-other external costs-personnel costs).

Stable character of the Agency Fitch Ratings (AFR) published (Agency Fitch Ratings: is an international rating industry agency, which assigns notes to Great International Firms yearly, based on each industry report, production technology and the export volume reduced) recently (late 2009-2010) for this great Tunisian Mining Firm showing its good image in the world and its future trends that will keep pace with growing strong, albeit this situation unfavorable world economic crisis.

Currently and through this report (The agency report was published recently in August 10, 2009.) AFR (2009), the Tunisian phosphate industry will undergo a great development in the coming decades, thanks to its significant potential reserves that are very rare worldwide, and also for investment, reported by 11th (2007-2011) government Plan, already made and also to ongoing programs of technological modernization, restructuring and upgrading already followed since 1996 by the great Tunisian Mining Company, TCGP.

For increased its level of productivity and increasing the pace of development, this large Tunisian Mining Company has planned a investment in the order of 158 million Dinars in the 11th Plan (2007-2011) allowing it to reach the horizon of this plan an estimated production of 9.5 million tones of Tunisian phosphate.

Moreover, facing this economic crisis that has severely affected most countries of the world together with their companies irrespective of their economic size, the great Tunisian Mining Company TCGP expected in future years more difficult economically, maintain production at least at the current level, improve their technological capabilities (ICT) in productivity, operating and recovery of minerals while reducing costs at various stages of business and marketing. In this framework, Fitch Ratings has confirmed, in fact, its ratings in 2009 at the international level for Tunisian Mining Company, TCGP.

The new ratings reflect the strong performance of the Tunisian phosphate industry, despite these difficult (Faced to this financial crisis and global economic conditions, the Tunisian Government played a key role in

aid and support for Enterprises (SMEs, etc) most affected in order to keep out at less economic damage) economic changes worldwide, which further contributes a remarkable development of the financial base of the Tunisian economy.

However, these ratings assigned by Fitch Ratings to the Tunisian large public Mining Company reflect the excellence of the financial health of this great Mining Company that is directly related to the high demand for phosphate fertilizer quality worldwide for agriculture fertilization. This explains the surplus in trade balance in late 2008, when the price per tone of phosphate product has *triple*, exceeding 400 Dollars per tone, representing a huge win for the Mining Company and, Tunisian economy too (the Tunisian GDP has been growth remarkably).

From an economic standpoint, the Tunisian phosphate industry has continued in recent years (2006-2009), to take advantage of favorable global environment characterized by continued demand ever higher and the pursuit of increase in sales prices of phosphate and fertilizers.

This Leader Tunisia Mining Company TCGP has made in the end 2008 earnings 1420.4 MTD cons 414 MTD in 2007, a profit of 243%. Boasting the world price of phosphate is strongly increased after several years of stability (prices triple from medium 60 dollars / tone in the 2007 to over 400 dollars / tone in the 2008 and up to half of the year following 2009). Thus, the operating EBITDA margin increased from 37.5% in 2007 to 78.1 in late 2008, a differential gain of 40.6%.

It is obvious to remark that this Tunisian Mining Company exhaled, finally in 2008 and early 2009, a strong cash flow exceeding 961 Million Tunisian Dinars, four times over the year before. Although, debt levels are unpacking a rate of 36.5% to end 2008, into lower debt to the order of 54.8%.

However, it is important to remember that this great public Tunisia mining Firm has signed a joint-venture under the *partnership* in the phosphate with *Indian Companies* for the installation of a phosphoric acid plant in Skhira Sfax and another in Gafsa Mdhila. The TCGP Mining Company and its subsidiary Chemical group hold

more than 70% share in the joint-venture Tunisian-Indian. It is estimated that the production capacity of these plants located in the region of Sfax -in Tunisia- is the order of 360,000 tones per year with an increase in production rate for previous years.

To this end, TCGP Tunisian Mining Company consider from the end of 2010, under the partnership agreement the Tunisian-Indian, to increase its own production of the phosphate mining in region of Gafsa Tunisia to reach 9 million tones per year, in order to cover actually basic needs of new plants already installed in areas of Sfax and Gafsa to the recovery of phosphoric acid in high demand in world market of phosphate fertilizer WMPF.

CONCLUSION

Tunisian phosphate industry has continued to thrive since its discovery in 1897 in the mining region of south-west of Tunisia. After independence, Tunisia has merged all mine operators to increase their competitiveness and their ability to produce in a great single Company named Tunisian Company of Gafsa Phosphates TCGP and its subsidiary Chemical group for recovery and enrichment phosphate fertilizers that are in high demand for agriculture by importing countries (mainly European Union and India) in the world market for phosphate fertilizers.

Nowadays, the Tunisian phosphate industry has continued, despite the recent global economic crisis of 2008, take advantage of this international situation following the increase of high demand for phosphate products to enhance agriculture, adding to this fact, the unprecedented price soared phosphate rock in late 2008 that has more contiguous triplet (3 x) near the 400 dollars per tone of phosphate.

To this end, the Tunisian phosphate industry, which represents a major economic base activity for the country, has been able to generate surplus cash bypassed for the development of the sector itself a part. The second is intended as a value added to national GDP and increase the capital base of the country as a direct result.

Currently, in late 2009 and early 2010, prices have almost stabilized with a sort of equilibrium between supply and demand for the fertilizers phosphate product into world market fertilizer phosphate WMFP. Thus, the Tunisian phosphate industry continues to grow with a steady pace with their production opportunities at the future while pressing:

- Diversification of phosphate fertilizers
- Improving the overall quality
- Reducing production costs and any kind of waste
- Use of ICTs as tools for *technological modernization* to confront foreign competition (before entering the new entrants: in 2020 Algeria and Saudi Arabia in 2016) and armed with technological potential from the phase of

operations until marketing of mining product.

These are articulators points of the strategy implemented in recent years, despite the remarkable effort of all officers and managers are an essential support to achieve this targeted objective by senior management of this Tunisian Mining Company.

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