Headaches and successes of a state-owned mining exploration company

By Raymond Raby

SOQUEM, the Quebec Mining Exploration Company, is a state company formed in 1965 by the Government of the Province of Québec, Canada. It was established during the "Quiet Revolution," as an effective management response to the then small participation of Quebecers in the mining exploration-exploitation sector, as well as in the main centres of decision related to mining resources.

Thanks to its exploration successes, 20 years later, SOQUEM has become an equal partner with the private sector in the management of its five own significant orebody discoveries (see Table 1) that were brought into production during this same period. In Canada, our performance record is acknowledged as next to none given the operating constraints inherent in a state company.

During 1986, under the Quebec Government global policy of privatization, the Doyon gold mine, the niobium mine and all of the exploration-development mining properties of SOQUEM in the Abitibi region, were regrouped into Cambior Inc. along with some other assets, and this wholly owned subsidiary of SOQUEM was privatized through the sale of some 70% of the shares to the public. As of March 31, 1987, the 30.7% residual interest held by SOQUEM in Cambior Inc. was worth some 180 MCAD (1.32 Canadian dollar (CAD) = 1.00 USD) on the open market.

After inclusion of other assets valued at some 73 MCAD, the potential market value of the SOQUEM's assets as of March 31, 1987 is a net 239 MCAD compared to the investment of 127.6 MCAD made by the Government of Quebec into SOQUEM over the years.

Everyone familiar with the sector knows how volatile mining exploration risk capital can be, when coupled with low market prices, political and fiscal stability as well as the rate of new discoveries which always create ups and downs in the overall mineral exploration efforts. During its 21 year life, SOQUEM has generated through its own operations some 149 MCAD of funds reinvested in mining exploration and development. When these funds are added to the initial government investment, the net result shows an annual governmental investment of some 13 MCAD to stabilize the volatility of the private sector investments into the mineral economic development of the province of Quebec. It is recognized in Quebec and Canada that SOQUEM has been, and will likely remain, an effective management response by the Quebec government to the somewhat erratic risk capital investment in the solid mineral industry carried out by the private sector (see Table 2).

In this temporary period of high availability of risk capital created by very attractive fiscal conditions in Canada, and as a result of the recent privatization process, the mandate of SOQUEM has been redefined, without changing its basic objectives, to include among other things, a regionally diversified exploration annual budget of some 5.0 MCAD inclusive of corporate administrative costs. The regional allocation of the budgets has been based primarily upon geological potential with regards to metal priorities.

Already, within less than one year after privatization, the exploration management team is proud of its portfolio of exploration projects selected to attract private partners in accordance with SOQUEM's metal priorities, ie, (1) 50% for base metals, (2) 25% for alloying and high technology metals and (3) 25% towards the search for precious metals (see Table 3).

We at SOQUEM wish to convey to this gathering of policy-makers and managers from state-related mining enterprises, our strong belief that our unique successful Canadian experience as a state mining exploration company can be duplicated in selected developing countries through a well-managed and organized program hinging on adequate know-how and technology transfer. To

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this effect, we proudly refer to the successful program carried out by SOQUEM during the 1975-1978 period in cooperation with the Industrial and Mining Development Bank of Iran. SOQUEM, with the help of specialized partners, welcomes proposals for international self-financed programs aiming at the creation of organizations similar to that of SOQUEM in interested developing countries.

SOQUEM's goals

SOQUEM was created by a special law of the National Assembly of the province of Quebec, with the following goals:

> "Mining exploration using all methods; Prospecting and development, mining and conversion of mineral substances."

The law also established the following points with respect to these goals:

> "To pursue its goals, the Company may, according to the law, associate or enter into agreements with any person or company;
> In carrying out its goals, the Company must aim to be profitable."

Corporate structure

The corporate structure of SOQUEM is characterized by the following elements:

- *Shareholders*: All the shares of SOQUEM are held by the Minister of Finance for the Government of the Province of Quebec.
- *Responsibility*: The Minister of Energy and Resources is responsible to the National Assembly for the operations of SOQUEM. This responsibility is presently borne by the Minister responsible for mines and native affairs.
- *Board of directors*: Composed of 7 to 11 members appointed by the Government of Quebec for a two year term; includes a Chairman and Vice-Chairman as elected by the Board members.
- *President and Chief Executive Officer*: Nominated by the Government for a term of 5 years.
- *Organization chart*: As defined by the President and approved by the Board of Directors, it includes a corporate vice-presidency charged with administrative responsibilities, and a General Manager for Exploration charged with all exploration activities defined in the annual budget (currently 5.0 MCAD) as approved by the Board.

Table 1
Allocation of exploration efforts (SOQUEM and partners)
(based on historical CAD)

		% of SOQUEM budget to projects		% of SOQUEM budget allocated to			
Year	SOQUEM's exploration expenses CAD	Autonomous	Shared	Grassroot	Prospecting	Drilling	Discovery of deposit
1987-1988	4 200 000 (budget)	75(est.)	25(est.)	30(est.)	20(est.)	40(est.)	10(est.)
1986-1987	2 440 000	80.1	19.9	48.1	6.1	45.8	-0-
1875-1986	5 011 000	72.1	27.9	16.6	22.1	61.3	-0-
1984-1985	4 461 000	70.5	29.5	14.6	14.4	71.0	-0-
1983-1984	4 293 000	65.4	34.6	21.3	19.3	46.2	13.2
1982-1983	5 986 000	69.2	30.8	35.6	14.0	43.7	6.7
1981-1982	8 213 000	60.5	39.5	11.8	8.4	54.8	25.0
1980-1981	7 260 000	73.8	26.2	5.5	9.1	49.8	35.6
Total (9 years)	**41 864 000**	**69.0**	**31.0**	**18.8**	**13.0**	**53.3**	**14.9**
SOQUEM's expenses						31.8%	68.2%
Concurrent expenses by partners	14 835 000	—	—	3.1	5.2	73.7	18.0
						8.3%	91.7%

Constraints and headaches

As a state company, SOQUEM has to live with a certain number of constraints, and we shall address only those of significant importance. Indeed, should we have to contribute our know-how and experienc toward the creation of similar state company in developing countries, we would certainly pay special attention to parameters such as (1) statutes, (2) capitalization, (3) geographic limitations, (4) parity with the private sector, without forgetting the operating structure and the available know-how of the personnel involved.

1. Statutes

The law creating SOQUEM (statutes) has been fairly well tested throughout the years and functions well commercially. Only one significant modification has been carried out. The concept of responsibility for exploration that had to be added to the original version of the law.

A clear and stable statute not only eliminates jurisdictional and legal conflicts, but in the case of SOQUEM it has enhanced credibility by enabling SOQUEM to posess both the long-term vision of the multinational as well as the short-term vision of the small investor.

2. Capitalization

Unlike the multinational or the national mining company that carries out its mining exploration activities through a specialized subsidiary, SOQUEM is primarily an exploration company that can carry out mining exploitation through a specialized subsidiary or through joint venture agreements with partners. This has been and will remain one of our main headaches.

To say that SOQUEM's successes throughout the years were the very causes of many of its headaches and/or financial problems, may sound like a paradox, however it is fundamentally true. Indeed, everytime SOQUEM was successful in making a significant mineral discovery, it had to reduce the level of its exploration activities (the primary object of its existence), to liberate the funds necessary to evaluate the commercial feasibility of its discoveries. This happened in 1969-70 with the Louvem copper deposit, in 1970-75 with the niobium discovery, in 1972 through 1978 with the salt development and the Doyon gold mine projects, and for different reasons in 1983 through 1986 with the difficult phasing-in of production of the rock salt mine operation.

When legislation created SOQUEM in 1965 with an annual endowment of 1.5 MCAD for 10 years, both the odds and the industry were against SOQUEM succeeding in making a significant discovery at such a level of effort. SOQUEM quickly turned out to be very successful in making discoveries and thus came face to face with two related constraints: (a) the taking of initial exploration risks, and the simultaneous (b) development of its discoveries to ensure long-term survival.

These constraints were addressed in the following general manner.

Table 2
SOQUEM Mining exploration and development discoveries brought into production

Year	Metal or Substance (ore body)	Details
1965	—	Creation of SOQUEM.
1968	Copper (Louvem)	
1970	Zinc—Silver	Discovery of a zinc — silver orebody by (Louvem) SOQUEM subsequently brought into production upon depletion of Cu reserves, by Louvem a then wholly owned subsidiary, subsequently privatized in 1983-1984.
1968	Niobium (Niobec)	Discovery by SOQUEM alone of a niobium and rare earth bearing carbonatite complex. First production in 1976 at 1.5 kt/day underground, expanded to 2,300 2.3 kt/day in 1979; second largest world producer of niobium owned 50/50% by Teck Corp. and SOQUEM, subsequently privatized into Cambior Inc. in 1986.
1972	Salt (Seleine)	Discovery by SOQUEM of a diapiric rock salt formation put into production in 1982-1983 at the nominal rate of 1.25 Mt/year per year by Seleine Mines, a wholly owned subsidiary considered for privatization in 1987-1988. Targeted for privatization early 1988.
1973-74	Gold (Doyon)	Discovery by SOQUEM of a gold deposit put into open pit production in joint venture (50/50%) with Lac Minerals in 1980. Considered one of the largest open pit gold mine in Canada, now producing some 240 000 ounces of gold per year, subsequently privatized into Cambior in 1986.

Sharing the exploration risks

Everyone familiar with mining exploration knows that it is a game for professionals where survival is only obtained by the fittest, the luckiest and by the most ingenious, because the odds of winning are better when gambling your money at the casino or the lottery. Due to its limited funds, SOQUEM had to divide its risks, and it rightly shared as many projects as possible with interested partners from the private sector to increase its economic chances of participating in an eventual discovery.

Our experience demonstrates quite clearly that the private sector would rather pay more to share in a successful program as opposed to taking the initial risks associated with grassroot exploration (see Table 4).

To offset this handicap SOQUEM has adopted the strategy of directing (on the average) some 30% of its financial exploration efforts to the more risky phases

Table 3
SOQUEM exploration strategy: priority for metals and minerals

		Base for the priority				
Classification	Metal or Mineral	Consolidation	Diversification	Economic value	Technological value	Priority level at SOQUEM
Base metals	Copper	x				2
	Zinc	x		x		2
	Lead		x			6
	Nickel		x			6
Precious metals	Gold	x		x		1
	Silver	x		x		1
	Platinum group		x	x	x	4
Refractory specially alloying and high technology metals	Niobium	x	x	x	x	3
	Tantalum		x	x	x	3
	Tungsten		x		x	4
	Chromium		x		x	4
	Beryllium		x	x	x	4
	Tin		x		x	4
	Zircon		x		x	4
	Gallium		x	x	x	4
	Rare earths		x	x	x	3
	Vanadium		x		x	8
	Uranium		x		x	8
Industrial refractory minerals	Graphite	x	x	x	x	5
	Kyanite-sillimanite		x	x	x	5
	Magnesite-dolomite	x	x		x	5
Fertilizers	Phosphates			x		5
Others	Silica	x				7
	Rutile		x	x	x	4

of grassroot prospecting in search for drill targets capable of creating new centres of interest for the private sector. During the same period, the partners were willing to contribute only 8% of their joint exploration budget with SOQUEM to grassroot prospecting, while directing 92% of their budget to less risky programs which had already reached drilling or discovery phases (see Table 1).

For the development or the bringing into production of its discoveries, SOQUEM as a mining exploration company could not rely upon a mother company specialized in mining to take over these more costly investment phases, and therefore had always to chose one of the following three alternatives:

Alternative 1
With autonomous projects, there are 4 possibilities:

(a) to share the project while asking the partner to contribute a premium accounting for the initial risk (as in the case of the niobium mines); or

(b) to develop it alone at a normal rate, as in the case of the salt deposits; or

(c) to develop it at a slow rate which in fact would reduce the economic return of exploration (for example the Crevier Nb-Ta deposit); or

(d) to shelve it temporarily (as with the silica deposits, the Lac Dore vanadium deposits and the Pascallis gold project awaiting better gold prices in 1984-85).

Alternative 2
With joint venture projects, SOQUEM could only contribute its predetermined (per contract) share to the development costs by temporarily shelving other exploration programs, thus affecting its capacity to generate new projects of interest until such time as the project is capable of generating a cash flow: as exemplified by the Louvem copper and the Doyon gold deposits.

Alternative 3
To sell its share to the partner, or alternatively dilute its equity in the project, or sell to a third party depending upon the terms of the joint venture agreement. The experience clearly demonstrates that the sale of an orebody at the prefeasibility stage is seldom carried out for cash payment, but more so for development expenses applied to the purchase of an undivided equity position in the project, or for future royalty payment on production. If on the other hand, a sale of interest occurs, it is always on a discounted value basis due to the risks still attached to the project.

Table 4
Sharing the exploration risks with private sector
(last 7 years experience by SOQUEM)

	Projects with partners/total projects				Total projects in progress	Shared projects	
	Exploration phase						% contribution by partners
	Grassroot (1)	Prospecting (2)	Drilling (3)	Discovery of deposit (4)			
1986-1987	0/17	0/5	4/10	0/0	32	13%	34%
1985-1986	0/11	1/20	15/25	1/1	57	30%	65%
1984-1985	0/8	1/14	18/34	0/0	56	34%	71%
1983-1984	0/6	5/21	10/24	3/3	54	32%	49%
1982-1983	3/26	2/11	13/26	2/2	65	31%	49%
1981-1982	3/11	4/14	22/36	2/5	66	47%	46%
1980-1981	0/4	7/16	21/35	0/3	58	48%	49%
Shared projects	**7%**	**21%**	**55%**	**57%**	**av. 55**	**35%**	**-**
% contribution by partners	**56%**	**54%**	**51%**	**62%**	**—**	**—**	**53%**

Table 5
Value of mineral shipments from Quebec mines (1964-1984)
(kCAD)

	1964	%	1974	%	1984	%
Metals						
Gold	35 672	5.34	68 537	5.56	429 684	21.55
Iron ore	155 581	23.27	159 116	12.92	403 398	20.23
Copper	107 072	16.01	240 264	19.51	127 933	6.42
Iron (remelt)	15 955	2.39	81 882	6.65	121 000(1)	6.07
Zinc	64 779	9.69	96 893	7.87	81 968	4.11
Silver	6 660	1.00	14 811	1.20	16 340	0.82
Niobium	2 305	0.34	6 680	0.54	17 500(1)	0.88
Ilmenite	—	-	—	-	10 000(1)	0.50
Selenium	1 190	0.18	5 564	0.45	5 460	0.27
Cadmium	899	0.13	1 333	0.11	434	0.02
Tellurides	391	0.06	714	0.06	160	0.01
Molybdenum	1 685	0.25	986	0.08	1.384	0.07
Bismuth	310	0.05	6	0.01	—	-
Cobalt	175	0.03	—	-	—	-
Lead	881	0.13	437	0.03	—	-
Nickel	3 914	0.59	—	-	—	-
Sub-total	**297 489**	**59.45**	**677 223**	**54.99**	**1 215 361**	**60 95**
Industrial minerals						
Asbestos	125 898	18.83	236 548	19.21	278 641	13.97
Titanium (Dioxyde)	20 982	3.14	51 931	4.22	—	-
Peat moss	1 953	0.29	7 985	0.65	17 171	0.86
Silica	547	0.08	5 847	0.47	14 703	0.74
Dolomite	3 467	0.52	—	-	6 382	0.132
Sulfur	386	0.06	1 770	0.14	9 112	0.46
Talc and pyrophilite	194	0.03	682	0.05	2 388	0.12
Feldspar	205	0.03	—	-	—	-
Graphite	7	0.01	—	-	*	-
Ironoxyde	79	0.02	—	-	—	-
Lithium	1 152	0.17	—	-	—	-
Mica	92	0.02	30	0.01	*	
Others* (1986, salt, mica, graphite)	—	-	—	-	27 840(1)	1.40
Sub-total	**154 962**	**23.18**	**304 793**	**24.75**	**356 237**	**17.87**
Construction materials	**116 125**	**17.37**	**249 561**	**20.26**	**422 318**	**21.18**
Totals	668 576	100.00	1 231 577	100.00	1 993 916	100.00

(1) Preliminary figures, source: *L'industrie minière du Québec 1984*, M.R.N., Quebec, 1985.
Sources:
1964: *Mineral Yearbook of Canada in 1964*, M.M. and R.T., Ottawa.
1974: *Mineral Industry of Quebec 1975*, M.R.N., Quebec, 1976.
1984: *The Mineral Resource 1985*, M.R.N., Quebec, 1985.

Table 6
SOQUEM other mining exploration — Development or commercial achievements

Year	Type of achievement	Details
1968	Cu — Ni	Development of a small open pit orebody sold to private enterprise for a royalty.
1975-1978	Foreign Cooperation Iran	Supply of expertise to create an Iranian Mining Fund patterned after SOQUEM to promote the mining industry in Iran; agreement with the Industrial and Mining Development Bank of Iran.
1975-1985	Nb — Ta	Discovery in 1975 by SOQUEM of a large and uniform niobium-tantalum nepheline syenite dyke, which has been developed to the pilot plant and prefeasibility before privatization into Cambior in 1986.
1978	Chimo gold	Acquisition for exploration and development of a former producing orebody. Currently in production at 450 T.P.D. Subsequently privatized into Louvem in 1983/1984.
1978-1980	Montauban gold	Acquisition of 50% undivided interest for exploration-development by SOQUEM of a gold orebody subsequently brought to production by the private partner at 400 T.P.D. rate (still producing). SOQUEM's residual interest privatized into Cambior Inc. in 1986.
1979-1982	Silica quartz	Acquisition and development of a 65 M tonnes quartz property for development of SiC-Si-FeSi industries. On standby awaiting investments by others in the manufacturing sector.
1980	Mixed company	Creation by SOQUEM of a mixed public company by transfer of mining properties at various stages of development including a gold orebody in production since 1983 at rate of 700 T.P.D. SOQUEM's residual interest privatized into Cambior Inc. in 1986.
1981	Peat moss	Acquisition from private investors of a 55% undivided interest in a peat bug at early stage of production. Subsequently privatized (1985) into a large commercial producer.
1981-1983	Equity participation	Gradual acquisition of a 31% equity interest in Sullivan Mines Inc. to reactivate this former Quebec producer into mining exploration and production, which led to the subsequent acquisition Other Mining Exploration — Development or Commercial Achievements Year Type of achievement Details
1982	Pascalis gold	Discovery by SOQUEM of a significant gold deposit which still requires underground development before concluding to production feasibility. SOQUEM's 60% undivided interest privatized into Cambior Inc. in 1986.
1982	Gold trading	Development of a gold trading expertise and know-how on international markets using spot — futures and option sale
1982-1983	Foreign Cooperation	Evaluation of current mining projects Pakistan under development by the Sharad Development Authority in N.W.F.P. of Pakistan.
1984	Magnesite	Identification of a high purity magnesite deposit in a remote area: awaiting the construction of an access road for aggressive development.
1985-1986	Foreign Cooperation Ecuador	Evaluation of the methods applicable to internal and external commercialization of gold and other precious metals as a mean to provide entry of foreign currencies; including a thorough evaluation of current production capacity and needs for modem techniques of production.
1986	Equity participation and privatization	Creation of a wholly owned subsidiary known Cambior Inc. to regroup a selection of producing assets with other assets and 46 mining properties at various stages of development for the purpose of creating a mixed company through the sale to the public of some 70% of the equity whereby SOQUEM still retains 30% or 7,000,000 shares. Public offering generated: 157,5 MCAD out of which SOQUEM received 100M CAN as partial payment.
1987	Foreign Cooperation	Signature of a 4-year agreement with Sintrem Inc. of Quebec City whereby SOQUEM will supply the mining exploration expertise as required for the export to developing countries, the Canadian and Quebec expertise for integrated airborne and/or ground geophysical surveys with ground follow-up work and transfer of know-how in mineral exploration.

Almost in every case this alternative is a losing proposition that does not generate sufficient cash for a sustained effort in exploration and this alternative was never used by SOQUEM except for a small Cu-Ni deposit which turned out to be a pilot experience by a group of private investors.

Alternate solution through privatization.

The liquidity problem of SOQUEM to sustain its basic exploration mandate while retaining adequate capital to keep up with its joint venture obligations for the development of its discoveries to the production stage, was adequately managed by SOQUEM and its sole shareholder in the current 5-year company development plan covering the 1986-1991 period.

Indeed, throughout the 1986 privatization process of its producing assets into Cambior Inc., SOQUEM has retained, as an investment, an adequate equity interest which, on duly planned partial liquidation, will conveniently permit SOQUEM to swing its share of contributions into new mining projects which have reached prefeasibility or production phases.

This solution is therefore vital in order to enable SOQUEM to fully and equally participate in the surplus value of any successful mineral discovery, that surplus value which is the very and only base for a properly planned economic return in mining exploration investment. This concept of state participation in the production phase of mineral development is fully compatible with an ongoing privatization concept applicable to a state mining exploration company, whose status is not that of a subsidiary of a mining producer.

3. Geographical limitations

A study carried out on SOQUEM in 1985-1986 by the Economic Council of Canada[2] concludes that the rate of return generated by SOQUEM to its sole shareholder has been substantially reduced on account of the geographical constraint imposed on SOQUEM to explore mainly within the province of Quebec. This study shows that some 41% of the difference in return-on-investment generated by SOQUEM when comparing it to the Canadian sector, is due to this factor.

SOQUEM agrees to a certain extent with this conclusion on the basis that:

(a) mines are where you find them;

(b) mines are found in mining areas;

(c) geology has no geographical limitations;

Table 7
SOQUEM list of current equity participation in mineral properties and operating companies

Nature of assets	Details
100% undivided ownership of mining rights	100% interest in the mining rights of some 28 mining properties covering 58 500 hec-tares at various stages of exploration.
Shared ownership of mining rights	Varied undivided interest participation in the mining rights of some 7 mining properties covering some 17 300 hectares and held jointly with partners at various stages of exploration
Full equity ownership in operatio ncompany	100% equity in Seleine Mines Inc., a deicing rock salt producer of 1 250 000 Mt/year; targeted for privatization early 1988.
Equity participation in operating company	19% equity participation in La Société Minière Louvem Inc. representing 3093 954 common shares, market value on August 28, 1987 is 2.60 CAD per share. Louvem is a 35 000 ounces-a-year producer which carries its exploration through the recently created exploration subsidiary Exploration Monicor Inc., owner of undivided interests in several properties at various stages of exploration and development.
Equity participation in operating company	30.7% equity participation in Cambior Inc. including 6 000 000 shares having a market value of 27.75 CAD per share on March 31, 1987, and 1 000 000 shares at 12.50 CAD subject to exercise of warrants. Cambior Inc. is the 6th largest gold producer in Canada and owns a 50% interest in the second largest niobium producer in the world (17% of world market).'

(d) exploration successes are the result of know-how, rumors, luck, patience, hard work and opportunities.

On this basis, the restriction imposed onto SOQUEM to explore everywhere in Quebec except in the part of the Abitibi area where the private sector is most active, could be taken as a significant geographical constraint against profitability. The current motivation of our exploration specialists hinges on proving this interpretation to be false due to the fact that the province of Quebec is vast and still contains many unexplored areas.

Already, many known but unexplored greenstone belts are systematically being investigated by SOQUEM in order to accumulate sufficient mineral indices to focus the private sector's interest on these new areas; and to this effect, two major exploration programs have already been shared with the private sector prior to reaching the less risky phases of anomaly drilling.

4. Parity of treatment with private sector

Most governments consider the mining of resources as strategic to the national economy, and because they are of a depleting nature, they should be developed for the benefit of the population.

While keeping in mind this philosophy, care should be taken not to impose undue or selective social obligations working against the economic feasibility of a mining project; for example, why should the economic viability of a project be handicapped by the costs of an infrastructure such as a power line, an airport, a railroad, or a long access road, which would create accesses to new wealth such as additional mining exploration, tourism, leisure activities, new territorial development, etc., once built?

Equal care should be taken to treat the state mining exploration company in the same way as those of the private sector, in all areas affecting their work, such as environment, social welfare, archeology, work conditions, etc., so that its profitability is not unduly affected by trying to upgrade standards that cannot yet be incorporated into regulations.

The following apposite statement from The World Bank reinforces the above contentions[3]:

> "The mineral exploration and development experience of Société Québecoise d'Exploration Minière (SOQUEM) is extremely instructive, as it demonstrates that success can apparently be achieved quite quickly, when the objectives, policies, functions, and operations of the company are essentially those of a private mining company, even though the government owns the issued share capital."

Current operating policies

Right from the beginning of its operations and throughout the years, SOQUEM has developed operating policies that have made it a well respected, efficient and successful state-owned mining exploration company. From among these policies, the following are considered as fundamental or elective by the author:

(a) *Fundamental policies*

1. SOQUEM shall not seek or receive special or privileged treatment or information from its sole shareholder, excepting those which may be incorporated within its statutes.
2. SOQUEM shall not be considered as a vehicle designed to resolve cases of financial hardship in mining camps.
3. SOQUEM shall oblige itself to act within the same constraints as companies in the same field of activity in the private sector, including that of profitability.
4. SOQUEM shall compete in all commercial fairness with the private sector using its own means and skills.
5. SOQUEM shall not vest itself with any inventory or function in regards to mining resources and geological information.
6. SOQUEM shall treat all information as proprietary or confidential, and more so when acquired in joint venture association with partners.

(b) *Elective policies*

1. SOQUEM shall manage its assets while being guided by medium term profitability for the benefit of its shareholder and that of the community.
2. SOQUEM shall seek to share with the private sector as many of its exploration programs as possible while promoting the active participation of Quebecers in the management of the mineral resource development and exploitation.
3. SOQUEM shall also promote the development and participation of individual prospectors.
4. While aiming at the regional diversification of its activities, SOQUEM shall be guided primarily by the geological potential with due respect to its corporate profitability and metal priorities.
5. SOQUEM shall not be concerned with exploration for and development of iron ore and asbestos.
6. Except for very specific cases, SOQUEM shall not be concerned with exploration for and development for industrial minerals.
7. SOQUEM shall not be concerned with manufacturing processeseven though related to mineral conversion beyond the primary phase.
8. In carrying out its field activities, SOQUEM shall use specialized contractors whenever possible.

Metal priorities

With regards to the selection of metal priorities for exploration, SOQUEM has been guided by the following criteria to be considered in relation with Tables 3 and 5:

- Its acquired know-how;

- The geological potential of the areas to be explored;
- The short-term economic potential of its discoveries;
- The consolidation of the existing mineral production and conversion capacity in Quebec with the view of replacing depleting reserves;
- The diversification of the mineral production in Quebec to diminish financial hardships resulting from cyclic low metal prices;
- The market value of the metals;
- The added technological value of the metals.

References:

[1] *Revised Statutes of Quebec*, Chapter S-19, An act respecting to the La Société Québecoise d'Exploration Minière.

[2] Bernard, Jean-Thomas and Gérard Gaudet, *SOQUEM: Its mandate, restrictions and profitability*, Document 299, Economic Council of Canada.

[3] Bosson, Bex and Bension Varon, *The experience of the Quebec Mining Exploration Company: a case study*; Annex J, The Mining Industry and the Development Countries, published for The World Bank by Oxford University Press, pp 256-260.

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