

CHAIRMAN'S MESSAGE - 2002

Since its inception in March 1993, the Geological Survey & Mines Bureau (GSMB) has been concentrating mainly on preparation of geological maps, mineral exploration and regulatory functions. In the year under review too, these functions have been carried out with particular emphasis on expediting the areas not mapped in detail and as a result the GSMB was able to publish four 1:100,000 scale maps covering an approximate area of 10,000 sq.km Preliminary work in connection with publishing another four maps covering an area of 11,000 sq.km also commenced during the said period.

In the fields of mineral exploration and mineral surveys, work has been carried out in Uva and Sabaragamuwa provinces and draft reports have been prepared. River sand surveys were conducted along selected stretches of Maha Oya and Kala Oya, and reports were submitted to NW Provincial Council and Mahaweli Authority, respectively. Other mineral surveys undertaken during the year were the Garnet sand survey around Ambalantota, integrated geological investigation of a Vein Quartz deposit at Randeniya, Wellawaya, a Ball Clay investigation around Dediawala, Kalutara and geological investigations of Feldspar deposit at Mailapitiya, Kandy.

In addition to the collection of basic geological and geophysical information as required in the Mines and Minerals Act No. 33 of 1992, the GSMB has taken positive steps in the direction of mineral promotion and development.

The GSMB having ensured that the legal requirements in the Mines and Minerals Act No.33 of 1992 and the related Regulations are clearly understood by the law enforcement authorities, industrialists and the general public, embarked upon a special programme on mineral promotion and mineral development to meet the requirements of the mining community and industrialists who are engaged in mineral based industries at all levels. This included meeting of the information requirements and encouraging them to have direct and continuous relationship with the staff of the Bureau. This has enabled to develop a better rapport between the Bureau and the industry in general. One of the significant achievement of this rapport is the commencement of Wellawaya Vein Quartz exploration work where the GSMB was able to offer the initiative to an International group of industrialists to install a mining and processing plant that would ultimately give employment for about 400 people in one of the under developed areas in the Monaragla District. This will also give indirect employment opportunities for several thousands of people by way of providing supplementary services for the manufacturing plant. In addition to this special project work, the GSMB also undertook several projects which have ultimately earned a net profit of Rs. 1.5 million under difficult economic conditions.

In 2002, the mining division also made remarkable strides by ensuring regular supply of all kinds of mineral requirements for the manufacturing industry as well as the construction industry while giving equal attention to environment factors. As a result, while new areas were allocated for more disciplined mining for minerals and building materials such as sand certain areas particularly in the North Western and Central provinces were brought under restricted mining for sand.

Further, a reorganized Mining Division has enabled the GSMB to earn a better income through Royalties and Licence fees. It should be noted that in 2002, the GSMB streamlined the collection of

Royalties where the arrears exceeded Rs.60 million in export sales. Steps were taken to record, analyze and collect arrears of Royalties due on ongoing activities. This has resulted in Royalties (on exports) on current activities being collected in time without any arrears by end 2002.

With these internal developments and improvements the GSMB was able to operate without any government grants and also to earn a surplus of Rs.5.6 million.

In accordance with government policy and advice of the General Treasury, the Bureau has commenced preparation of plans for restructuring. Restructuring will be on the basis that the Bureau will concentrate on the regulatory functions and activities of National Importance while activities which are of a commercial nature will be entrusted to the subsidiary Company incorporated as the GSMB Technical Services (Pvt) Ltd. With these proposed changes, the GSMB plans to play a more active role in the promotion and development of mineral industry giving equal importance to environment factors while injecting business sense to the members of staff of the GSMB.

R.J. DE SILVA
CHAIRMAN

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ANNUAL REPORT

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01. Geological Survey Division

1.1. Mineral Surveys

1.1.1 Mineral Surveys in Uva and Sabaragamuwa Provinces

These mineral surveys were conducted to locate economic mineral occurrences including building materials in Uva and Sabaragamuwa Provinces. The area is covered by 21 topographical sheets of 1:50,000 scale.

The surveys were conducted in two provinces separately. The field parties engaged in the surveys were as follows.

- Sabaragamuwa Mineral Survey - (i) Mr. C.H.E.R. Siriwardena (Geologist)
Mr. M.K.C. Rupananda (D.E.)
- Uva Mineral Survey - (i) Mr. A.M.M. Rathnayake (Geologist)
Mr. M.D. Pathmasiri (T.O.)
- (ii) Mr. S.T. Kalubandara (Geologist)
Mr. R. Manchanayake (T.O.)

The field work in both provinces was completed. The draft reports and maps were being scrutinized by Dr. W.K.B.N. Prame (Asst. Director).

1.1.2 Geological Investigation of Feldspar Deposit at Mailapitiya, Kandy.

This survey was carried out for Central Provincial Council (CPC). The objectives of the survey were the assessment of quality of feldspar, demarcation of the lateral extents and evaluation of the size of the deposit. The fieldwork was conducted by Mrs. D.P.R. Weerakoon (Geologist) and Mr. M. Siripala (S.T.O.). The final report was submitted to CPC in July.

1.1.3 River Sand Survey along Maha Oya

This survey was conducted for the North Western Provincial Council to identify and assess the sand deposits of Maha Oya. The suitable sites for sand mining were located in order to minimize the damages to the environment and sustainable exploitation of sand from Maha Oya. The field work was carried out by Messrs M. Siripala (Senior Technical Officer) and

K.S.J. Fernando (Senior Technical Officer) under the supervision of Mr. Ekanayake (Mining Engineer).

The report was submitted to NW Provincial Council. The survey has identified a number of sand deposits suitable for mining.

1.1.4 River Sand Survey along the Kala Oya

This survey was identical to Maha Oya sand survey and it was carried out at the request of Mahaweli Authority of Sri Lanka (MASL). The field work was conducted by Messrs K.S.J. Fernando (STO) and M.D. Pathmasiri (TO).

The survey was conducted to identify the sand deposits in Kala Oya. The final report prepared by Mrs. D.P.R. Weerakoon (Geologist) was submitted to MASL in December. The survey revealed that the number of sites suitable for sand mining in Kala Oya is insignificant.

1.1.5 Garnet Sand Survey around Ambalantota

This survey was conducted around Ambalantota and Dikwella coastal belt within the exploration leases owned by Southern Lanka Minerals (Pvt) Ltd. at their request.

The work included the preparation of a survey map, hand augering and collection of samples at different depths and mineralogical analysis of sand samples to identify promising areas for a detailed survey.

The following officers were involved in the investigation.

Geologist in-charge - Mr. K.T.U.S. de Silva

Field Staff - Mr. M. Siripala (STO)

Mr. K.S.J. Fernando (STO)

About 300 samples were analyzed at the laboratories. The final report was prepared by Mr. K.T.U.S. De Silva (Geologist). The Southern Lanka Minerals were informed about the completion of the report.

1.1.6 Vein Quartz Survey at Randeniya, Wellawaya

At the request of “Star Building” Quartz Ltd., GSMB commenced a detailed study of the vein quartz occurrence at Randeniya, Wellawaya in late August. This integrated survey includes, detailed geological mapping, core drilling, chemical analyses of samples and geophysical investigations.

The drilling was conducted by two drilling crews. The drilling of DH# 1, 2, 3, 4 and 5 was completed by Mr. K.S.J. Fernando (STO) and Mr. M.D. Pathmasiri (TO). All drill holes except DH #4 are vertical. A total of about 190 metres were drilled. The drilling operations are continued. The geophysical investigations including resistivity profiling (RP) and vertical electrical sounding (VES) were conducted by Mr. S.N. De Silva (Geophysicist). The geophysical field work was completed. An interim report on geological mapping and geophysical investigations was submitted to SB Quartz Ltd. in December. All field work except drilling was completed.

1.1.7 Ball Clay Investigations around Dediawela, Kalutara

An investigation for ball clay around Dediawela in Kalutara area was conducted at the request of Lanka Tiles Ltd. The main objective of this preliminary survey was the location of ball clay occurrences suitable for detailed studies. Ball clay is a vital constituent of the body mixture of floor tiles.

The field work was carried out by Mr. M. Siripala (STO) and Mr. M.D. Pathmasiri (TO). The samples collected during the survey were analyzed at the Lanka Tiles Laboratory. The report prepared by Mr. K.T.U.S. De Silva (Geologist) was submitted to Lanka Tiles Ltd. in December. The promising areas identified by the survey were recommended for follow up action.

1.2 Geological Mapping

One of the key programmes of the year 2002 was the systematic geological mapping and publication of geological maps. This is an activity continued since 1994 to produce a new series of geological maps of 1:100,000 scale. There are 21 such maps and ten out of 21 was published with the World Bank and AusAID assistance by the end of 2001.

The objective of the exercise is to prepare a set of “state of the art” geological maps (medium scale, 1:100,000) for the prospective users such as Geologists, Engineers, Investors in the Mineral Sector. These geological maps provide information on the lithology and structure of a particular area. They act as the base maps for any detailed geological investigation including mineral surveys, engineering geological studies, water resource investigations and urban and environmental geological studies.

1.2.1 Geological Mapping Continued from 2001

By the end of 2001 the compilation of 1:100,000 scale geological maps of Moneragala - Panama (Sheet #18), Kataragama - Tissamaharama - Yala (Sheet #21), Manipay - Kilinochchi (#1) and Mullian - Mullaittivu (#2) were completed. These four maps cover an area of about 10,000 square kilometers. The final corrections to digital data were done by Dr. J. Parker, the Geological Advisor made available under AusAID Programme. These four maps printed in Australia under ‘AusAID’ assistance were received in October.

1.2.2 Geological Mapping Commenced in 2002

By the year 2002, two thirds of the country has been covered by the new series of maps of 1:100,000 scale. Appropriate action has been taken to complete mapping of the remaining one third which consists of 7 maps of 1:100,000 scale. The project would last about 3 to 4 years. These maps will cover about 20,000 sq.km. in northern and eastern Sri Lanka. Accessibility to most of these areas is limited and therefore we have to rely on 1:63,360 scale geological maps prepared by the Geological Survey Department and information extractable from new remote sensing data.

As the next step, it is expected to prepare three geological maps of 1:100,000 scale covering an approximate area of 11,000 sq.km. in the NE and E Sri Lanka. The work includes literature survey, air photo and satellite image interpretation, limited amount of field work, digitizing of data, preparation of check-plots and printing of maps. The selected sheets are Mankulam-Kokilai (Sheet # 4), Kathiraveli-Kalkudah (Sheet # 9) and Padiyatalawa-Tampaddai (Sheet # 15).

About 50% of cartographic work and the literature survey was completed. The digitizing of base maps of Mankulam, Kalkudah, Alampil, Padaviya and Kokilai (1:50,000) sheets were in progress.

As required air-photos were not available with us, the permission of Surveyor General was sought to study them at the Survey Department.

1.3 Geotechnical Investigations

1.3.1 Sigiriya Rock Rehabilitation Project

Sigiriya restoration project was initiated by the GSMB in 1999 and during last three years the project was continued under three phases. Under Phase I and II, a detailed geological report on the western face of Sigiriya was prepared and a large unstable rock slab on the western face was stabilized. Under Phase III of the project unstable platy rock fragments were scraped out and a “Bo” tree situated on top of the unstable rock slab was removed. This work was carried out at the request of Central Cultural Fund (CCF).

Under the Phase IV of the project another unstable rock slab lying close to the mural cave was removed.

1.3.2 Geological Investigation along the Proposed 132 kv Underground Cable Route

The geological investigations were conducted along the proposed 132 kv underground cable route of “Greater Colombo Grid Substation Project” at the request of Ceylon Electricity Board (CEB). This cable route extends from Pannipitiya to Kolonnawa. The investigations were carried out at 55 locations identified by the CEB. At each of these locations augur holes were put down to a maximum depth of 4 metres. The samples collected at 12 locations were analyzed at the Petrological and Analytical laboratories. Also a few samples were analyzed at the laboratory of the Road Development Authority at Ratmalana. The Officer in-charge of the survey was Mr. C.H.E.R. Siriwardana (Geologist). The field work was conducted by Mr. M.K.C. Rupananda (DE).

The report on this survey was submitted to CEB in December. Its contents were used in the main Tender Document of the project by the CEB.

1.4 Seismological Station

This is a collaborative work between Geological Survey and Mines Bureau and University of California, San Diego (UCSD). The station is now connected to the Global Seismic Network (GSN) maintained by Incorporated Research Institution for Seismology (IRIS) and International Deployment of Accelerometers (IDA).

The station situated at Pallekelle, was functioning satisfactorily. Mr. Phil Porter, an engineer from UCSD attended to technical problems of the station in mid 2002. Our geophysicists attend to other weekly maintenance work. A solar power unit will be installed at the site to provide uninterrupted power supply to the station in January 2003. The station has the capability of recording earth quakes and earth tremors in the region.

1.5 Cartography Section

1.5.1 The corrections to digital cartographic work of geological map sheets # 18, 21, 1 and 2 were done in consultations with Dr. A.J. Parker (Geological Advisor under AusAID programme). Also the plotter prints of these maps were obtained for further scrutiny.

1.5.2 The cartography section digitized and prepared all maps, and geological sections included in the reports of the following surveys.

- i. Mineral surveys in Uva and Sabaragamuwa provinces
- ii. Geological investigation of feldspar deposit at Mailapitiya, Kandy
- iii. River sand survey along Maha Oya
- iv. River sand survey along Kala Oya
- v. Garnet sand survey around Ambalantota
- vi. Ball Clay investigations around Dediawala, Kalutara

1.5.3 The digitizing of base maps of Mankulam, Kalkudah, Alampil, Randeniya and Kokilai (1:50,000) sheets were in progress.

1.6 Library

1.6.1 The Librarian was on study leave to read for a Masters degree at the University of Colombo.

1.6.2 The library continued its-routine work. The issues # 1, 2, 3 & 4 of “Current Awareness Service” were prepared and distributed among concerned parties. The library also, prepared and distributed two issues of Mining & Minerals News (News Flash).

1.7 Analytical Laboratory

1.7.1 Analysis of 297 samples of water, digested rocks, quartz, dolomite, graphite, feldspar, clay, rock phosphates, soil, sand, cement, mica, zircon and body mixtures of tiles and ceramics etc. were carried out by the laboratory on the requests made by various institutions and individuals.

1.7.2 The laboratory also analyzed 38 samples of water, soil, quartz, graphite and feldspar in connection with various investigations carried out by the Bureau.

1.8 Equipment

1.8.1 A new computer, micro pipette, hotplate and some glass ware were provided to the analytical laboratory.

1.8.2 Five more computers were provided for the use of scientific staff and the library.

1.8.3 The petrology laboratory was provided with an air compressor, air gun and a heavy duty vacuum cleaner. Also a Rayner refractometre, and other accessories were ordered.

1.8.4 Also the following drilling accessories were ordered.

- i. Triple tube core barrel and HXM core barrel.
- ii. NX casing shoes
- iii. NXM core barrel heads
- iv. Spare parts for Bean Royal Triplex Pump
- v. NX flush coupled casings
- vi. AW rods

1.9 Staff Training

1.9.1 Mrs. H.P. Jayalath (Chemist) returned to GSMB in January after completing her M.Sc degree in chemistry at the Wollongong University, Wollongong, Australia.

1.9.2 Mr. D.M.K. Dassanayake (Data Base Management Executive) returned to GSMB after completing an M.Sc degree at Wollongong University in Wollongong, NSW, sponsored by AusAID.

1.9.3 Mr. A.S. Jayakody (Geologist) returned to GSMB after completing a Masters degree at James Cook University, Townsville sponsored by AusAID.

1.9.4 Mrs. P.K. Perera (Librarian) was granted leave to follow a Masters degree at the University of Colombo.

1.9.5 Mr. A.G.S.R. Perera (Geophysicist) followed an international training course on “Earthquake Hazards and Hazards Mitigation for Developing Countries” held in Beijing, China from 5th to 21st October.

1.10 Workshop & Seminars

1.10.1 The Scientists of the Bureau attended the workshop on “Sediment Fans of the Indian Ocean and the Implication for Marine Policy in the 21st Century” organized by the “IOMAC”, and held at the BMICH from 18th to 21st January.

1.10.2 The following officers of the Bureau attended the Fourth South Asia Geological Congress (GEOSAS IV) held in New Delhi, India between 11th and 13th November.

- i. Dr. N.P. Wijayananda (Director)
- ii. Mr. C.H.E.R. Siriwardena (Geologist)
- iii. Mr. K.T.U.S. De Silva (Geologist)
- iv. Mr. P.N. Ranasinghe (Geologist)

- v. Mr. A.G.S.R. Perera (Geophysicist)
- vi. Mrs. S. Siriwardana (Chemist)

1.10.3 Mr. S.M.A.T.B. Mudunkotuwa (Deputy Director) and Dr. W.K.B.N. Prame (Asst. Director) attended the meetings on “Future Cooperative Activities in South Asia” and “Asia Seismological Commission” sponsored by United States Geological Survey (USGS) and UNESCO, held in Kathmandu, Nepal between 23rd and 26th November.

1.11 Publications

1.11.1 Maps

The following four geological maps of 1:100,000 scale were published.

- i. Monaragala - Panama (Sheet # 18)
- ii. Kataragama - Tissamaharama - Yala (Sheet # 21)
- iii. Manipay - Kilinochchi (Sheet # 1)
- iv. Mulliyian - Mullaittivu (Sheet # 2)

1.11.2 Abstracts

The following scientific papers were presented at the Fourth South Asia Geological Congress (GEOSAS IV) held in New Delhi, India between 11th and 13th November.

1. Integrated geological, geophysical and drilling survey of Vanathavillu limestone Prospect, Northwestern, Sri Lanka.

C.H.E.R. Siriwardana, A.G.S.R. Perera and Y.P.S.Siriwardana

2. An application of statistical analysis of borehole and chemical data for subsurface modelling

Y.P.S. Siriwardana, P.N. Ranasinghe & C.H.E.R. Siriwardana

3. Application of Image processing techniques for mapping of coastal habitats along the southern coastal belt of Sri Lanka.

K.T.U.S. de Silva, M.M.J.P. Ajith Prema

4. Geophysical exploration of limestone using vertical electrical sounding technique. A case study from the northwestern coastal belt of Sri Lanka.

A.G.S.R. Perera and S.M.A.T.B. Mudunkotuwa

5. Importance of grain size factors in distribution of trace elements in stream sediments of tropical high grade terrains: A case study from Sri Lanka.

P.N. Ranasinghe, M.S. Rupasinghe and C.B. Dissanayake

1.11.3 Sri Lanka Minerals Year Book 2002

The GSMB prepared and published the “Sri Lanka Minerals Year Book 2002”. This publication contains statistical information on production, export and import of minerals and also production and sales of mineral based industries. This is the fourth successive year of the publication.

1.11.4 Geotourist Map

The term “Geotourism” is defined as the provision of interpretative and service facilities to promote the value and social benefit of geological and geomorphological sites and their materials and to ensure their conservation for the use of students, tourists and other casual recreationalists.

The GSMB has decided to prepare the “Geotourist” map to promote this concept in Sri Lanka. The map is intended for both the foreign and local tourists. Also, it would be immensely beneficial for young school children. The map and the brochure were completed and the plotter prints of the map were obtained.

The map and the brochure (201 sites) were forwarded to the Ceylon Tourist Board for their consideration and comments also with a view to protecting the sites under the Tourist Board Act.

The printing of the map and brochure was awarded to a professional printer and arrangements were made to print 1000 copies.

1.12 Other Activities

- 1.12.1*** Mr. K.T.U.S. de Silva (Geologist) carried out image processing (image fusion) of Landsat TM7 satellite data in order to find out its suitability for mapping of coastal habitats (e.g. coral, mangroves etc.)
- 1.12.2*** Mr. K.T.U.S. de Silva (Geologist) attended the first meeting of the “Global Coral Reef Monitoring Network” held at the Transasia Hotel, Colombo on 24th April.
- 1.12.3*** Mr. S.T. Kalubandara (Geologist) assisted, a two member team from Iluka Resources of Australia in their inspection of mineral sand occurrences in the eastern coastal belt of Sri Lanka in September.
- 1.12.4*** Mr. C.H.E.R. Siriwardana (Geologist) submitted a report to Coastal Resources Management Project at their request on the stability of a laterite cliff located at Beruwala in October.
- 1.12.5*** Messrs S.N. de Silva and A.G.S.R. Perera (Geophysicists) attended to routine maintenance work of GSN Station, Pallekele.
- 1.12.6*** Messrs A.G.S.R. Perera and S.N. De Silva (Geophysicists) conducted soil resistivity measurements at the Thulhiriya CEB grid sub station on 24th July at the request of CEGETEL Ltd. The report on the survey was submitted to them subsequently.

02. Mines Division

2.1 Mineral Titles Registry

2.1.1 A detailed breakdown of the applications received under different categories, licences issued and the revenue collected by way of licence fees, royalties and inspection charges during the year is in Annex 1.

2.1.2 During the year the Registry received a total of 3121 new applications in the mining licence category having the following breakdown.

Metal quarrying	2045	Feldspar	03
Dolomite	23	Ball clay	02
Quartz	10	Clay & sand	09
Quartz & feldspar	05	Clay	07
Mica	17	Quartz & dolomite	01
Calcite	06	Calcite quartz & feldspar	01
River sand mining	709	Kaolin	01
Sea shells	17	Off shore sand	02
Silica sand	04	Granite	01
Calcite & dolomite	03		

In addition to the above Registry received a total of 935 applications for renewal of mining licences.

2.1.3 The total number of licences issued by the Registry have the following breakdown;

Artisanal Mining Licences	Category A	306
Artisanal Mining Licences	Category B	983
Artisanal Mining Licences (renewals)	Category A	299
Artisanal Mining Licences (renewals)	Category B	479
Industrial Mining Licences	Category A	35
Industrial Mining Licences	Category B	73
Industrial Mining Licences	Category C	724
Industrial Mining Licences (renewals)	Category A	14
Industrial Mining Licences (renewals)	Category B	32

Industrial Mining Licences (renewals)	Category C	111
Trading Licences	Category A	04
Trading Licences	Category B	01
Trading Licences	Category C	05

2.2 ANNEX - 01

Mineral Titles Registry - Year 2002

Category	No. of App.	Fees Receives (Rs.)	Licence Issued	App. Rejected	Amount Credited to Income (Rs.)	Rejection (Rs.)	Total Income
AML							
Category A	441	882 000.00	306	18	612 000.00	1800.00	613 800.00
Category B	1761	880 500.00	983	05	491 500.00	125.00	491 625.00
AML (Renew.)							
Category A	302	604 000.00	299		598 000.00		598 000.00
Category B	460	230 000.00	479		239 500.00		239 500.00
IML							
Category A	17	170 000.00	35		350 000.00		350 000.00
Category B	71	355 000.00	73		365 000.00		365 000.00
Category C	831	2 077 500.00	724		1 810 000.00		1 810 000.00
IML (Renew.)							
Category A	12	3 110 000.00	14		3 130 000.00		3 130 000.00
Category B	29	135 000.00	32		150 000.00		150 000.00
Category C	121	302 500.00	111		277 500.00		277 500.00
RML							
	08	24 000.00	03		9 000.00		9 000.00
EL							
	12	226 000.00	03		63 000.00		63 000.00
EL (Renew.)							
	08	1 380 000.00	05		666 000.00		666 000.00
TDL							
Category A	03	22 500.00	04		30 000.00		30 000.00
Category B	06	30 000.00	01		5 000.00		5 000.00
Category C	06	6 000.00	05		5 000.00		5 000.00
TDL (Renew.)							
Category A	01	7 500.00	-		-		-
Category B	07	35 000.00	10		50 000.00		50 000.00
Category C	02	2 000.00	01		1 000.00		1000.00
TPL							
	10382	519 100.00	10 387		519 350.00		519 350.00

Inspection Fees	-	2 488 650.00	-		2 488 650.00		2 488 650.00
Royalty	-	38 286 297.33	-		38 286 297.33		38 286 297.33
Test blast	12	74 000.00	12		74 000.00		74 000.00
TOTAL	14 492	51 847 547.33	13487	23	50 220 797.33	1925.00	50 222 722.33

2.3 Annex - 02

Comparison of Activities of the Mineral Title Registry for periods January 2001 - December 2001 & January 2002 - December 2002

CATEGORY	NO OF APPLICANTS		NO OF LICENCES ISSUED		INCOME (RUPEES)	
	2001	2002	2001	2002	2001	2002
Artisanal Mining Licence	3110	2964	2399	2067	2 253 000.00	1 941 000.00
Industrial Mining Licence	1153	1081	1041	989	11 845 000.00	6 082 500.00
Reserved Mineral Licence	05	08	04	03	12,000.00	9 000.00
Exploration Licence	24	20	20	08	1 118 000.00	729 000.00
Trading Licence	21	25	23	21	106 500.00	91 000.00
Transport Licence	8946	10382	8884	10387	444 200.00	519 350.00
Inspection Fees	-	-	-	-	2 537 675.00	2 488 650.00
Royalties (Calculated)	-	-	-	-	28 752 009.65	38 286 297.33
Total	13259	14480	12371	13475	47 068 384 65	50 146 797.33

AML - Artisanal Mining Licence

IML - Industrial Mining Licence

RML - Reserved Mineral Licence

EL - Exploration Licence

TDL - Trading Licence

TPL - Transport Licence

3. FINANCE AND ACCOUNTS

3.1 Income & Expenditure

Since its inception in March 1993 the Geological Survey & Mines Bureau (GSMB) has been receiving Treasury Grants for its recurrent and capital expenditure. In January 2002, the Treasury informed the GSMB that no further Treasury Grants will be allocated and that it should utilize funds received from licence fees and royalties to meet its recurrent and capital expenditure.

The money received since its inception from royalties and licence fees were kept to finance a building for the head office. As at end 2002, the GSMB has accumulated Rs.242 million for this purpose.

In 2002, the GSMB earned a total income of Rs.38.5 million as against an expenditure of Rs.56.3 million leaving a deficit of Rs.17.8 million. But in 2002, in addition to the income of Rs.38.5 million, the GSMB received Rs.16 million in royalties pertaining to previous years and Rs.23.4 million as interest on royalties and licence fees accumulated over the years. Fresh action taken to streamline collection of royalties and proper accounting of them will show that the GSMB could operate from the income from licence fees and royalties without depending on any Treasury Grants. This situation will further improve if the GSMB can have its own building to house its head office, as the GSMB now spends 20% of its total expenditure on rent per annum.

3.2 Project Income

In addition to the functions as described in the Mines and Minerals Act No.33 of 1992, the GSMB also undertakes project work related to geotechnical, engineering geology and mining etc. In 2002, the GSMB earned a profit of Rs.1.5 million from projects after making provision for all expenditure.

3.3 Staff

At present the GSMB has 110 permanent employees and 10 casual employees working in the head office and the two regional offices in Kandy and Matara. In 2002, the GSMB spent around 31% (Rs.17.5 million) of its total expenditure (Rs.56.3 million) on staff salaries, EPF and ETF etc.

3.4 Income & Expenditure Statement for the Year ended 31/12/2002

<u>Year 2001</u>		<u>Income</u>	<u>Year 2002</u>	
Rs.000	Rs.000		Rs.000	Rs.000
675		Treasury Grants	-	
16 458		Royalty	22 712	
15 430		Licence Fees	5 356	
5 413		Project Income	5 293	
2 518		Inspection Charges	2 692	
202		Laboratory Income	340	
814		Other Income	2 159	
36 453		Bank Interest	23 397	
-----			-----	
77 963		Total Income	61 949	
		<u>Less : Expenditure</u>		
4 788		Geological	4 381	
1 328		Mapping	940	
2 545		Projects	3 843	
1 997		Regional Offices	1 944	
3 292		Mining	3 347	
42 243	56 193	Administration	41 842	56 297
-----	-----		-----	-----
	21 770			5 652
	=====			=====

3.5 Balance Sheet
As at 31/12/2002

<u>2001</u>	<u>Assets</u>	<u>2002</u>	<u>Rs.000</u>
Rs.000		Rs.000	Rs.000
24 419	Fixed Assets		24 527
275 132	Investments		322 835
31 637	Current Assets	30 027	
(22 435)	Less: Current Liabilities	(47 487)	(17 460)
-----		-----	-----
308 753	Total Assets		329 902
=====			=====
	<u>Funded By</u>		
32 251	Consolidated Fund		32 252
69 015	Capital Fund		70 900
185 717	Revenue Reserve		221 098
21 770	Income over Expenditure		5 652
-----			-----
308 753	Total		329 902
=====			=====

04. Restructuring

In accordance with government policy and the advice of the General Treasury (as per the National Budget Circular No. 104), the Bureau has already commenced preparing a plan for restructuring. Restructuring will be on the basis that the Bureau will concentrate on the regulatory functions, while functions which are of a commercial nature will be entrusted to the subsidiary company incorporated as the GSMB Technical Services (Pvt) Ltd. This subsidiary Company was established in 2001 with 60% of the share capital held by the Bureau and 20% each by the Gems and Jewellery Authority and Lanka Phosphate Ltd.

Restructuring the GSMB will give an opportunity for the scientific staff of the Bureau to operate with less procedural restrictions and adequate liberty to earn more than what they do at present. In other words, GSMB will outsource its field work and projects to the Company. In this way, we shall give an opportunity to the University and the Graduate Community recruited by the Company on project basis work, to work with the more experienced GSMB staff.

The GSMB will earn its revenue from royalties and license fees and by hiring its assets to the Company while substantially reducing its overheads. The Company will compete for business/projects using the staff and equipment readily available with the GSMB. The Company will make profits and work efficiently to support the regulatory work of the GSMB. The whole process will facilitate decision making. Restructuring will be designed to benefit the people requiring licences, answer public complaints without delay and assist expeditiously industrialists requiring GSMB services to identify mineral deposits and perform exploratory work for them.

It is hoped that the proposed restructuring will eliminate the currently prevalent “Departmental Culture” and introduce a private sector attitude to work.

05. Legal Division

As in the previous years, the Legal Division has been instrumental in filing cases against illegal mining activities. In 2002, 05 cases were filed against unauthorized mining activities. Altogether, 14 cases are pending in courts viz. Labour Tribunal and Human Rights Commission cases, matters before the Ombudsman in Petitions filed by parties alleging environmentally hazardous mining operations.

During the past few years, the Legal Division has concentrated on proposing amendments to the Act and Regulations in order to facilitate investment promotion while paying due attention to protecting the environment.

The Legal Division has also pursued the collections of dues from past employees who have defaulted in loans and bonds they had entered into. As a result the Bureau was able to collect Rs. 56,000/= from the officers who have not settled their loans.

In addition to its normal functions, the Legal Division has been given the task of collecting royalty arrears from 1994. Already 27 letters of demand have been sent to defaulters. 13 companies have responded favourably and agreed to settle once the correct balances are agreed upon.

10 April 2003

PI/E/GSMB/FA/2002/1

The Chairman

Geological Survey and Mines Bureau

REPORT OF THE AUDITOR GENERAL ON THE ACCOUNTS OF THE GEOLOGICAL SURVEY AND MINES BUREAU FOR THE YEAR ENDED 31 DECEMBER 2002 IN TERMS OF SECTION 14(2)(C) OF THE FINANCE ACT, NO. 38 OF 1971.

The audit of accounts of the Geological Survey and Mines Bureau for the year ended 31 December 2002 was carried out under my direction in pursuance of provisions in Article 154(1) of the Constitution of the Democratic Socialist Republic of Sri Lanka read in conjunction with Section 18(3) of the Mines and Mineral Act No. 33 of 1992 and Section 13(1) of the Finance Act. No.38 of 1971. My observations which I consider should be published with the annual report of the Bureau in terms of Section 14(2)(c) of the Finance Act appear in this report. The detailed report in terms of Section 13 (7) (a) of the Finance Act will be furnished to the Chairman of the Bureau in due course.

1:2 Scope of Audit

Audit opinion, comments and findings in this report are based on a review of the financial statements presented to audit and substantive tests of samples of transactions. The scope and the extent of such review and tests were such as to enable as wide an audit coverage as possible within the limitations of staff, other resources and time available to me. The audit was carried out in accordance with Sri Lanka Auditing Standards, methods and practices to obtain reasonable assurance as to whether the financial statements are free of material misstatements. The audit included examination of evidence supporting the amounts and disclosures in financial statements and assessment of accounting principles and significant estimates and judgements made in the preparation of financial statements evaluation of their overall presentation and determining whether accounting policies adopted were appropriate, consistently applied and adequately disclosed. Sub-sections (3) and (4) of Section 13 to the Finance Act No. 38 of 1971 give discretionary powers to the Auditor General to determine the scope and extent of the Audit.

2. Accounts

2:1 Audit Opinion

Except for the effects of the adjustments arising from the matters referred to in paragraph 2:3 of this report, I am of opinion that the financial statements have been satisfactorily prepared to present fairly in all material respects, the financial position of the Bureau as at 31 December 2002 and the results of its operations for the year then ended in accordance with the Sri Lanka Accounting Standards.

2:2 Financial Results

According to the accounts presented, the working of the Bureau for the year ended 31 December 2002 had resulted in a surplus of Rs. 5,652,074 as compared with the corresponding surplus for the preceding year amounting to Rs. 21,769,649 after taking into account the Government Grant of Rs. 675,000 received for the recurrent expenditure of that year. A Government Grant had not been received for the year under review.

2:3 Comments on Accounts

2:3:1 Accounting Deficiencies

The following accounting deficiencies were observed in audit.

- (a) The land at Yakkala which was under the charge of the Bureau had not been vested in the Bureau even during the year under review. The expenditure of Rs. 452,133 incurred in erecting a fence around that land had been treated as depreciation and written off completely.
- (b) The sum of Rs. 1,215,078 shown in the accounts of the Bureau as an over payment of Goods and Services Tax to the Department of Inland Revenue had not been recovered even during the year under review.
- (c) A proper procedure had not been adopted by the Bureau for the selection of officers for foreign tours. Separate files had not been maintained in respect of officers who had participated in foreign travel to facilitate an audit of the expenditure incurred on such foreign travel. A sum of Rs. 452,000 had been shown in the accounts as debtors due to the failure account for the expenditure on foreign travel within the specified time frame after the completion of foreign travel.

2:3:2 Exceptional Items

The Bureau had spent a sum of Rs. 25,726 on three cellular phones during the year under review. This amount included the bill for Rs, 10,900 in respect of the cellular phone purchased in March 2002.

2:3:3 Lack of Documentary Evidence for Audit

Fixed Assets valued at Rs. 24,527,047, stocks valued at Rs. 1,920,993 deposits for buildings amounting to Rs. 1,682,333, debtors balance amounting to rs. 5,926,772 and building rentals amounting to Rs. 11,136,000 in respect of the year under review could not be satisfactorily vouched or accepted in audit due to the non-availability of verification reports, goods verification reports, confirmations, and rental agreements respectively.

2:3:4 Non-compliance with Laws, Rules, Regulations and Management Decisions

- (a) Provisions in Sections (11)b, 13(5)(c), 13(6) and 13(8) of the Finance Act, Financial Regulations 109 and Section 4 of Chapter xiv of the Establishment Code had not been complied with.
- (b) Action had not been taken in terms of provisions in Public Administration Circular No. 2/99 of 26 February 1999.
- (c) The requirements of Sri Lanka Accounting Standard 09 had not been complied with.

3. Financial and Operating Review

3:1 Financial Results

The deficit of Rs. 17,744,803 that had resulted form the operations of the Bureau had been converted to a surplus of Rs. 5,652,074 after taking into account the interest income of Rs. 23,396,877 earned on the cash invested. This surplus also included a sum of Rs. 1,218,479 being the proceeds of the sale of fixed assets.

3:2 Transactions not Supported by Authority

An individual over 60 years of age had been employed as an Additional Director without obtaining the requisite approval of the cabinet, the General Treasury or the line Ministry. That Officer had been paid Rs. 237,703 as salaries and allowances during the year under review.

3:3 Performance

- (a) Statistics relating to the various Divisions of the Bureau during the year under review and the preceding year are given below.

	<u>Year 2002</u>	<u>Year 2001</u>
Geological Division		
Minerals Surveys	3	2

Geological Mapping	4	2
Drilling Investigations (Metres)	190	-
Training Programmes and Workshops	1	11

Mining Division

Issue of Licenses	13,487	12,383
Royalty for Minerals	Rs. 22,712,554	Rs. 16,457,785
Inspection of Mineral Deposits	1,734	2,478

The following observations are made.

- (i) An improvement in the Minerals surveys, Geological mapping, drilling investigations, issue of licenses and the receipt of royalty on minerals had been shown during the year under review. However, action had not been taken for the recovery of Rs. 44,661,073 as royalty income on the export of minerals.
 - (ii) A decrease in the training programmes and workshops and the inspection of mineral deposits had been observed in respect of the year under review.
- (b) The total number of applications for licenses received and the number of licenses issued during the year under review as compared with the preceding year had been as follows.

	<u>Year 2002</u>	<u>Year 2001</u>	<u>Percentage</u> <u>Increase</u>
Number of Applications received	14,492	13,271	9.2
Number of Licences issued	13,407	12,383	8.2

Thus, an increase in the number of applications received and the number of licenses issued during the year under review had been indicated.

3:4 Uneconomic Transactions

The following observations are made.

- (a) The following deficiencies were observed in connection with the expenditure of Rs. 2,174,539 incurred during the year under review on the purchase of motor spare parts and repairs to motor vehicles.
 - (i) Calling for quotations for the purchase of motor spare parts had not been carried out in accordance with the tender procedure. Particulars of documentary evidence on calling for quotations have not been made available for audit.

- (ii) One officer of the Bureau had been responsible for taking decisions on repairs, calling for quotations, purchasing, recommendation of repairs carried out and the recommendation of payments.
 - (iii) Certificates in support of the fixing of spare parts and that repairs had been carried out properly had not been made available to audit.
 - (iv) There was no evidence that the spare parts removed from motor vehicles had been returned to the Bureau. A register had not been maintained for this purpose.
- (b) At an inspection of five motor vehicles with a written down value of Rs. 833,625 scheduled for sale by auction on 14 March 2002, carried out with the assistance of a Technical Officer revealed that parts and mechanical components of those vehicles had been removed. Although the vehicles had been sold for Rs. 1,243,479, it was observed in audit that a more favourable price could be obtained if the removed parts had been in place.
 - (c) A Register of Overseas Telephone Calls had not been maintained in respect of overseas telephone call charges amounting to Rs. 53,171 paid during the year under review. In the circumstances, it was not possible to be satisfied in audit in regard to the relevance of such calls to the Bureau and the economy thereof.
 - (d) A test check of 14 motor vehicles revealed that motor vehicles had been driven for Rs. 5,399 kilometers on 108 unauthorised journeys. Had the motor vehicles been used economically, the Bureau could have saved the expenditure of Rs. 421,398 incurred during the year under review on hired motor vehicles.

3:5 Liquidity

The net current assets had been less than the current liabilities by Rs. 17,459,633 thus indicating that it had encountered liquidity problems in connections with its operations.

3:6 Budgetary Control

Significant variances were observed between the budget and the actuals, thus indicating that the budget had not been made use of as an effective instruments of management control.

4. Systems and Controls

Special attention is needed in respect of the following areas of control.

- (a) Motor Vehicles Utilisation
- (b) Royalty Income Collection
- (c) Foreign Travel
- (d) Travelling Expenses

(S.C. MAYADUNNE)

AUDITOR GENERAL

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REPORT OF THE AUDITOR GENERAL ON THE ACCOUNTS OF THE GSMB FOR THE YEAR ENDED 31ST DECEMBER 2002 IN TERMS OF SECTION 14(2) (C) OF THE FINANCE ACT NO. 38 OF 1971

CHAIRMAN'S COMMENTS

2.2 Financial Results

The comparison of surpluses in 2001 & 2002 shows that there was a drop of Rs.16.1 million in 2002. The main reasons for this drop are:

- i. Reduction of the income from interest due to drop in the rate of interest from an average of 12% to 7% in 2002.
- ii. There was an unusually high income from licence fees in 2001 from the off shore sand mining licences issued to Road Development Authority and South Asia Gateway Terminal.

2.3 Comments on Accounts

2.3.1 Accounting Deficiencies

(a) Land at Yakkala

Although action had been initiated to get this land at Werallawatte (Yakkala) vested in the GSMB, this matter was not pursued in the latter part of 2002 as the GSMB was looking for alternate sites.

At present the District Secretariat of Gampaha is working with the Provincial Land Ministry on the vesting of this land to the GSMB. In any case, a decision whether to keep this land with GSMB or to handover it to the Divisional Secretariat would be made at the end of 2003.

(b) Payment of Goods and Services Tax

Action has already been taken in accordance with the established procedures to reclaim this excess of payment from the Inland Revenue.

This situation has arisen because the GSMB had to pay a very large amount as GST, which could not be set off against the GST payable to the Inland Revenue in the same quarter.

Further, I also would like to inform that the GSMB was liable to pay all local taxes on the importation of equipment for the Seismological Station located at Pallekele in Kandy.

(c) Foreign Visits by GSMB Staff

Since a formal procedure for selection of officers for foreign travel was not operational separate files had not been maintained in respect of officers who had traveled abroad in the past. Action has been taken to maintain proper records on all foreign visits from 2003.

Settlement of Advances Obtained on Foreign Travel

This amount of Rs.452,000/=, shown as debtors as at 31/12/2002 was to be reimbursed by the South Asian Geological Congress (GEOSAS). This was settled in January 2003.

2.3.2 Mobile Phones

At present there are two mobile phones used by this Bureau. One is being used by the Chairman where approval has already been obtained from the Ministry of Environment & Natural Resources. The other one is being used by the Director of the Bureau for which, approval is pending.

2.3.3 Lack of Documentary Evidence for Audit

Stocks, Debtors & Other Assets

The verification reports had been handed over to the officers of the Auditor General subsequently. The delay was due to the advancement of the date of finalization of year end accounts from 30th of April to 28th February. As a result the accounts staff had to give priority to preparation of accounts and stocks & assets verifications had to be delayed.

Although the GSMB has sent letters to the debtors calling for confirmations, only a few had responded.

2.3.4 Non Compliance with Rules, Regulations and Management Decisions

(a) Finance Act 11 (b)

Finance Act 11 (b) refer to investment of money of a public corporation. The GSMB has invested the money collected from royalties and licence fees in the short term deposit accounts with the Peoples Bank and Bank of Ceylon. Although several letters have been sent to the then Ministry of Industries and Ministry of Ethnic Affairs & National Integration to obtain the covering approval no response had been received.

Finance Act 13 (5) (c)

According to the Finance Act 13 (5) (c) the Auditor General has the right to summon any person for examination and for the production of any document. The importance of the Finance Act 13 (5) (c) has already been explained to the officers of the GSMB.

Finance Act 13 (6)

This section refers to the time frame within which the accounts of a public corporation is to be produced. The Bureau has complied with the requirements of this section.

Finance Act 13 (8)

This act refers to the fact that the Governing Body of a Public Corporation should consider the comments given in the Section 13 (7) of the Auditor General's Report and steps that such body intend to take with regard to the matters pointed out in that report, within three months. However as the GSMB had not received a Section 13 (7) report for year ending 31st December 2002, this situation does not arise.

Establishment Code - Section 4 of the Chapter XIV

This section refers to the payment of combined allowances.

The GSMB pays subsistence on the basis as given in the establishment code. In addition it also pays an allowance of Rs.350/= per night for 1-3 persons and Rs.700/= for 3-5 persons mainly for staff who carry out inspections. For this additional payment the GSMB has obtained the approval of the then Ministry of Industries.

(b) Public Administration Circular No.2/99 of 26th February 1999

This Circular refers to the purchase of mobile telephones.

The GSMB has already taken steps to obtain covering approval for the purchase of mobile telephones.

(c) Sri Lanka Accounting Standard 9 (SLAS 9)

This refers to the production of Cash Flow Statements with the year end accounts to the Auditor General.

From 2003 onwards Cash Flow Statements would be submitted with the year end accounts to the Auditor General.

3.2 Transactions not supported by authority

Upon a Board Paper prepared by the Director, the then Board of Management of the GSMB had appointed the Additional Director Mr. N.S. Ranasinghe to the same post after the Cabinet decided to retire him with effect from 17/03/2001. At a subsequent Board Meeting the Treasury Representative had disagreed with the decision. There appears to be no Ministry approval either for this appointment.

3.3 Performanceck

a (i) Arrears of Royalties Rs.44.6 million

The arrears of Royalty amounting to Rs.44.6 million has been built up from 1994 to 2002.

In the latter part of 2002 this situation was discovered by the Internal Auditors on an initiative taken by the present Chairman. However the Internal Auditors have worked out that the total outstanding is Rs.60,197,638.09. Internal Audit Reports pertaining to arrears of royalty collections have already been submitted to the Auditor General.

While steps have been taken to streamline the collection of arrears of royalties, action has also been taken to collect royalties on new businesses with effect from 2003 without any delay. The GSMB has already collected Rs. 5.8 million from the arrears of Rs.60.2 million.

3.4 Uneconomic Transactions

(i) Purchase of Motor Spares and Repairs

For the purchase of spares quotations had been received on the request made over the telephone, from at least four suppliers and purchases had been made from the supplier who have quoted the lowest price. These quotations had been received by the Transport Officer through the Administrative Officer and the final approval has been given by the General Manager.

(ii) Purchase/decisions on repairs calling quotations, recommendations for the repairs, all been done by one officer

The requirements of repairs to the Bureau's vehicles are originated from the Drivers who inform the necessity of repairs in writing. The decisions on the repairs to be undertaken is being done by the General Manager on the advice of the Transport Officer. Transport Officer, then inspect the vehicle and decide on the spares to be purchased. As explained in the (i) above the Transport Officer call quotations and spares had been purchased with the approval of the General Manager.

Payments to the garages for the repair work had been paid to the garages only after an inspection to that effect by the Transport Officer. As explained above the repairs had been done with the knowledge of at least two officers of the GSMB. They are the Transport Officer and the General Manager.

(iii)&(iv) These sections refer to the necessity of issue of a certificate to certify the repairs on motor vehicles

Although a separate certificate to this effect has not been issued, the Transport officer had certified that relevant spares had been fixed and repairs had been done.

Further, the old spares had been returned to the stores and records are maintained to that effect. In future a proper certificate would be raised and regular update of the used spares register would be done.

(b) Removal of Spares before the Auction

The vehicles that were disposed of were more than 10 years old and uneconomical to use as they were regularly under repairs. As a result there were instances where some sort of cannibalization had taken place. In any case these vehicles had been sold above the market prices prescribed by the Automobile Association.

(c) Register for Overseas Telephone Calls

Almost all these overseas telephone calls had been obtained by the Director and the Additional Director. A proper register is being maintained since 05th April 2002.

(d) Running of 5399 km. without proper approval

This situation has arisen because the officers have not properly certified their journeys when they leave the vehicle at the end of the journey. The Bureau has already taken action to overcome this discrepancy.

4. Systems and Controls

- (a) Motor Vehicles Utilization
- (b) Royalty Income Collection
- (c) Foreign Travel
- (d) Travelling Expenses

Action has already been taken to pay special attention and to exercise a better control on the above matters.

CHAIRMAN

GEOLOGICAL SURVEY & MINES BUREAU