

VII. Regional Environmental Forecast and, if Applicable, Assessment of Alternatives

The simulation for the environmental scenario is presented in Section V.4.2.3.2 (see Figure V.4.2.3.2.1), as part of the analysis required to determine the Environmental Deficiencies described in Chapter V. The following summary has therefore been prepared for this section.

Vegetation

Local:

The areas where the installations are due to be constructed and the work carried out will be reforested, with the possible exception of the office buildings, roads, and other installations which could potentially be used by the municipality (See Section II.3.5).

However, it is worth restating that the largest area required by the project will be occupied by the tailings dam (377.23 ha), which represents 47% of the total area for the project and 65% of the surface to be dismantled, it is also considered as one of the residual impacts.

The construction of the tailings dam means that the existing slopes will disappear and a plateau will be created (at the end of the dam's operating life); this implies that some of the species (*Lysiloma-Pachycormus sp.*) found in the original landscape will not find the conditions of the new habitat appropriate. The site will therefore be reforested using other species such as *Larrea-Fouquieria-Erazurizia sp.* and *Jatropha-Fouquieria sp.*

At the end of the project, the situation will differ from the original state in terms of the abundance of different species; for this reason the projection proposed in the Environmental Deficiency assessment states that the environmental "Abundance" attribute value will decrease from 0.5 at present to 0.435 in year 35.

In terms of diversity, the impact is not considered significant, as the entire area of the project barely represents 0.03% of the Protected Natural Area and the species located inside the affected areas are extensively represented in the mining district and throughout the ecosystem known as the "Sonoran Desert" (Shreve, 1951).

Regional:

At present, it is difficult to clearly determine in which areas of the Biosphere Reserve the Reserve Management intends to allocate the resources from the trust created by the applicant.

It is certain, however, that the trust proposed by the applicant as compensation will represent a source of resources to assist the conservation of the Protected Natural Area.

On the basis of these arguments, the Environmental Deficiency assessment believes that the quality index relating to the species attribute will change from 0.5 at present to 0.524 after 35 years.

Fauna

Local:

The mining activities will drive away fauna, mainly the medium-sized carnivores; however, as mentioned in Chapter IV.2.2, their presence is already minimal, as herbivores are found in abundant numbers.

After the project has ended and all the compensatory or mitigation measures have been completed, the reforestation will have a beneficial effect on the fauna, as areas that are currently not very attractive such as the land abandoned after previous mining activities will be re-colonized; however,

the re-colonization process will be slow.

For this reason, the Environmental Deficiency assessment states that the index applied for the abundance factor decreases from 0.5 in year 0 to 0.435 in year 35.

Regional:

As is the case with vegetation, it is not currently possible to determine the resources that the Reserve Management will allocate; however, guarantees have been given to ensure sufficient resources are available to support programs benefiting the conservation of other species in the Reserve, which are not necessarily found in the mining district. The Environmental Deficiency assessment therefore determined that the quality index for the species attribute will change from the current 0.5 to 0.524 after 35 years.

Geomorphology

Local:

As previously mentioned in the section relating to the vegetation, this environmental attribute will be affected due to the construction of the tailings dam, which implies the filling of the creeks and the stream in order to obtain an elevated plateau.

Regional:

As the topography of the eastern slope of the Baja California Peninsula is composed of flat mesas separated by streams, which flow more or less parallel with wide flat beds and steep sides, the creation of this new plateau is not considered significant.

Taking these considerations into account for the Environment Deficiency assessment, the original attribute index of 0.5 decreased to 0.488 in year 35.

Soil

Local:

In common with the previous attribute, the impact of the project will be considerable due to the removal of the layer of fertile soil, in particular in the area of the tailings dam and the areas where the cuts are opened up. However, as reported in Appendix VIII.3.20 relating to the soil analysis and classification for potential use, mining activities are a natural usage for this type of soil.

Regional:

Regarding the potential usage, the soil types are similar throughout the mining district; therefore, restating the figures listed in Table V.6.1, the area requiring dismantling is fairly small compared to the total surface area of the Protected Natural Area.

Consequently, this Environmental Deficiency assessment has determined that the soil attribute index will start at 0.5 in year 0 and, at the end of the project, will be 0.488 in year 35.

Water

Local:

It is worth restating that the impact on water is not considered significant, as the project specifically intends to use seawater and will not therefore compete with the local population for this resource; however, any quantities discharged will be monitored prior to leaving the applicant's property; furthermore, at the end of the project, these installations could be of interest to the municipal government, as, on an environmental level, they could increase the quality due to the availability of the desalinization plant.

Regional:

On a regional level, the wastewater discharges will not be significant; therefore, at the end of project's operating life, the ending of the discharge process will not cause a major impact; however, the local government may be interested in this infrastructure as it could represent an alternative method for improving the quality of the water for the human population.

Air

Local:

The implications of the project with regard to this attribute are not considered significant due to the current conditions of the terrain, as any dust is easily carried away by the air currents, particularly in the areas denuded of vegetation. With regard to the tailings dam, a large section will be covered by still water and dust will not therefore be generated.

At the end of the project, the aim of the reforestation activities will be to reduce the dust generated by the strong gusty winds, after the tailings dam no longer receives water and dries out.

Regarding the emissions from the Acid Plant, these will be controlled by applying the appropriate engineering measures; for this reason, therefore, it is not believed the starting up of the project or the ending of it will significantly alter the existing conditions. Regarding emissions from the diesel-fed electricity generators, maintenance is a major factor, as maintaining the generators in a good working order means the combustion process remains efficient and produces the lowest possible atmospheric emissions.

At regional level:

At this level, the impacts are not considered significant as, at the end of the operating life of the project, the scenario will be extremely similar to the current one.

Socioeconomic Conditions

At the start of the project, the reported increase in the attributes relating to employment and population dynamics determined in the Environmental Deficiency assessment will have a considerable local impact. From 0.5 in year 0 of the project, this attribute will rise to 0.649 in year 35. The Environmental Deficiency assessment supposes that institutional mechanisms will be applied - which are independent of the applicant - to take advantage of the economic stimulus generated by the start-up of the project.

VII.1. Monitoring Program

According to the information presented (Section VI.2), a brief description of the monitoring programs required is presented below. It should also be kept in mind that these programs will be adapted and/or implemented at a later date after the project has been authorized and when information is available on suppliers and equipment and, in particular, when the project's detailed engineering is known.

A large part of these monitoring programs are included in the plans and programs mentioned in Table VI.2.1; these will be supplied for information purposes in Appendices VIII.3.32 to VIII.3.36, in relation to the Environmental Monitoring Plan, vegetation rescue and Transplant, and the fauna protection and erosion prevention plans.

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Table VII.1.1. Proposed Monitoring Programs

Master plan	Monitoring Program	Objectives	Activities	Execution
Environmental Management Plan	Emissions from the Acid Plant stack	Guarantee compliance with Official Mexican Standard NOM-039-SEMARNAT-1993. The maximum permissible levels of atmospheric emissions of sulfur dioxide and trioxide and sulfuric acid mist from plants producing sulfuric acids must be established. Define the relevant guidelines for emergency situations.	Installation and operation of equipment to ensure continuous monitoring. Generation of reports. Maintenance of the equipment installed. Supply information to complete the COA (Annual Operating Permit). Carry out periodic checks on the installation, checking that there no dry deposit effects.	Continuous.
	Emissions from electricity generators	Guarantee the combustion process is efficient to ensure atmospheric emissions are kept to a minimum.	Equipment maintenance program. Maintenance of the equipment installed. NO MEASUREMENTS ARE CONSIDERED based on the type of equipment. Supply information to complete the COA using emission factors.	Six-monthly.
	Wastewater discharges	Guarantee compliance with Official Mexican Standard NOM-001-SEMARNAT-1996 or with the specific conditions for discharges imposed by the CNA (National Water Commission).	Scheduling and collection of measurements. Generation of Maintenance reports for the equipment installed to supply information when completing the COA.	Continuous for discharges. Annual analysis and reports.
	Monitoring underground water	Compliance with Official Mexican Standard NOM-141SEMARNAT-2003	Install wells to monitor the water above and below the tailings dam. Sample collection and laboratory analysis. Generation of reports.	Annual analysis and reports.

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Master plan	Monitoring Program	Objectives	Activities	Execution
	Generation of hazardous waste	Guarantee compliance with the regulations of the LGEEPA (General Law of Ecological Equilibrium and Environmental Protection) relating to hazardous waste or, if appropriate, the Regulations of the General Law for the Prevention and Integral Management of Waste (when published).	Determine the frequency for completing the forms in order to comply with the applicable regulations. Generation of reports. Maintenance of temporary storage installations. Supply information to complete the annual COA.	Monthly, six-monthly, and annually.
Vegetation Rescue and Transplant Program	Monitoring the removal and relocation of plants.	Achieve the best possible outcome when rescuing and transplanting plants. Promote areas that can be reforested. Recognize the best practices for rescuing and transplanting vegetation.	Documentary support: ¼ The deforested areas. ¼ The reforested areas. ¼ The successful reforestation. ¼ The successful experiences to be able to reproduce them. ¼ Identify the areas of opportunity to improve the procedures.	During the preparation of the site, construction, and preparation of the areas with cuts.
Fauna Protection Plan established for the exploration phase	Monitoring the fauna rescue activities.	Rescue as many protected species as possible. Recognize the best practices for rescuing fauna.	Documentary support: ¼ The number of individuals rescued. ¼ The areas from where the fauna was excluded due to the removal of vegetation. ¼ Identify the areas of opportunity to improve the	During the preparation of the site, construction, and preparation of the areas with cuts.

Protection Plan for the Prevention of Erosion established for the exploration phase	Protection against erosion.	Limit the loss of fertile soil.	procedures. Provide documentary support for the volume of soil removed. Identify the areas of opportunity for improving the procedures.	During the preparation of the site, construction, and preparation of the areas with cuts.
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The tentative content of the monitoring programs is as follows (this list is not exhaustive):

- ☞ Distribution list
- ☞ Objectives
- ☞ Scope
- ☞ Human and economic resources required
- ☞ Definition of responsibilities
- ☞ Activities of managers
- ☞ Schedule of work
- ☞ Procedures to review and adjust the work
- ☞ Technical procedures (when applicable)

VII.2. Conclusions

The implementation of the El Boleo Mining project presents the following strengths and weaknesses: within this perspective, the project deserves to be authorized to take advantage of the natural vocation of the soil and to support the economic development of the region; furthermore, it will generate economic resources to partially finance the conservation activities that will be carried out by the Management of the Protected Natural Area.

Weaknesses	Strengths
Located within a Protected Natural Area.	It is located, according to the sub-regionalization of the Reserve, within the buffer area; where it is recognized that the natural vocation of the soil is for mining activities. Mining activities have been performed since the deposit was discovered in 1868.
No infrastructure exists in the area of the project.	The project will use seawater in its processes; therefore, it will not compete with the population of Santa Rosalia for drinking water; it will also satisfy its water requirements with a desalinization plant and a water treatment plant. The project includes a power plant with generators fueled by diesel and, for this reason, there will be very little competition with the local area for the capacity supplied by the CFE (Federal Electricity Commission).
Area of 801.96 ha required, of which 576.02 will be dismantled.	The 576.02 ha area that needs to be dismantled for the project is occupied as follows: ¼ 57.1% by an association of Lysiloma-Cercidium-Stenocereus sp.; ¼ 25.29% by an association of Jatropha-Fouquieria sp.; ¼ 8.73% by an association of Lysiloma-Ruellia sp.; ¼ 8.61% by the following associations: Atriplex-Ambrosia; Hyptis emory and Lysiloma-Cercidium-Olineya sp. ¼ 0.14% by Larrea-Fouquieria-Errazurizia sp. and; ¼ 0.13% by Lysiloma-Pachycormus sp. Although the presence of protected species cannot be discounted, the distribution of such species is so scarce that no presence was reported in the cross-sections obtained from the mining area at various periods.
The project will lead to the displacement of fauna.	The fauna in the mining district is dominated by rodents; the total surface area of the project amounts to 0.03% of the surface area of the Protected Natural Area.
The tailings dam represents a residual impact that will remain at the end of the project.	As a compensatory measure, the applicant will set up a trust to provide the Management of the Protected Natural Area with resources that can be used in areas considered a priority for conservation.
The tailings dam will retain significant quantities of water (>70% in weight).	The still water generated will consist of brackish water and, therefore, will not be attractive to the fauna; in addition, the humidity will not give rise to wind-generated dust. The high rates of evaporation mean that the still water will disappear at the end of the project's operating life.
	The property belonging to the mining company is 6694.94 ha; of this area, only a little under 12% will be occupied.
	The hydrometallurgical process to be implemented is the technological response to the specific conditions of the area, which

Weaknesses	Strengths
	previously prevented the exploitation of the mineral remnants from the "golden" age of French mining. This means that highest possible advantage will be taken of the available resources, minimizing therefore the impact on the environment.
	During the construction phase, the project will generate 2000 direct jobs; the operating activities will generate 616 jobs, which represents 57.63% of the economically active population registered in July 2005; as well as 90.45% of the permanent jobs in Santa Rosalía for the same date.
	The project will allow Mexico to become the sole cobalt producer in North America.
	The project will provide an opportunity to attract high-tech companies, which require cobalt as a raw material.
	The project is located at the eastern extremity of the Protected Natural Area, which means that any potential companies using cobalt will be situated OUTSIDE the Protected Natural Area.
	The project will set up a trust to supply resources for the conservation activities performed by the Management of the Protected Natural Area.

Despite the stated advantages, the project is NOT to be seen as a panacea for the economic development of the region; however, it does represent a development opportunity which could be promoted at various levels of government.

VII.3. Bibliography

- Abbot, I. A. and G. J. Holienberg. 1976. Marine algae of California, Stanford University Press, Stanford, California, 827 pp.
- Aceves, M. G. 1992. Análisis espacio-temporal de la distribución y abundancia de Pleuronectiformes en el Golfo de California, período 1984-1986. [Spacio-temporal analysis of the distribution and abundance of Pleuronectiformes in the Gulf of California, period 1984-1986]. Master's Thesis, Centro Interdisciplinario de Ciencias Marinas -IPN-, la Paz, B. C. S., 62 pp.
- Aguayo, C., J. E. 1981. Origen y distribución de sedimentos en el Golfo de California. [Origin and distribution of sediments in the Gulf of California]. Revista Inst. Mexicano Petróleo, 13 (3): 5-19.
- Alvarez, M., 1961. Las provincias fisiográficas de la República Mexicana. [The physiographic provinces of the Mexican Republic]. Bol. de la Soc. Geol. Mexicana. Vol. 24, No. 2: 5-20.
- Alvarez-Borrego, S. 1983. Gulf of California. In. Ketchum, B. H. (Ed.), Estuaries and Enclosed Seas. Ecosystem of the World No. 26, Elsevier, Amsterdam, pp 427-429.
- Alvarez-Borrego, S., J. A. Rivera, G. Gaxiola-Castro, M. de J. Acosta-Ruiz and R. A. Schwartzlose. 1978. Nutrientes en el Golfo de California. [Nutrients in the Gulf of California]. Ciencias Marinas, 5(2): 53-71.
- Alvarez-Borrego, S. and R. A. Schwartzlose. 1979. Masas de agua del Golfo de California. [Bodies of water in the Gulf of California]. Ciencias Marinas, 6(1-2):43-63.
- Alvariño, A. 1969. Zoogeografía del Mar de Cortés: quetognatos, sifonóforos y medusas. [Zoogeography of the Sea of Cortez: Chaetognatha, Siphonophorae, Medusae]. An. Inst. de Biol., Serie Ciencias del Mar y limnología, UNAM 40 (1): 11-54.
- American Ornithologists' Union. 1983. Checklist of North American birds, sixth edition, Alien Press Inc., Lawrence, Kansas, 877 pp.

- Anderson, D. 1983. The seabirds. In: Case, T. J. and M. L. Cody (Eds.), *Island Biogeography in the Sea of Cortez*, University of California Press, pp. 246-263.
- Anonymous, 1980. Bathymetrical chart and bottom contours of the middle Gulf of California. *Sea of Cortez cruising chart*.
- Angelier J., & B. Coleta, 1981. Faulting evolution of the Santa Rosalía Basin, Baja California Sur, Mexico, *Instituto de Geología U.N.A.M.* pp. 265-272.
- Angelier, J., B. Colleta, J. Chrowicz, L. Ortlieb and C. Rangin, 1981. Fault tectonics of the Baja California Peninsula and the opening of the sea of Cortez, Mexico. *Department of Geotectonics, Université Pierre et Marie Curie, Paris, France* Pp 347-357.
- Aranda-Sánchez, J.M., 1981. *Rastros de Mamíferos Silvestres de México, Manual de Campo [Traces of wild mammals in Mexico, Field guide]*. Inst. Nal. de Inv. sobre Rec. Biól., Xalapa, Ver. 198.
- Arellano, R, 1997. Distribución de la Mineralización de cobre-cobalto en el manto 3 de la zona Purgatorio-Boleo, en el Distrito Minero de Santa Rosalía, B.C.S. [Distribution of the copper-cobalt mineralization in stratum 3 of the Purgatorio-Boleo zone, in the mining district of Santa Rosalía, B.C.S.] México, Tesis la Paz, Pp 58.
- Arellano M., R., 1998. Estudio Geotécnico Preliminar, Alternativa Mesa Boleo para Planta de Beneficio. [Preliminary geotechnical study, alternate Boleo mesa for the processing plant]. Report prepared for Minera Curator, Sta. Rosalía, B.C.S., pp. 23.
- Arizona Department of Environmental Quality. 1992. *Human Health-Based Guidance Levels for the Ingestion of Contaminants in Drinking Water and Soil*. Arizona Department of Environmental Quality
- Aschmann, H. 1959. *The Central Desert of Baja California: Demography and Ecology*. Ibero-Americana 42, University of California Press, Berkeley.
- Atwater, T., 1970. Implications of plate tectonics for the Cenozoic Tectonic evolution of western north America. *Bull. Geol. Soc. America*, 81:125-133.
- AWMA, 1992. *Air Pollution Engineering Manual*. Buonicore, A. J. & W. T. Davis (Eds.). Air & Waste Management Association, Van Nostrand Reinhold, New York.
- Badan-Dangon, A. C., J. Koblinsky and T. Baurngartner. 1985. Spring and summer in the Gulf of California: Observations of surface thermal patterns. *Oceanologica Acta*, 8 (1):13 - 22.
- Bagnouls, F. & H. Gaussen. 1957. Les climats biologiques et leur classification. [Biological climates and their classification]. *Ann. Geogr.* 66 (355): 193-220.
- Bancroft, G., 1927. Breeding birds of Scamoon's Lagoon, Lower California. *The Condor*. 29: 29-55.
- Banks, R.C., 1964. Range extensions for three bats in Baja California, Mexico. *J. Mamm.*, 45:489.
- Barajas, M. 1992. Migraciones Intermunicipales en Baja California. [Inter-municipal migration, Baja California]. *Travesías* (29):15-24 UABC, Mexicali, B.C.
- Barbour, M.G., J.H. Burk & W.D. Pitts. 1980. *Terrestrial Plant Ecology*. Senjamin/Cummings Publ. Co. Menlo Park, Calif. 604 pp.

- Bassols B.A, 1972. El Noreste de México [The northeast of Mexico], Instituto de Investigaciones Económicas UNAM. p 80.
- Bassols, B.I. 1981. Catálogo de acaros Mesostigmata de mamíferos de México. [List of Mesostigmata mites on mammals in Mexico]. An. Esc. Nac. Cienc. Biol. 24:9-49.
- Bastida, Z. J. 1991. Poliquetos (Annelida:Polychaeta) del sureste de la bahía de la Paz, B.C.S., México: Taxonomía y aspectos biogeográficos. [Polychaetes (Annelid: Polychaetes) in the southeastern area of Bahía del Paz, BCS, Mexico: Taxonomic and biogeographic aspects]. Undergraduate Thesis, Depto. de Biología Marina, Universidad Autónoma de Baja California Sur, La Paz, B.C.S., 1 58 PP.
- Bauer, H.L. 1943. The statistical analysis of chaparral and other plant communities by means of transect samples. Ecology 24:45-60.
- Baver, L.D; W.H: Gardner & W.R. Gardner. 1980. Soil Physics Translated into Spanish by J. M. Rodríguez, Mexico. D.F. 529 p.
- Beal, C.H., 1948. Reconnaissance of the Geology and oil possibilities of Baja California, Mexico. Mems. Geol. Soc. America, Num 31, 138 pages ilustrs.
- Becerra, M. 1932. Morfología y génesis de suelos. [Soil morphology and genesis].
- Behler, J.L. & Wayne. 1987. Field Guide of North American Reptiles and Amphibians. The Audubon Society, Ed. Alfred A. Knopf. New York.
- Bentley, J.P., 1966. Adaptations of Amphibia to desert environments. Science, No. 152:619- 623.
- Bigurra, P.E. 1993. Análisis Eléctrico Resistivo en la Zona Geotérmica Tres Vírgenes, B.C.S. [Resistive electrical analysis in the geothermic area of Tres Vírgenes, B.C.S.]. In: Geotermia, Rev. Mex. de Geoenergía. (2) 1 pp 75-92
- Biro, P. 1966. General Physical Geography. Willey & Sons. New York
- Bohnsack, J. A. & S. P. Bannerot. 1986. A stationary visual census technique for quantitatively assessing community structure of coral reef fishes. NOAA Technical Report, NMFS, 41: 1 5 pp.
- Borges, C.J. and G. Sánchez. 1992. Santa Rosalía y Guerrero Negro: cobre y sal en el desierto. [Santa Rosalía and Guerrero Negro: copper and salt in the desert]. ISSSTE-Baja California Sur.
- Brinton, E., A. Fieminger & D. Siegel-Causey. 1 986. The temperate and tropical planktonic biotas of the Gulf of California. CalCOFI Rep., 27: 228-266.
- Brinton, E. & A. W. Townsend. 1980. Euphausiids in the Gulf of California -the 1957 cruises. CalCOFI Rep., 21: 211-236.
- Breceda, A.; Castellanos, A; Arriaga, L and A. Ortega. 1991. Conservación y Áreas Protegidas en Baja California Sur. [Conservation and protected areas in Baja California Sur]. In: Ortega, A. and L. Arriaga (Editors). La Reserva de la Biósfera El Vizcaíno en la Península de Bajacalifornia. [El Vizcaíno Biosphere Reserve in the Peninsula of Baja California]. Centro de Investigaciones Biológicas de Bajacalifornia Sur, A.C.: 21-32.

- Brock, R. E. 1982. A critique of the visual census method for assessing coral reef fish populations. *Bull. Mar. Scie.*, 32 (1): 269-276.
- Brown, J.H. & A.C. Gibson, 1983. *Biogeography*. The C.V. Mosby Co. 643.
- Brusca, R. C. 1980. *Common intertidal invertebrates of the Gulf of California*, second edition, The University of Arizona Press, Tucson, Arizona, 51 3 pp.
- Burrough, P.A. 1986. *Principles of Geographical information Systems for Land Resources Assessment*. Oxford Science Publications. Monographs on Soil and Resources 12. Oxford University Press. 193 pp.
- Burt, W.H. & R.P. Grossenheider, 1976. *A Field Guide to the Mammals of North America North of Mexico*. Houghton Mifflin Company. Boston, New York.
- Cafaggi F. Francisco, 1998. *Estudio Geotécnico Preliminar de la Presa de Jales, Alternativa Gloria*. [Preliminary Geotechnical Study for the Tailings Dam, Gloria Alternative]. Report prepared for Minera Curator, Sta. Rosalía B.C.S., Pp 14. CFE, Section 31-C, Morelia Pp 2
- Campos Hermanos, 1961. *Carta de las Zonas de Probabilidad Sísmica de la República Mexicana*. [Map of probable earthquake zones in the Republic of Mexico]. Productos Campos Hermanos, reviewed and approved by the Instituto de Geofísica de la UNAM.
- Canter, L.W., 1998. *Manual de Evaluación de Impacto Ambiental*. [Environmental impact evaluation manual]. Mc Graw Hill. Madrid, Spain
- Carranza-Edwards, A., M. Gutiérrez-Estrada and R. Rodríguez-Torres. 1975. *Unidades morfotectónicas continentales de las costas mejicanas*. [Continental morphotectonic units along the Mexican coasts]. *An. Inst. Ciencias del Mar y Limnología, UNAM*, 2 (1): 81-88.
- [CEC, 2004]. *Centro de Estudios de Competitividad, 2004. El sector minero en México: Diagnóstico, prospectiva y estrategia*. [The mining sector in Mexico: Diagnosis, prospects and strategy]. Instituto Tecnológico Autónomo de México. Mexico, D.F:
- [CETENAL, 1973]. *Comisión de Estudios del Territorio Nacional, 1973. Mapa referencial de sobrevuelos, Baja California Sur, Zona 46a, escala 1:500,000*. [Aerial map: Baja California, Zone 46a, scale 1:500,000].
- Christoffersen J, 1997. *A Geological Review of the Stratabound Boleo Copper-Cobalt-Zinc deposits, Santa Rosalía, Baja California Sur, Mexico*. Report for Minera Curator S.A. de C.V., B.C.S., Pp 28.
- [C.I.B., 1989]. *Centro de Estudios Biológicos del Noroeste, 1989. Estudio para decretar zona de Reserva de la Biósfera al Desierto del Vizcaíno y la Laguna Ojo de Liebre*. [Study for the purpose of declaring a Biosphere Reserve in the area of the El Vizcaíno Desert and the Ojo de Liebre Lagoon]. Centro de Investigaciones Biológicas de Baja California Sur, A.C. La Paz Baja California.
- _____, 1991. *Manifestación de Impacto Ambiental Modalidad Específica Perforación Exploratoria en la Zona Geotérmica Las Tres Vírgenes, B.C.S.* [Local environmental impact statement, exploration drilling in the geothermal area of Las Tres Vírgenes, B.C.S.] Gerencia de Proyectos Geotermoeléctricos. Centro de Investigaciones Biológicas de Baja California Sur, A.C. División de Biología Terrestre. La Paz, Baja California.
- Clavijero, F.X. 1937. *The history of [Lower] California*, Translated from the Italian and published by Sara E. Lake & A.A. Gray. Stanford University Press. Stanford.
- Colegio de Postgraduados, 1990. *Manual de Conservación de Suelo y Agua*. [Soil and Water Conservation Manual]. Col. de Postgraduados, Montecillos, México.

- [CFE, 1989]. Comisión Federal de Electricidad, 1989. Propuesta de Perforación en la Zona Geotérmica de Las Tres Vírgenes, B.C.S. [Drilling proposal in the geothermal area of Las Tres Vírgenes, B.C.S.]. Departamento de Exploración C.F.E., report 11/89. unpublished.
- Comisión Nacional de Salarios Mínimos, 2005. Resolución del H. Consejo de Representantes de la Comisión Nacional de Salarios Mínimos que fija los salarios mínimos generales y profesionales vigentes a partir del 1 de enero de 2006. [Decision of the National Minimum Salary Commission determining the general and professional minimum wages valid from 1 January 2006]. In: Diario Oficial de la Federación. Monday December 26, 2005.
- Congreso Geológico Internacional, 1956. Geología General de la parte sur de la península de Baja California. Depósitos continentales y volcánicos del Cenozoico superior y marinos del inferior, así como sedimentos marinos del Cretácico superior. Características fisiográficas y efectos de intemperismo en la región desértica. [General Geology of the southern section of the peninsula of Baja California. Continental and volcanic deposits from the Upper Cenozoic and marine deposits from the early period, as well as marine sediments from the Upper Cretaceous]. Pp 79, Mexico D.F.
- Corporación Ambiental de México (CAM), 1997. Caracterización de Suelos. [Soil Characterization]. Study conducted for Minera Curator, Santa Rosalía B.C.S. Pp 38.
- Cserna, Z., 1989. An outline of the geology of Mexico. In: Bally, A.W. & A.R. Palmer (eds.) The geology of North America, an overview: Boulder, Colorado, Geological Society of America. The geology of North America, v.A., 233-264.
- Colleta, B. & J. Angeller. 1981. Faulting evolution of the Santa Rosalia Basin, Baja California Sur, Mexico. In: Ortlieb, R. & Jordán (eds). Geology of Northwestern Mexico and Southern Arizona, Instituto de Geología. UNAM. Mexico.
- Contreras Arias, A. 1942. Mapa de las provincias climatológicas de la República Mexicana. [Map of the climatic provinces of the Mexican Republic]. Sec. Agric. y Fomento, Dir. Geog. Meteor. e Hidro., Inst. Geográfico. Mexico.
- Corporación Ambiental de México, 1998. Estudio Ambiental Básico Proyecto CAM95005. [Basic Environmental Study for Project CAM95005]. Prepared by Minera Curator. Mexico, D.F.
- Cota, M. R. 1983. Centenario de Santa Rosalía. [Santa Rosalía Centenary]. Cuaderno de Historia 3. Archivo histórico "Pablo L. Martínez", B.C.S.
- Cristóbal C., J.; J. Lardé; A. Rebolledo and A. Picozzi, 2005. Situación y tendencias recientes del mercado del cobre. [Situation and recent trends in the copper market]. UN-CEPAL-COCHILCO. Santiago de Chile, Chile.
- Davis, W.B. & D.C. Carter, 1962. Notes on Central American bats with description of a new subspecies of Mormoops. Southwestern Nat. 7:64-74.
- Dawson, E. Y. 1944. The marine algae of the Gulf of California. A. Hancock Pac. Exped. 3:11 5-453.
- Dawson, E. Y. 1953. Marine red algae of Pacific México. Part. 1 Bangiales to Corallinaceae Subf. Corallinoideae. A. Hancock Pac. Exped., 1 7: 1-238.
- Dawson, E. Y. 1960. New records from Pacific México and Central America. Pac. Am., 1(20):31-52.
- Dawson, E. Y. 1963. Marine red algae from Pacific México Pte. 6 Rhodymeniales. Nova Hedwigia 5:437-476.
- De La Lanza, G. (compiler). 1991. Oceanografía de mares mexicanos [Oceanography of Mexican seas], AGT editor, S. A., Mexico, D. F., 569 pp.

- Delhoume, J. P. 1988. Distribution spatiale des sols le long d'une toposéquence représentative [Spatial distribution of soils along a representative toposequence], p 135-165. In. Montaña, C. (ed). Estudio Integrado de los Recursos, Vegetación, Suelo y Agua en la Reserva de la Biosfera de Mapimí. [Integrated study of the resources, vegetation, soil and water at the Mapimí Biosphere Reserve].
1. Ambiente Natural y Humano. Instituto de Ecología, AC. Mexico D.F.
- Demant, A., Robin, C., 1975, Las Fases del Vulcanismo en México; una síntesis en relación con la evolución geodinámica desde el Cretácico [Volcanic eruption phases in Mexico; a summary and the geodynamic evolution since the Cretaceous], Univ. Nat. Autón. México, Ins. de Geología, Rev. v. 75 (1): 70-83.
- Dice, L. R. 1943. The Biotic Provinces of North America. Quart Rev. Ann Arbor.
- Dokka, R.K., Merriam R.H., 1982, Late Cenozoic extension of northeastern Baja California, Mexico, Geological Society of America Bulletin, v. 93, p. 371-378.
- Donegan, D. & H. Schrader. 1982. Biogenie and abiogenie components of laminated sediments in the central Gulf of California area. A symposium, Inst. Geología UNAM, 11-20 pp.
- Dasques, F. 1 995. La Iglesia de Santa Rosalía en Baja California Sur ¿Un edificio de Eiffel? [The Church of Santa Rosalía in Baja California Sur: an Eiffel building?] México en el Tiempo, June-July: 8-14 pp.
- Eastman, J. R. 1992. IDRISI Version 4.1. Clark University Graduate School of Geography. Worcester, Mass.
- Edwards, K.A. 1979. Cultural Practice and Changes in Catchment Hydrology: A Review of Hydrological Research Techniques as Aids to Development Planning in the Humid Tropics. In: Greenland, D.J. and R. Lal (edits.), Soil Conservation and Management in the Humid Tropics. Wiley, New York. 33-46.
- Ehrhardt, N. M., A. Solis N., L. Pierre S., J. Ortiz C., P. Ulloa R., G. González D., and F. García B. 1 986. Análisis de la biología del stock del calamar gigante *Dosídicus gígás* en el Golfo de California, México, durante 1980. [Analysis of the stock of giant squid *Dosidicus gígás* in the Gulf of California, Mexico, in 1980]. Ciencia Pesquera (5): 63-76.
- Elliot, D.G., 1907. A catalogue of the collection of mammals in the Field Columbian Museum. Field Columb. Mus., Publ. 115, Zool. Ser., 8:Vili+1+694.
- Encyclopedia of the Geological Sciences, 1978. Weathering Process. McGraw-Hill, Pp 851 852.
- [EPA, 1972]. U.S. Environmental Protection Agency, 1972. Water Quality Criteria. U.S. EPA, Ohio, E.U.A.
- Eppinga, J., 1992. Santa Rosalía y la gran Compañía del Boleo. [Santa Rosalía and the El Boleo Company]. Mexico desconocido No. 186: 56-60 PP.
- Escandón, V.F. 1995. Génesis de los Yacimientos Polimetálicos del Boleo, Santa Rosalía, Baja California Sur. [Genesis of the Polymetallic Deposits in El Boleo, Santa Rosalía, Baja California Sur]. Academia Mexicana de Ingeniería. Mexico. 24
- Esqueda, E. G. 1991. Bionomia planctónica de la parte central del Golfo de California. [Plankton bionomy of the central section of the Gulf of California]. Section: Ictiopianeton. Technical Report, Depto. de Plancton, Centro Interdisciplinario de Ciencias Marinas - IPN-, La paz, B. C. S., no page.

- Esquivel-Herrera, A. 1 990. Caracterización de las comunidades de sifonóforos del Golfo de California. [Characterization of the Siphonophorae community in the Gulf of California]. Master's Thesis, Centro Interdisciplinario de Ciencias Marinas -IPN-, La Paz, B.C.S. 85 pp.
- Faccioli, E. 1991. Seismic Amplification in the Presence of Geological and Topographic Irregularities. An. Second Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, St, Luis Missouri, pp 1779-1796 Resources Report 60.
- [FAO, 1988]. Food and Agriculture Organization of the United Nations, 1988. World Soil (World Soil Map, Revised Legend), Translated into Spanish by the Centro de Edafología, Colegio de Postgraduados, Mexico (1990). FAO, Rome.
- Fauchald, K. 1977. The polychaete Worms. Natural History Museum of Los Angeles, Science Series No. 28, 1 25 pp.
- Feiger, R. & M.B. Moser. 1980. People of the Desert and Sea. University of Arizona Press, Tucson.
- Figueroa, A.J., 1973, Sismicidad en Baja California [Earthquakes in Baja California], Univ. Nal. Autón. México, Inst. de Ingeniería, Rev. 321.
- Filloux, J. H. 1 973. Tidal patterns and energy balance in the Gulf of California. Nature, 243 (5404):21 7-221.
- Fleminger, A. 1975. Geographical distribution and morphological divergence in American coastal zone planktonic copepods of the genus Labidocera. Estuarine Research, Vol. 1, Academic Press, New York, p. 392-41 9.
- Flores-V., O. & P. Gerez. 1988. Conservación en México. [Conservation in Mexico]. Inst. Nal. de Rec. Biot., Mexico.
- Fluor Daniel Wright, 1997. Pre-Feasibility Study Final Report, For Minera Curator, Unpublished Report
- Foster, M. S., De Vogelare A. & D. Schield. 1 986. The point matrix method vs. photographic analysis: advantages and perspectives. J. Exp. Mar. Biol. Ecol. 54: 234-256.
- Fowler, A. J. 1987. The development of sampling strategies for population studies of coral reef fishes. A case study. Coral Reef, 6: 49-58.
- Galina, P.; Alvarez-Cárdenas, S.; González-Romero, A. & S. Gallina. 1991. Aspectos Generales sobre la Fauna de Vertebrados. [General aspects of vertebrate Fauna]. In: Ortega, A and L. Arriaga. Reserva de la Biósfera P:1 Vizcaíno en la Península de Baja California. Publication No. 4. 4. Centro de Investigaciones Biológicas de Baja California Sur A.C.
- Garate-Lizárraga, 1988. 1 988. Un análisis de la estructura de asociaciones microfítplanctónicas de la región central del Golfo de California y su distribución espacial en el otoño de 1986. [An analysis of the structure of the microphyte-planktonic association in the central region of the Gulf of California and spatial distribution in Autumn 1986]. Undergraduate Thesis, Depto. de Biología Marina, Universidad Autónoma de Baja California Sur, La Paz, B.C.S., 1 21 pp.
- García, E. 1988. Modificaciones al sistema de clasificación climática de Köppen. [Modifications to Köppen's climate classification system]. 4a De. Offset Larios, Mexico.

- Gaskin, J:W.; Douglass, J.E. & W.T. Swank. 1984. Annotated Bibliography of Publications on Watershed Management and Ecological Studies of Coweeta Hydrologie Laboratory, 1934-1984. USDA Forest Service, General Technical Report, (1984) Sep., 30. 140.
- Gastil, R.G., Phillips, P.R. and Allison, E.C., 1975. Reconnaissance geology of the State of Baja California: Geological Society of America Memoir 140, 170 p.
- Gastil, R.G., Krummenacher D., Minch, J., 1979, The record of Cenozoic volcanism around the Gulf of California, Geological Society of America Bulletin, Part 1, v. 90, p. 839-857.
- Gastil G.R, D. Krummenacker, G. Morgan, 1981. The Tectonic History of Peninsula California and adjacent Mexico, Inst. Ernest, W.G. (ed), The Tectonics development of California, Prentice-Hall, New Jersey, Pp 285-306.
- Gastellum-Arce, R., 1985. Centenario de Santa Rosalía. [Santa Rosalía Centenary]. Edition of the Gobierno de Baja California Sur, 1 59-1 60.
- Gaxiola-Castro, G., S. Alvarez-Borrego and R. A. Schwartziose. 1978. Sistema del bióxido de carbono en el Golfo de California. [Carbon bioxide system in the Gulf of California]. Ciencias Marinas, 5(2): 25-40.
- Gilbert, J. Y. & W. E. Alien. 1 943. The phytoplankton of the Gulf of California obtained by E. W. Scripps in 1939 and 1940. J. Mar. Res., 5 (2): 89-1 10.
- Gobierno del Estado de Baja California Sur, 1992. Mulegé: Situación Socioeconómica y sus perspectivas. [Mulegé: Socio-economic situation and prospects].
- Goff, J.A., Bergman E.A. and Solomon S.C., 1987, Earthquake Source Mechanisms and Transform Fault Tectonics in the Gulf of California, Journal of Geophysical Research, Vol. 92, No. BIO, pp 10,485-10510.
- Golden Software. 1994. Surfer ver. 5.0 Surface Mapping System. Golden Software, Inc. Golden Colorado.
- Goldman, E.A., 1937. A new mountain sheep from Lower California. Proc. Biol. Soc. Washington, 50:29-32.
- Gómez Orea, D., 2003. Evaluación de Impacto Ambiental. [Environmental impact assessment]. Mundi-Prensa editions. 2nd. Ed. Madrid, Spain
- González-Farías, F., M. Hernández-Garza and F. Flores-Verdugo. 1986. Variación estacional del detritus en diversos ecosistemas del Golfo de California. [Seasonal variation of detritus in the various ecosystems of the Gulf of California]. Memorias del intercambio académico sobre investigación en el Mar de Cortés CICTUSCONACVT, April 1986, Hermosillo, Son., 1 33-148 pp.
- Gotshall, D. W. 1 982. Marine animals of Baja California. A guide to the common fishes and invertebrates, Second edition, Sea challengers publication, 1 73 pp.
- Gotshali D. W. 1 994. Guide to marine invertebrates: Alaska to Baja California, Sea challengers publication, 105 pp.
- Gotshali, D. W. and L. L. Laurent. 1979. Pacific coast subtidal marine invertebrates, Sea Challengers publication, 107 pp.

- Grinneli, J., 1928. A distributional summation of the ornithology of Lower California. Univ. Calif. Pub. Zool. 32 (1): 1-300.
- Gutiérrez, N. L., 1990. Litología, Mineralogía y Geotermometría del pozo LV-2, Las Tres Vírgenes, B.C.S. [Lithology, mineralogy, and geothermometry of well LV-2, Las Tres Vírgenes, B.C.S.]. Geotermia Rev. Mex. Geoenergía Vol. 2 No. 2 pp 185-211.
- Hall, E. R., 1981. The mammals of North America. John Wiley and Sons, Vol. 1: XV+600+90, Vol. 2: VI+601+1181+90.
- Hamman, M. G., T. R. Baumgartner & A. Badan-Dangon. 1988. Coupling of the Pacific sardine (*Sardinops sagax caeruleus*) life cycle with the Gulf of California pelagic environment. CalCOFI Rep. 29:102-109.
- Hastings, J.R. & R.R. Humphrey. 1969. Climatological Data and Statistics for Baja California. Technical Reports on the meteorology and Climatology of Arid Regions. University of Arizona Institute for Atmospheric Physics. 96 pp.
- Hastings, J. R.; Turner, R. M. & D. K. Warren, 1972. An Atlas of Some Plant Distributions in the Sonoran Desert. The University of Arizona, Institute of Atmospheric Physics. Technical Reports on the Meteorology and Climatology of Arid Regions. Arizona.
- Hausback, B.P., 1982. Timing and nature of Tertiary tectonic and volcano-stratigraphic events in southern Baja California, Mexico (abs): Geological Society of America abstracts with Programs, v.14, N°4, P.171.
- Heim, A, 1922. Notes on the Tertiary of Southern Lower California, Geol. Magaz, 59:529-547.
- Hendrickx, M. E. 1993. Crustáceos decápodos del Pacífico mexicano. [Decapod Crustaceans in the Mexican Pacific]. In: Salazar-Vallejo, S. 1. and N. E. González (Eds.). Biodiversidad Marina y Costera de México. Centro de Investigaciones de Quintana Roo. pp. 271-318.
- Herber, G. 1978. Pioneers of Prefabrication. Baltimore and London, The Johns Hopkins University Press. Hernández-Becerril, D. A. 1985. Estructura del fitoplancton del Golfo de California. Ciencias Marinas, 11 (2): 23-38.
- Hewlett, J.D. 1982. Principles of Forest Hydrology. Georgia: University of Georgia Press.
- Hill, H.M. & I.L. Wiggings. 1948. Ornithological notes from Lower California. The Condor, 50: 155-161.
- Holguín-Quirón, O. E. 1971. Estudio fitoflorístico estacional de las algas marinas del sur de la Bahía de La Paz. [Seasonal study of the marine algae in the south of Bahía de La Paz]. B. C. S. Professional Thesis, Escuela Nacional de Ciencias Biológicas, Instituto Politécnico Nacional, Mexico, D.F., 115 pp.
- H. Municipio de Mulegé, 1980. Desarrollo Urbano, Ecoplan del Municipio de Mulegé, R.C.S. [Town planning, eco-plan for the municipality of Mulegé, R.C.S.].
- H. Municipio de Mulegé, Gobierno del Estado de B.C.S., Secretaría de Asentamientos Humanos y Obras Públicas. 165p.
- H. Municipio de Mulegé, 1993. Plan Municipal de Desarrollo, 1993-1996 [Town Development Plan 1993-1996] H. Municipio de Mulegé, B.C.S.

- Huerta-Múzquiz, L. and C. Mendoza González. 1985. Algas marinas de la parte sur de la Bahía de la Paz, B.C.S., México. [Marine algae in the south of Bahía de La Paz, B.C.S., Mexico]. *Phycologia*, 59(1): 35-57.
- Huey, L.M., 1964. The mammals of Baja California, Mexico. *Trans. San Diego Soc. Nat. Hist.*, 13:85-168.
- Humphrey, R. R. 1974. *The Boojum and its Home: Idria columnaris and its ecological niche.* University of Arizona Press, Tucson. 214 pp.
- INE. 1993a. Atlas de la Regionalización Ecológica. [Ecological regionalization atlas]. Instituto Nacional de Ecología, Direc. Gral. de Planeación Ecológica, Mexico.
- INE. 1993c. Sistema de Información para el Ordenamiento Ecológico (SIORDECO). [Mexican information system for ecological planning]. Instituto Nacional de Ecología, Direc. Gral. de Planeación Ecológica - Fundación Arturo Rosenblueth, Área de Sistemas, Mexico.
- INE. 1994. Programa de Manejo de la Reserva de la Biosfera del Vizcaíno. [Management Program: Vizcaíno Biosphere Reserve]. Instituto Nacional de Ecología, Mexico.
- INEGI. 1974a. Carta Topográfica [Topographic map] 1:50,000, Santa Rosalía G12A36. Instituto Nacional de Estadística, Geografía e Informática, Mexico.
- _____. 1980b. Carta Topográfica [Topographic map] 1:250,000, Santa Rosalía, G12-1. Instituto Nacional de Estadística, Geografía e Informática, Mexico.
- _____. 1981a. Carta Hidrológica de Aguas Subterráneas [Hydrological map of underground water], 1:250,000, Santa Rosalía, G12- 1. Instituto Nacional de Estadística, Geografía e Informática, Mexico.
- _____. 1981b. Carta Hidrológica de Aguas Superficiales [Hydrological map of surface water], 1:250,000, Santa Rosalía, G12-1. Instituto Nacional de Estadística, Geografía e Informática, Mexico.
- _____. 1981c. Guías para la Interpretación de Cartografía, Uso del Suelo. [Guides for the interpretation of maps, use of soil] Instituto Nacional de Estadística, Geografía e Informática, Mexico.
- _____. 1981d. Guías para la Interpretación de Cartografía, Edafología. [Guides for the interpretation of maps, soil science]. Instituto Nacional de Estadística, Geografía e Informática, Mexico.
- _____. 1981e. Guías para la Interpretación de Cartografía, Hidrología. [Guides for the interpretation of maps, hydrology]. Instituto Nacional de Estadística, Geografía e Informática, Mexico. 1982a. Carta Edafológica [Soil Map]. 1:250,000, Santa Rosalía, G12-1. Instituto Nacional de Estadística, Geografía e Informática, Mexico.
- _____. 1982b. Carta Uso del Suelo y Vegetación [Use of soil and vegetation map], 1:250,000, Santa Rosalía, G12-1. Instituto Nacional de Estadística, Geografía e Informática, Mexico. 1983. Carta Geológica [Geological map], 1:250,000, Santa Rosalía, G12-1. Instituto Nacional de Estadística, Geografía e Informática, Mexico.

- _____. 1984. Geología de la República Mexicana. [Geology of the Mexican Republic]. Instituto Nacional de Estadística, Geografía e Informática, Mexico.
- _____. 1984b. Anuario Estadístico del Estado de Baja California Sur. [Statistical yearbook for the State of Baja California Sur]. Instituto Nacional de Estadística, Geografía e Informática, Gobierno del Estado de Baja California, Mexico.
- _____. 1988. Atlas Nacional de] Ambiente Físico. [Physical Environment Atlas]. Instituto Nacional de Estadística Geografía e Informática. Mexico.
- _____. 1989. Guías para la Interpretación de Cartografía, Hidrología. [Guides for the interpretation of maps, Hydrology]. INEGI, Aguascalientes, Ags. 14. 1991. Baja California Sur, Resultados Definitivos del XI Censo General de población y Vivienda. Volumes 1-111. Instituto Nacional de Estadística, Geografía e Informática, Mexico.
- _____. 1993. Niveles de Bienestar en México. [Welfare levels in Mexico]. Instituto Nacional de Estadística Geografía e Informática, Mexico. 1993b. Ordenamiento Ecológico General del Territorio Nacional. Instituto Nacional de Ecología, Direc. Gral. de Planeación Ecológica, Mexico.
- _____. 1994. Anuario Estadístico del Estado de Baja California Sur. [Statistical yearbook for the State of Baja California Sur]. Instituto Nacional de Estadística, Geografía e Informática, Gobierno del Estado de Baja California, Mexico.
- _____. 1995. Síntesis Geográfica de Baja California Sur. [Geographic summary of Baja California Sur]. Instituto Nacional de estadística, Geografía e Informática. Aguascalientes, Mexico.
- _____. 1995b. Anuario Estadístico del Estado de Baja California Sur. [Statistical yearbook for the State of Baja California Sur]. Instituto Nacional de estadística, Geografía e Informática. Aguascalientes, Mexico.
- Inman, D. L. and C. E. Nordstrom. 1971. On the tectonic and morphologic classification of coasts. *Journal of Geology*, 79 (1):1-21.
- Ives, R.L., 1962. Dating of the Tres Virgenes volcano, Baja California Sur, Mexico: *Geological Society of America Bulletin*, v.73, p 647-648.
- Jordán, F. 1976. El Otro México. Biografía de Baja California. [The other Mexico, biography of Baja California]. Gobierno del Estado de Baja California Sur, p 1 60-1 73.
- Juárez, C. del C. 1991. Bionomia planctónica de la parte central del Golfo de California. [Plankton bionomy of the central section of the Gulf of California]. Section: Ictioplancton. Technical Report, Depto. de Plancton, Centro Interdisciplinario de Ciencias del Mar - IPN-, La Paz, B. C. S., no page.
- Karig, D.E. and Jensky, W., 1972, The Proto Gulf of California, *Earth and Planetary Science Letters* 17 (1972) p 169-174.
- Keen, A.M. 1971. *Sea shells of Tropical West America*, second edition, Stanford University Press, 1064 pp.
- Kerstitch, A. 1989. *Sea of Cortez marine invertebrates: A guide for the Pacific Coast, Mexico to Ecuador*. Sea Challengers Publication, 1 1 2 pp.

- Knopf, A. 1996. National Audubon Society Field Guide to North American Mammals. Dal Nippon Printing Co., Ltd. Tokyo, Japan.
- Kemmer, F. N. and J. MaeCallion, 1989. Manual del Agua. (The Nalco Water Handbook) McGraw-Hill Interamericana de México. Volume 1.
- Lance Brown, Eng Tech; Geoff Hughes-Games, PAg; Rick Van Kleeck, PEng; publishers, 2005, Reference Guide, BC Ministry of Agriculture, Food and Fisheries. Resource Management Branch, website: <http://www.bcac.bc.ca/>.
- Landrea, C., 1995. Pacific Eastern Hurricanes. At website <http://thunder.atms.purdue.edu/hurricane.html>.
- Lee, R. E. 1990. Phycology. Cambridge University Press, N. Y., 477 pp.
- León-Portilla, M. 1989. Cartografía y Crónicas de la Antigua California [Cartography and articles on Old California]. UNAM/Fundación de Investigaciones Sociales A.C. Mexico, D.F. pp 207
- Lidekker, R. 1915. Catalogue of the ungulate mammals in the British Museum (Natural History). British Museum, 4:XXI+1+438.
- Lira Herrera, H, G. Ramírez Silva, J.J. Franco Herrera and H. Vargas Ledezma, 1984. Estudio Geológico a semidetalle de la zona geotérmica de las Tres Vírgenes, B.C.S. [Semi-Detailed Geological Study of the Geothermal Zone of Tres Vírgenes, B.C.S.]. C.F.E, report 30/83, unpublished.
- Lobeck A.K., 1939. An Introduction to the Study of Landscape. McGraw-Hill, New York and London Pp 731.
- Lock, S.E., S.M. Sinitiere & L.J. Williams. 1990. Salinas & Sabkhas. In: Dave, O.K. (de). Quaternary Geology of Bahia Adair and the Southwestern United States. Great Basin Nat. 46: 46-65
- López Hernández side, Zenon Casarrubias Unzueta and Roberto Leal Hernández, 1993. Los tres complejos pliocuaternarios del área de Santa Rosalía, B.C.S., México, su relación tectónica con la evolución del Golfo de California y su potencial geotécnico. [The three Plio-Quaternary complexes in the area of Santa Rosalía, B.C.S., Mexico, and its tectonic relationship with changes to the Gulf of California and its geotechnical potential].
- López Hernández, A, C Robin, J, Cantagrel and P, Vincent, 1989. Estudio Geoquímico, mineralógico y edades radiométricas de la zona las Tres Vírgenes, B.C.S., [Study of Geochemistry, mineralogy, and Radiometric Ages in the Area of Las Tres Vírgenes, B.C.S.]. C.F.E. report 5/89, unpublished.
- López-Ramos, E., 1979. Geología de México [Geology of Mexico], Volume II. Mexico.
- López Ramos, E, 1982. Geología de México [Geology of Mexico], 3rd edition 2:1-5.
- Lugo-Hubp, J., 1990. El Relieve de la República Mexicana [The terrain of the Mexican Republic]. Univ. Nal. Autón. México, Inst. Geología, Rev. Vol. 9, No. 1:82-111.
- Lyle, Mitchell and Ness, Gordon E, 1991. The opening of the southern Gulf of California. Chapter 20 in the Gulf and Peninsular province of the California, J. Paul Dauphin and Bernd R.T. Simoneit, editors. The American Association of Petroleum Geologists (AAPG), memoir 47, Pages 403-423.

- Maluf, L. 1. 1983. The physical oceanography. In: Case, T. J. and M. L. Cody (Eds.), *Island Biogeography in the Sea of Cortez*, University of California Press, pp. 26-45.
- Mammerickx, J. & K.D. Klitgord, 1982. Northern East Pacific Rise: Evolution from 25 m.y. B.P. to the present. *J. Geophys. Res.*, 87 (B8), 6751-6759.
- Manrique, F. A. 1977. Variación estacional del zooplancton de la región de Guaymas (Golfo de California). [Seasonal variation of zooplankton in the region of Guaymas (Gulf of California)]. In: F. A. Manrique (ed.). *Memorias V Congreso Nacional de Oceanografía*, 22-25 octubre, 1974, Guaymas, Son., p. 359-368.
- Margalef, R. 1983. *Limnología [Limnology]* Ed. Omega. Barcelona. 41-46.
- Mateo-Cid, L. E., 1. Sánchez-Rodríguez, Y. E. Rodríguez-Montesinos and M. M. Casas-Valdez. 1993. Estudio florístico de las algas marinas bentónicas de Bahía Concepción, B.C.S., México. [Floristic analysis of the bentonic marine algae of Bahía Concepción, B.C.S., Mexico]. *Ciencias Marinas*, 19(1):41-60.
- McLaughlin, S.P. 1986. Floristic Analysis of the Southwestern United States. *Great Basin Nat.* 46:46-65.
- Mcneely, J. A., 1990. *Conserving the World's Biological Diversity*. UIC, WRI, CI, WWF-US, World Bank. Washington.
- Mercado Romero, G. 1993. Plan Estatal de Desarrollo 1993-1999. [State development plan 1993-1999]. Baja California Sur. Gobierno del Estado de Baja California Sur. La Paz, BCS. 19.
- Medellín L., R., 1995, El Borrego Cimarrón. [Bighorn Sheep]. *Gaceta Ecológica*. No 37:19-21.
- Medina, F., Espíndola, J.M. and Suárez, F., 1991, Baja California y sus volcanes [Baja California and its volcanoes] -*Información Científica y Tecnológica*, vol. 13, No 51, p. 45-51.
- Merriam, C.H., 1893. Description of a new kangaroo rat from Lower California (*Dipodomys merriami melanurus* subsp. nov.) *Proc. California Acad. Sci.*, Ser. 2, 3.-345-346.
- ____ 1894. Descriptions of eight new pocket mice (genus *Perognathus*). *Proc. Acad. Nat. Sci.*, Philadelphia, 14:262-268. 1
- ____ 1897. Revision of the coyotes or prairie wolves, with descriptions of new forms. *Proc. Biol. Soc. Washington*, 11:19-33.
- Miettinen, J.K., 1974. The accumulation and excretion of heavy metals in organisms. In: McIntyre, A.D. & C.F. Milis (Eds.) *Ecological toxicology research*. Plenum Press. New York. 215-229.
- Miller, D. J. And R.N. Lea. 1972. Guide to the coastal marine fishes of California. *Fish Bull.* No. 157, 249 pp.
- Mina Uhink, F., 1957. Bosquejo Geológico de la parte sur de la Península de Baja California. [Geological outline of the southern section of the Peninsula of Baja California]. *Bol. Asoc. Mex. Geólogos Petroleros*, V.9, Pp: 139-269.
- Miranda, F. and E. Hernández-X., 1963. Los tipos de vegetación de México y su clasificación. [Types of vegetation in Mexico and classification]. *Bol. Soc. Bot. Méx.*, 28: 29-179.
- [MOEE, 1994]. Ministry of Environment and Energy, 1994. Proposed Guidelines for the Clean-Up of Contaminated Sites in Ontario. Queen's Printer for Ontario, Canada. 74.

- Moore, D.G., 1973, Plate-Edge Deformation and Crustal Growth, Gulf of California Structural Province, Geological Society of America Bulletin, v. 84, p. 1,883,906.
- Morris, R. H., D. P. Abbott & E.C. Haderlie. 1980. Intertidal invertebrates of California, Stanford University Press, 690 pp.
- Morris, P. and R. Therivel, 2001. Methods of Environmental Impact Assessment. 2th Ed. Spon Press Taylor & Francis Group. Great Britain
- Mooser, F. and Lagos, A.R., 1961. El grupo volcánico de las Tres Vírgenes. [The volcano group of Las Tres Vírgenes]. Municipality of Santa Rosalía, Baja California, Mexico: Universidad Nacional. Instituto de Geología. Boletín, v.61, p 47-48.
- Moser, H. G., E. Ahistrom, D. Kramer & E. G. Stevens. 1974. Distribution and abundance of fish eggs and larvae in the Gulf of California. CalCOFI Rep., 1 7: 1 1 2-1 30.
- Moyano, A., J. Martínez. 1982. La Compañía Inglesa. [The English company]. In: Visión histórica de Ensenada Universidad Autónoma de Baja California. p. 143-162.
- Mumphreys Eugene D. and Weldon, Ray J.II, 1991. Kinematic constraints on the rifting of Baja California. Chapter 12 in the Gulf and peninsular province of the Californias, J. Paul Dauphin and Bernd R.T. Simoneit, editors. The American Association of Petroleum Geologists (AAPG), Memoir 47, Pages 217-229.
- Munguia L, V. Wong, 1995. Microseismicity Studies at the Laguna Salada, Baja California, México. Geothermal field. Centro de Investigaciones Científica y de Educacion Superior,Ensenada, Mexico. Instituto de Geofísica, Mexico. Seismological Research-letters 64(1) P.53.
- Museo Universitario del Chopo, 1992. La Torre Eiffel en México. Exposición Temporal. [The Eiffel Tower in Mexico, temporary exhibition].
- Musser, G. G. 1964. Notes on geographic distribution, habitat and taxonomy of some Mexican mammals. Oecas. Papers Mus. Zool., Univ. Michigan, 636: 1-22.
- Mueller-Dumbois, D. & H. Ellenberg. 1974, Aims and methods of Vegetation Ecology. John Wiley. New York. 547 pp.
- Nelson, E.W., 1909. The rabbits of North America. N. Amer. Fauna, 29:1-314.
- Nelson, E.W. & E.A. Goldman, 1909. Eleven new mammals from Lower California. Proc. Biol. Soc. Washington, 22:23-28.
- Nelson, E.W., 1921. Lower California, and its natural resources. Memoirs of National Academy of Sciences, 16.-I-94.
- Nelson, J. S. 1994. Fishes of the world, third edition, John Wiley & Sons, New York, 600 pp-
- Norris, J. N. 1975. Marine algae of the northern Gulf of California. Ph. D. Thesis, University of California, Santa Barbara, California, USA. 256 pp.
- Ordoñez, E., 1941. Las provincias fisiográficas de México. [The physiographic provinces of Mexico]. Rev. Geográfica del Inst. Panamericana de Geografía e Historia, Vol 1- 134-161.

- Ortega, A., L. Arriaga. 1991. La Reserva de la Biósfera El Vizcaíno en la Península de Baja California. [El Vizcaíno Biosphere Reserve in the Peninsula of Baja California Sur]. Centro de Investigaciones Biológicas de Baja California Sur, A.C. p 39
- Ortega-Gutierrez, F., Mitre-Slazar, L.M., Roldán-Quintana, J., Aranda-Gómez, J.J., Moran- Zenteno, D., Alaniz-Álvarez, S.A. and A.F. Nieto-Samaniego, 1992a. Texto Explicativo de la Quinta Edición de la Carta Geológica de la República Mexicana [Explanations to the fifth edition of the geological map of the Republic of Mexico], Scale 1:2,000,000; Univ. Nat. Autón. de Méx., Inst. de Geol.SEMIP, Consejo de Recursos Minerales. ISBN 968-36-2386-7.
- Ortega-Gutierrez, F., Mitre-Slazar, L.M., Roldán-Quintana, J., Aranda-Gómez, J.J., Moran- Zenteno, D., Alaniz-Álvarez, S.A., and A.F. Nieto-Samaniego, 1992b. Carta Geológica de la República Mexicana [Geological map of the Mexican Republic], Scale 1:2,000,000; Compiled by the Inst. de Geol. de la UNAM, Sponsored by the Consejo de Recursos Minerales, SEMIP, 5th edition.
- Ortiz Villanueva, B.; Ortiz Solorio, C.A., 1990, Edafología. [Soil Science]. 7th Edition, Universidad Autónoma Chapingo, Departamento de Suelos, Mexico, 394 pp.
- Ortlieb, L. 1981. Sequences of Pleistocene marine terraces in the Santa Rosalia area, Baja California Sur, Mexico. In: Ortlieb, R. & J. Roldán (eds). Geology of Northwestern Mexico and Southern Arizona, Instituto de Geología UNAM, Mexico.
- Padilla, G. M. A. 1976. Distribución y abundancia relativa de huevos y larvas de sardina monterrey y merluza en el Golfo de California, febrero-marzo de 1974. [Distribution and relative abundance of Monterey sardine and hake eggs and larvae in the Gulf of California, February-March 1974]. Inst. Nal. de Pesca, INI/SI: 1 50.
- Padilla, G., Spedrín and E. Troyo-Diéguez. 1991. Geología. [Geology]. In: Ortega, A. and L. Arriaga. La Reserva de la Biósfera El Vizcaíno en la Península de Baja California. Centro de Investigaciones Biológicas de Baja California Sur A.C. La Paz p 71-93.
- Palomares-García, R. 1 99 1. Bionomia planctónica de la parte central del Golfo de California en 1987-1988. [Plankton bionomy of the central section of the Gulf of California in 1987-1988]. Section: copépodos pontélidos y su relación con larvas de clupeidos. Technical Report, Depto. de Plancton, Centro Interdisciplinario de Ciencias Marinas, La Paz, B.C.S.
- Panian, T.F., 1987. Unsaturated flow properties catalog, Volume II. Publication # 45061, Water Resources Center, Desert Research Institute, University of Nevada System.
- Parker, F. L. 1962. Planktonic foraminiferal species in Pacific sediments. *Micropaleontology* 8 (2): 219-254, pis. 1 - 10.
- Pasquili, F. 1971. Atmospheric Dispersion of Pollution, *Quart, J. Roy Meteorol. Soc.* 97 (414): 369-395.
- Peatfield, 1994. Technical Report on the Boleo Copper-Cobalt Property, Santa Rosalía area, Baja California Sur, México. International Curator Resources Ltd. Vancouver.
- Peinado, M., F. Alcaraz, J. Delgadillo & I. Aguado. 1994. Fitogeografía de la península de Baja California, México. [Phytogeography of the peninsula of Baja California, Mexico]. *Annales del Jard. Bot. Madrid* 51(2):255-277.

- Pérez E, 1995. Petrografía de las menas de los yacimientos del Boleo, Santa Rosalía, B.C.S. con énfasis en la distribución del cobalto. [Petrography of the ore deposits in El Boleo, Santa Rosalía, B.C.S., with an emphasis on the distribution of cobalt]. Work prepared for Minera Curator S.A. de C.V. Unpublished report, pp 1-35.
- Peterson, R. T. and E. L. Chalif. 1989. Aves de México. [Mexican birds]. Ed. Diana. Mexico, D.F. Phillips, J.C., 1912. A new Puma from Lower California. *Proe. Biol. Soc. Washington*, 25:85- 86.
- Phillips, P. C. and M. J. Pérez-Cruet. 1984. A comparative survey of reef fishes in Caribbean and Pacific Costa Rica. *Revista de Biología Tropical*, 32 (1): 95-102.
- Quiñones, H., 1987. El sistema fisiográfico de la Dirección General de Geografía. [Physiographic system of the Directorate General of Geography]. *Rev. de Geografía*, Vol. 1, No. 2:13-20.
- Rabinovich, J.E., 1980. Introducción a la Ecología de Poblaciones Animales. [Introduction to the ecology of animal populations]. *Comp. De. Continental. Mexico*, 315.
- Ramírez, C., 1992. Tratamiento de Aguas Residuales Industriales. [Treatment of industrial wastewater]. Univ. Autón. Metrop. Unidad Azcapotzalco. Text book collection.
- Ramírez-P, J.; López-W., R.; Müdespacher, C., and I. Lira. 1983. Lista Bibliográfica Reciente de Los Mamíferos de México. [Recent bibliographic list of Mexican mammals]. Univ. Autón. Metropolitana-iztapalapa. Mexico.
- Ramírez-P, J.; Britton, M.C.; Perdomo, A. & A. Castro. 1986. Guía de Los Mamíferos de México. [Guide to Mexican mammals]. Univ. Autón. Metropolitana-Iztapalapa. Mexico.
- Ramírez-P, J. & A. Castro-Campillo. 1994. Bibliografía Reciente de Los Mamíferos de México. [Recent bibliography of Mexican mammals]. Univ. Autón. Metropolitana-iztapalapa. Mexico.
- Raisz, E., 1959. Landforms of Mexico: Cambridge, Mass. private edition, map with text, scale 1:3,000,000.
- Reid, W. V. & K. R. Miller, 1989. Keeping Options Alive. The Scientific Basis for Conserving Biodiversity. World Resources Institute. USA.
- Ríos, R. G. 1 1989. Un catálogo de camarones carideos de Mulegé y Bahía Concepción, B.C.S., con anotaciones acerca de su biología, ecología, distribución geográfica y taxonomía. [Catalog of Caridean prawns in Mulegé and Bahía Concepción, B.C.S., with comments relating to their biology, ecology, geographic distribution, and taxonomy]. Undergraduate Thesis, Depto. de Biología marina, Universidad Autónoma de Baja California Sur, La Paz, B.C.S., 208 pp.
- Riosmena-Rodríguez, R., and D. A. Siqueiros-Beltrones., 0. García De La Rosa and V. Rocha Ramírez. 1991. Range extension of seaweeds in the Baja California Peninsula. *Rev. Inv. Cient. Univ. Autón. de Baja California Sur*, 2 (2):1 2-20.
- Riosmena-Rodríguez R. & D. A. Siqueiros-Beltrones, 1995. Morfología y distribución de *Corallina vancouverensis* (Corallinales, Rhodophyta) en el noroeste mexicano. [Morphology and distribution of *Corallina vancouverensis* (Corallinales, Rhodophyta) in the Northeast of Mexico]. *Ciencias Marinas*, 21(2): 1 87-1 99.
- Robinson, M. K. 1 1973. Atlas of monthly mean sea surface and subsurface temperatures in the Gulf of California, Mexico. *San Diego Soe. Nat. Hist., Mem., No. 5*, 97 pp.

- Rocha-Ramírez, V. & D. A. Siqueiros-Seitrones. 1991. El herbario ficológico de la U.A.B.C.S.: Elenco florístico de macroalgas para Balandra en la Bahía de la Paz, B.C.S. [The phycology herbarium of the U.A.B.C.S: Floristic catalog of macro algae in Balandra, Bahía de la Paz, B.C.S]. Mexico. *Rev. de Inv. Cient. Universidad Autónoma de Baja California Sur*, 2(1):1 3-33.
- Roden, G. I. 1958. Oceanographics and meteorological aspects of the Gulf of California. *Pac. Sci.*, 12 (1): 21-45.
- Roden, G. I. 1964. Oceanographics aspects of the Gulf of California. In: Van Andel Tj. H. and G. G. Shor, Jr. (Eds.), *Marine Geology of the Gulf of California a symposium*. The American Association of Petroleum Geologists, Tulsa, Mem. 3. pp. 30-58.
- Roden, G. I. and I. Emilsson. 1980. Oceanografía física del Golfo de California. [Physical Oceanography of the Gulf of California]. Centro de Ciencias del Mar y Limnología UNAM, contribution No. 90, 67 pp.
- Roden, G. I. and G. W. Groves. 1959. Recent oceanographic investigations in the Gulf of California. *J. Mar. Res.*, 18 (1): 10-35.
- Romero Gil, J.M. 1991. El Boleo, Santa Rosalía Baja California Sur. Un Pueblo que se negó a morir. 1885-1954. [El Boleo, Santa Rosalía Baja California Sur, A town that refuses to die, 1885-1954]. Universidad de Sonora, De. Unison, Hermosillo, Son.
- Roberts, N.C. 1989. Baja California Plant Field Guide. Natural History Publishing Company, LaJolla, Ca.
- Rosas-Cota, A. 1977. Corrientes geostróficas en el Golfo de California en la superficie y a 200 metros, durante las estaciones de invierno y verano. [Geostrophic currents of the Gulf of California on the Surface and at 200 meters, during winter and summer Seasons]. *CalCOFI Rep.*, 19: 89- 106.
- Rose, A.W., 1986. Mobility of Copper and other heavy metals in Sedimentary Environments, in: Boyle, R.W, A.C. Brown, C.W. Jefferson, E.C. Jowett and R.V. Kirkham, eds. *Sediment-hosted. Stratiform Copper Deposits: Geological Association of the Canada Special Paper 36*, Pp 37-110.
- Round, F. E. 1967. The phytoplankton of the Gulf of California. Part I. Its composition, distribution and contribution to the sediments. *J. Exp. Mar. Biol. Ecol.* 1(1):76-97.
- Rowley, J.S., 1935. Notes on some birds of Lower California, Mexico. *The Condor*, 32: 20-47.
- Rusnak, G. A. and R. L. Fisher. 1964. Structural history and evolution of Gulf of California. In: Van Andel Tj. H. and G. G. Shor, Jr. (Eds.), *Marine Geology of the Gulf of California a symposium*. The American Association of Petroleum Geologists, Tulsa, Mem. 3. pp. 144-156.
- Rzedowski, J. 1988. *Vegetación de México*. [Vegetation of Mexico]. Limusa, Mexico.
- Salas, G.P., 1991, Baja California Península Metallogenic Province, *The Geology of North America*, vol. P-3, Economic Geology, Mexico, The Geological Society of America.
- Salazar, V. S., J. A. León, and H. Salaices. 1988. Poliquetos (Annelida: Polychaeta) de México [Polychaetes (Annelid: polychaeta of Mexico], Universidad Autónoma de Baja California Sur, La Paz, B.C.S., 21 2 pp.

- Saldierna, R. and R. Vera. 1991. Bionomia planctónica de la parte central del Golfo de California. [Plankton bionomy of the central section of the Gulf of California]. Section: Ictioplankton. Technical Report, Depto. de Plancton, Centro Interdisciplinario de Ciencias Marinas, La paz, S. C. S., no page.
- Salinas-Zavala, C.A., R. Coria-Benet, and E.Díaz-Rivera. 1991. Climatología y Meteorología. [Climatology and meteorology]. In- Ortega, A. and L. Arriaga. La Reserva de la Biósfera El Vizcaíno en la Península de Baja California. Centro de Investigaciones Biológicas de Baja California Sur A.C. La Paz p 71-93.
- [SARH, 1988]. Secretaría de Agricultura y Recursos Hidráulicos, 1988. Normales Climatológicas (1941-1970). [Normal Climatology (1941-1970)]. Secretaría de Agricultura y Recursos Hidráulicos, Direc. Gral. de Estudios, Información y Estadística Sectorial. 2,1 de., Mexico, D.F.
- Sarukhán, J. and J.M. Maass. 1990. Bases Ecológicas para un manejo sostenido de los ecosistemas: el sistema de cuencas hidrológicas. [Ecological basis for a sustained management of ecosystems: the system of hydrological basins]. In: Leff, E. (coordinator), Medio Ambiente y Desarrollo en México, Vol. 1. Centro de Investigaciones Interdisciplinarias en Humanidades, UNAM - Gpo. Editorial Miguel Porrúa. 81-114.
- Savage, J.M., 1960. Evolution of a peninsular herpetofauna. Syst. Zool. 9:184-212.
- Sawlan, Michael and Smith James, G, 1984. Petrologic Characteristic, age and Tectonic setting of Neogene volcanic rocks in northern Baja California Sur, Mexico, in Geology of the Baja California Peninsula, Virgil A. Frizzell, Jr. editor. The Pacific Section, Society of Economic Paleontologist and mineralogist (SEPM) volume 39, Pages 237-251.
- Sawlan, Michael G, 1991. Magmatic evolution of the Gulf of California Rift. Chapter 17 in the Gulf and Peninsular Province of the Californias, J. Paul Dauphin and Bernd R.T. Simoneit, editors. The American Association of Petroleum Geologists (AAPG), Memoir 47, Pages 301-369.
- Schmitt, W. 1972. The marine decapod Crustacea of California. University of California, San Diego, California, 470 pp.
- Schmidt, E.K., 1975. Plate Tectonics, volcanic petrology, and ore formation in the Santa Rosalía area, Baja California, Mexico: unpublished M.S. Thesis.
- Scott, S. (Ed.). 1987. Field guide to the birds of North America, second edition, National Geographic Society, 464 pp.
- SEDESOL. 1994. Proyecto de Norma Oficial Mexicana NOM-090-ECOL-1994, que establece los requisitos para el proyecto, construcción y operación de presas de jales. [Draft Mexican Official Standard NOM-090-ECOL-1994, establishing the requirements for planning, building, and operating tailings dams]. Diario Oficial de la Federación. Tuesday September 26, 1994.
- SEDUE. 1983. Borrego Cimarrón. [Bighorn Sheep]. Secretaría de Desarrollo Urbano y Ecología, Subsecretaría de Ecología, Dirección General de Flora y Fauna Silvestres. 31 pp.
- SEDUE, 1989. Acuerdo por el que se establecen los Criterios Ecológicos de Calidad de Agua CE-CCA-001189. [Agreement establishing the ecological criteria for water quality CE-CCA-001189]. Diario Oficial de la Federación. December 2, 1989.

- [SEGOB. 1990]. Secretaría de Gobernación, 1990. Acuerdo por el que las Secretarías de Gobernación y Desarrollo Urbano y Ecología, con fundamento en lo dispuesto en los artículos 5° fracción X y 146 de la Ley General del Equilibrio Ecológico y la Protección al Ambiente; 27 fracción XXXII y 37 fracciones XVI y XVII de la Ley Orgánica de la Administración Pública Federal, expiden el primer listado de actividades altamente riesgosas. [Agreement in which the Secretary of Government, Town Planning, and Ecology, in accordance with the provisions set out in Articles 5 Section X and 146 of the General Law of Ecological Equilibrium and Environmental Protection; 27 Section XXXII and 37 Sections XVI and XVII of the Organic Law of Federal Public Administration, issued the first list of highly risky activities]. Gaceta Ecológica Vol. II. No. 9: 234-238.
- _____. 1993. Acuerdo por el que las Secretarías de Gobernación y Desarrollo Urbano y Ecología, con fundamento en lo dispuesto en los artículos 5° fracción X y 146 de la Ley General del Equilibrio Ecológico y la Protección al Ambiente; 27 fracción XXXII y 37 fracciones XVI y XVII de la Ley Orgánica de la Administración Pública Federal, expiden el primer listado de actividades altamente riesgosas. [Agreement in which the Secretary of Government, Town Planning, and Ecology, in accordance with the provisions set out in Articles 5 Section X and 146 of the General Law of Ecological Equilibrium and Environmental Protection; 27 Section XXXII and 37 Sections XVI and XVII of the Organic Law of Federal Public Administration, issued the second list of highly risky activities]. Gaceta Ecológica Vol. V. No. 20: 6-10.
- . 1994. Atlas Nacional de Riesgos. [Mexican atlas of risks]. May 1994 Version. Sec. de Gobernación, Direc. Gral. de Protección Civil. Mexico, D.F.
- SEGOB and Gobierno del Estado de Baja California. 1988. Los Municipios del Estado de Baja California. [Municipalities of the State of Baja California]. Sec. de Gobernación and Gobierno del Estado de Baja California, Mexico.
- [SEMARNAP. 1995a]. Secretaría de Medio Ambiente, Recursos Naturales y Pesca, 1995a. Acuerdo por el que se establece el calendario para la captura, transporte y aprovechamiento racional de aves canoras y de ornato para las temporadas 1995- 1996 y 1996-1997. [Agreement establishing the schedule for the capture, transport, and rational use of Songbirds during the seasons 1995-1996 and 1996-1997]. In: Diario Oficial de la Federación, II Secc.: 11-39. Thursday, July 27.
- _____. 1995b. Acuerdo por el que se establece el calendario cinegético correspondiente a las temporadas 1995-1996 y 1996-1997. [Agreement establishing the hunting schedule for the seasons 1995-1996 and 1996-1997]. Diario Oficial de la Federación, Volume DII, No. 04, 211 Section:1-96. Monday August 8.
- _____. 2000a. Reglamento de la Ley General del Equilibrio Ecológico y la Protección al Ambiente en Materia de Evaluación del Impacto Ambiental [Regulations of the General Law of Ecological Equilibrium and Environmental Protection for the Assessment of the Environmental Impact]. Diario Oficial de la Federación, May 30, 2000, First Section: 51-66.
- _____. 2000b. Guía para elaborar la Manifestación de Impacto Ambiental Modalidad Regional de Proyectos Mineros y Apéndices. [Guide for the preparation of regional environmental impact statements for mining projects and appendices]. Document dated September 21, 2000 but consulted for the final time on May 1, 2006 at http://portal.semarnat.gob.mx/semarnat/portal!/ut/p/kcxml/04_Sj9SPykssy0xPLMnMz0vM0Y_QjzKLN4g3NA4ESYGYxqb6kWhCjhgivoYQIV8jmEqAVCTADCYS5gkRRCfOCiRgaW8BMskSlEcDEPBFIaQqbfT3yc1P1QxGOMzTVjzDT99YP0C_IDYWAiPIKE0dFRQDDzFLv/delta/base64xml/L3dJdyEvd0ZNQUFzQ_UMvNEIVRS82XzBfMTNQ
- . 2000c. Programa de Manejo de la Reserva de la Biosfera El Vizcaíno. [Management program: Vizcaíno Biosphere Reserve]. Mexico. D.F.
- SEMARNAT. 2001. Norma Oficial Mexicana NOM-059-SEMARNAT-2001, que determina las especies y subespecies de flora y fauna silvestre, terrestres y acuáticas en peligro de extinción, amenazadas, raras y las sujetas a protección especial que establece especificaciones para su protección. [Mexican Official Standard NOM-059-SEMARNAT-2001, determining the species and sub-species of flora and fauna (wild, land, and aquatic) in danger of extinction, threatened, rare, and subject to special measures for their protection].
- _____. 2004. Norma Oficial Mexicana NOM-141-SEMARNAT-2003, Que establece el procedimiento para caracterizar los jales, así como las especificaciones y criterios para la caracterización y preparación del sitio, proyecto, construcción, operación y postoperación de presas de jales. [Mexican Official Standard NOM-141-SEMARNAT-2003, stipulating the procedure for classifying tailings, and the specifications and criteria for the classification and preparation of the site, project, construction, operation, and post-operation of tailings dams]. Diario Oficial de la Federación, September 13, 2004.

- Sengupta, M., 1993. Environmental Impacts of Mining. Lewis Publishers. Boca Raton, Fl.
[SEP, 1986] Secretaría de Educación Pública, 1986. Catálogo Nacional de Monumentos Históricos Inmuebles, Baja California Sur. [National list of historical monuments, Baja California Sur]. Sec. de Educación Pública, Inst. Nal. de Antropol. e Hist., Programa Cultural de las Fronteras. Mexico.
- Servicios Geológicos, 1996. Estudio de Evaluación Geohidrológica de las Subcuencas Hidrológicas de los Arroyos La Magdalena, Santa Agueda y Santa Rosalía de la Cuenca Trinidad-Muegú y de la Subcuenca del Río San Ignacio, perteneciente a la Cuenca San Ignacio-Raymundo (informe Final). [Geohydrologic assessment of the hydrological sub-basins of the La Magdalena, Santa Agueda and Santa Rosalía streams, of the Trinidad-Muegú basin, and the sub-basin of the Río San Ignacio, part of the San Ignacio-Raymundo Basin (Final report)]. Internal report prepared for Minera Curator.
- Setchell, W. A. and N. L. Gardner. 1920. The marine algae of the Pacific Coast of North America. Pte. II. Chlorophyceae. University of California, Publications in Botany No. 8: 139-374.
- Setchell, W.A. and N. G. Gardner. 1925. Marine algae from the Gulf of California. Proc. Calif. Acad. Sel., 14: 109-215.
- Sewian, M. G. & J.H. Smith. 1984. Petrologic characteristics, age and tectonic setting of neogene volcanic rocks in northern Baja California Sur, Mexico. In: Frizeli, V.A. (ed.) Geology of the Baja California peninsula, Soc. Econ. Paleo. Min. Pacific. Section 39: 237-251.
- SHCP. 1995. Plan Nacional de Desarrollo 1995-2000. [National development plan 1995-2000]. Diario Oficial de la Federación:4-96. Wednesday May 31, 1995.
- Shepard, F. P. 1967. Submarine geology, Harper & Row, New York, 517 pp.
- Shreve, F., 1951. Vegetation of the Sonoran Desert. Carn. Inst. Wash. Publ. 591:1-192.
- Shreve F., Wiggins I. L. (1964) Flora and Vegetation of the Sonoran Desert, Vol 1. Stanford University Press, Stanford.
- Smith, H.M. & E.H. Taylor, 1966. Herpetology of Mexico. Annotated checklists and keys to the Amphibians and Reptiles. Reprint of Bulletins 187, 194, and 199 of U.S. Nat. Mus., with list of subsequent taxonomic innovations. Erie Lundberg and Ashton, Maryland.
- Smith, M. P. 1. 1988. Effects of observer swimming speed on sample counts of temperate rocky reef fish assemblages. Marine Ecology-Progress Series, 43: 223-231.
- Smith, R. Y. and J. T. Carlton. 1975. Light's manual: Intertidal invertebrates of the Central California Coast, University of California Press, San Diego, California, 717 pp.
- Sokolov, V. A. and M. Wong R. 1973. Investigaciones efectuadas sobre los peces pelágicos del Golfo de California (sardina crinuda y anchoveta) en 1971. [Research conducted on deep-sea fish in the Gulf of California (sardines and anchovies)]. Scientific report by the Instituto Nacional de Pesca, No. 2. IN PISI: 12.
- Stebbins, R.C., 1985. A Field Guide to Western Reptiles and Amphibians. Houghton Mifflin Co., Boston.
- Steller D. L., 1993. Ecology of rhodolith beds at Bahía Concepción, B.C.S., México. Master's Thesis, University of California, San Jose, California, USA, 109 p.
- Stewart J. G. 1991. Marine algae and Seagrasses of San Diego Country, California Sea Grant College Program, San Diego, California, USA, 197 p.

- Tamayo, J. L. 1995. Geografía moderna de México. [Modern geography of Mexico]. Tenth edition, Ed. Trillas, 400 pp.
- Taylor, W. S. 1 945. Pacific marine algae of the Allan Hancock Expeditions to the Galapagos Islands. A. Hancock Pac. Exped. 1 2: 1-528.
- Termier, 1952. Congreso Geológico Internacional, [International geological congress] 1956., Mexico.
- Thomas, O., 1898. On new mammals from western Mexico and Lower California. Ann. Mag. Nat. Hist., ser. 7, 1:40-46.
- Thornson, D. A., L. T. Findley & A. N. Kerstitch. 1 979. Reef fishes of the Sea of Cortez. John Wiley & Sons, New York, 302 pp.
- Thornthwaite, C.W., 1931. The climates of North America according to a new classification. Geog. Rev., v. 21: 633-655.
- Townsend, C.H., 1923. Birds collected in Lower California. Bull. Ann. Mus. Nat. Hist. 48:1-26.
- Turner, R.M. & D.E: Brown. 1982. Sonoran Desert scrub. In. Brown, D.E. (ed) Biotic Communities of the American Southwest-United States and Mexico. Desert Plants 4 (1-4).
- Turner, R.M., J.E. Bowers & T.L. Burgess. 1995. Sonoran Desert Plants. University of Arizona Press. pp 504.
- UNESCO, 1996. Our land, our legacy: Our North American World Heritage. R.R. Leitch Publications, CNCA/Instituto Nacional de Antropología e Historia (INAH) y Editorial Raíces. 274-277 pp.
- USDA [U.S. Department of Agriculture]. 1992. Soil Survey laboratory Methods Manual. Soil Survey Investigation Report No. 42, Ver. 2.0. Soil Conservation Service, Nebraska.
- Valdez-Holguín, J. E., G. Gaxiola-Castro, and R. Cervantes-Duarte. 1 995. Productividad primaria en el Golfo de California, calculada a partir de la relación entre la irradiancia superficial y clorofila de la zona eufótica. [Primary productivity in the Gulf of California, calculated on the basis of the relationship between the superficial and chlorophyll radiation in the euphotic zone]. Ciencias Marinas, 21 (3):311-329.
- Van Andel, Tj. H. 1964. Recent marine sediments of Gulf of California. In: Van Andel Tj. H. and G. G. Shor, Jr. (Eds.), Marine Geology of the Gulf of California a symposium. The American Association of Petroleum Geologists, Tulsa, Mem. 3. pp. 21 6-31 0.
- Van Reeujik, L. P. 1 993. Procedures for Soil Analysis. Technical Paper 9. International Soil Reference and Information Center Wageningen. Netherlands.
- Walker, E. W. 1960. The distribution and affinities of fish marine of the Gulf of California. Systematic Zoology, Vol. 9: 1 23-133.
- Walther, M.A. 1986. La Minería en el Distrito Norte. En El Distrito norte de Baja California. [Mining in the northern district. In the northern district of Baja California]. Universidad Autónoma de Baja California, Mexicali. p 134-142.
- Wiggins, I. L. 1980. Flora of Baja California. Stanford University Press. Stanford. pp 1025.

- Williams-Linera, G. G. Haiffter, and E. Ezcurra, 1992. Estado de la Biodiversidad en México. [State of biodiversity in Mexico]. In: La Diversidad Biológica de Iberoamérica. CYTED-D. Instituto de Ecología, A. C. SEDESOL, Mexico.
- Wilson, Ivan F. and Veytia, Mario, 1949. Geology and manganese deposits of the Lucifer district northwest of Santa Rosalía, Baja California, Mexico. United States Geological Survey. Bulletin 960-F, pages 177-233, plates, maps.
- Wilson, I. F., 1955. Geology and Mineral Deposits of the Boleo Copper District Baja California, Mexico. Geological Survey Professional Paper 273. U.S. Government Printing Office, Washington. 134.
- Witters, H., J.H.D. Vangenechten, S. Van Puymbroeck & O.L.J.L. Vanderborgth, 1984. Interference of aluminium and pH on the Na-influx in an aquatic insect *Corixa punctata* (Illig.) Bull. Environ. Contam. Toxicol. 32: 575-579.
- Woloszyn, D. and B. W. Woloszyn, 1982. Los mamíferos de la Sierra de la Laguna, Baja California Sur. [The mammals of Sierra de la Laguna, Baja California Sur]. CONACYT, Mexico, 168.
- Wynne, M. 1986. A checklist of benthic marine algae of the tropical and subtropical Western Atlantic, Canadian Journal of Botanic, 64:2239-2281.
- Yerman, D. & A. Búrquez. Buffelgrass - Sonoran Desert Nightmare. 1994. The Arizona Riparian Council Newsletter 7: 1, 8-10.