

**DENR Administrative Order
No. 97-10
April 7, 1997**

**SUBJECT : Standard Costs and Fees for
Various Services of the Mines and
Geosciences Bureau**

Pursuant to Executive Order No. 192 and Memorandum Circular No. 121 of the Office of the President, the following fees and charges for services rendered by the Mines and Geosciences Bureau are hereby revised and/or updated:

**FEES/CHARGES
(In Pesos, unless otherwise indicated)**

1.0 MINING RIGHTS

1.1	Exploration Permit		
1.1.1	Application for Exploration Permit		
1.1.1.1	Filing Fee, per application	100.00	
	P.D. 1856	10.00	
1.1.1.2	Processing Fee, per application	5,000.00	
	P.D. 1856	10.00	
1.1.2	Clearance Fee (MGB), per application	5,000.00	
1.1.3	Issuance of Exploration Permit		
1.1.3.1	Registration Fee, per permit	100.00	
	P.D. 1856	10.00	
1.1.3.2	Occupation Fee, per hectare or fraction thereof per year		
	- For areas within mineral reservations	100.00	
	- For Non-Mineral Reservation Areas	10.00	
1.2	Mineral Agreements		
1.2.1	Application for Mineral Agreements		
1.2.1.1	Filing Fee, per application	500.00	
	P.D. 1856	10.00	
1.2.1.2	Processing Fee, per application	5,000.00	

	P.D. 1856	10.00
1.2.2	Clearance Fee (MGB), per application	5,000.00
1.2.3	Processing & Issuance of Special Mines Permit/Temporary Exploration Permit	
1.2.3.1	Processing Fee, per application	100.00
	P.D. 1858	10.00
1.2.4	Registration and Issuance of Mineral Agreements	
1.2.4.1	Registration Fee, per agreement	100.00
	P.D. 1856	10.00
1.2.4.2	Occupation Fee, per hectare or fraction thereof per year	
	- For areas within Mineral Reservation	100.00
	- For Non-Mineral Reservation areas	50.00
1.2.5	Conversion Fee (From MPSA to FTAA) per hectare or fraction thereof	5.00
1.2.6	Transfer/Assignment Fee per hectare or fraction thereof	5.00
1.3	Financial or Technical Assistance Agreements (FTAA)	
1.3.1	Application for FTAA	
1.3.1.1	Filing Fee, per application	100.00
	P.D. 1856	10.00
1.3.1.2	Procession Fees, per application or Phil. Peso equivalent	\$500.00
	P.D.1856	10.00
1.3.2	Clearance Fee (MGB), per application	5,000.00
1.3.3	Processing and Issuance of Temporary Exploration Permit	
1.3.3.1	Processing Fee, per application	100.00
	P.D.1856	10.00
1.3.4	Registration and Issuance of FTAA	
1.3.4.1	Registration Fee, per agreement	100.00
	P.D.1856	10.00
1.3.4.2	Occupation Fee, per hectare or	

	fraction thereof per year	
	- For areas within Mineral Reservation	100.00
	- For Non-Mineral Reservation areas	50.00
1.3.5	Conversion Fee (From FTAA to MPSA), per hectare or fraction thereof	5.00
1.3.6	Transfer/Assignment Fee, per hectare or fraction thereof	5.00
1.4	Quarry Resources, Sand and Gravel Permit/License under MGB Jurisdiction	
1.4.1	Filing Fee, per application	100.00
	P.D. 1856	10.00
1.4.2	Processing Fee, per application	500.00
	P.D. 1856	10.00
1.4.3	Occupation Fee, per hectare or fraction thereof per year	50.00
1.4.4	Registration, per permit	1,000.00
	P.D. 1856	10.00
1.5	Mineral Processing Permit	
1.5.1	Filing Fee, per application	100.00
	P.D. 1856	10.00
1.5.2	Processing Fee, per application	500.00
	P.D. 1856	10.00
1.5.3	Registration, per permit	1,000.00
	P.D. 1856	10.00
1.6	Accreditation of Traders, Dealers and Retailers in the Trading of Minerals/Mineral Products/By-Products	
1.6.1	Filing Fee, per application	100.00
	P.D.1856	10.00
1.6.2	Processing Fee, per application	500.00
	P.D. 1856	10.00
1.6.3	Registration, per permit	1,000.00
	P.D.1856	10.00

1.7	Registration of Mining Documents	
1.7.1	Per Power of Attorney	100.00
1.7.2	Transfer or Other Assignments	150.00
1.7.3	All Other Instruments Affecting Mining Rights	150.00
1.7.4	P.D. 1856	10.00
1.7.5	Letter Request for Certification	50.00
1.7.6	Docketing Charges	
1.7.6.1	For filing a protest, adverse claim or any other opposition including P.D. 1856	210.00
1.7.6.2	For filing of counter-adverse claims, counter-protests or counter-opposition including P.D. 1856	210.00
1.7.6.3	Appeal fee including PD 1856	210.00

**2.0 PROCESSING OF APPLICATION FOR SURVEY ORDER,
VERIFICATION OF SURVEY RETURNS AND FIELD
VERIFICATION/INVESTIGATION OF MINING/CONTRACT AREA
AND OTHER MINERAL LANDS**

2.1	Application for Survey Order	
2.1.1	Processing Fee or 81 hectares plus P20.00 for the succeeding blocks or a fraction thereof P.D 1856	50.00/block 10.00
2.1.2	Projection Fee for the first 100 hectares, plus P20.00 for the succeeding 100 hectares or a fraction thereof	100.00
2.1.3	Filing Fee, P.D. 1856	100.00 10.00
2.1.4	Surety Bond /ha. but not less than P500.00	10.00
2.2	Verification of Survey Returns	
2.2.1	P250.00 per application, plus P5.00 per prescribed set of original and duplicate computation sheets of not more than 15 stations per sheet.	

2.2.2 For resubmitted (correction) and/or additional survey returns with fieldnotes and/or computation, P5.00 per new set of original and duplicate prescribed computation sheets of not more than 15 stations per sheet; Provided, that the minimum charges shall be P300.00 for the first resubmittal, plus P350.00 for every subsequent resubmittal.

2.3 Survey Fees For Mineral Land Survey

2.3.1 For MPSA and other mining applications covering more than 20 hectares. Perimeter Boundary Survey of P25,000.00/line kilometer (km.), provided that the minimum charge shall be P50,000.00 for a contract area of fifty (50) hectares or less.

2.3.2 Application for Small Scale Mining Permit (ASSMP) maximum for 20 hectares, per ASSMP 20,000.00

2.3.3 Application for Sand and Gravel Permits

2.3.3.1 Commercial Permit Application, maximum of 1 hectare, per application 5,000.00

2.3.3.2 Industrial Permit Application (Individual) maximum of 8 hectares, per application 15,000.00

2.3.3.3 Industrial Permit Application (Corporation) maximum of 20 hectares, per application 20,000.00

2.3.4 Tie Line Survey, per kilometer 10,000.00

In addition to the above charges, the applicant or interested party shall pay for the transportation of bureau personnel from official station to the area and return and other incidental expenses incurred therein. The precision of survey control shall be in accordance with the Land Surveys Manual of the Philippines.

3.0 GEOLOGICAL/MINING INVESTIGATION AND VERIFICATION AND OTHER CHARGES

3.1	Geological, Geochemical, Geophysical Investigation /man/day provided that the minimum charge is P3,000.00	1,000.00
3.2	Verification/Evaluation of Mining Contract Area /man/day provided that the minimum charge is P3,000.00	1,000.00
3.3	Verification/Field Investigation of mining conflicts, boundary or other mineral lands survey, renewal or extension of mineral agreements, permit or licenses /man/day provided that the minimum charge is P3,000.00	1,000.00
3.4	Verification of ore stockpile and umpiring of ore shipments /man/day provided that the minimum charge is P3,000.00	1,000.00
3.5	Verification of exploration work done by permittees within government reservations /man/day provided that the minimum charge is P3,000.00	1,000.00
3.6	Verification/Field Investigation of Mineral Processing Plant /man/day provided that the minimum charge is P3,000.00	1,000.00
3.7	Verification of explosives magazines and blasting schemes /man/day provided that the minimum charge is P5,000.00	1,000.00
3.8	Technical and Financial Evaluation of Mining Companies Applying for a Registration/Licensing of Securities as referred by the Securities and Exchange Commission, per application	1,500.00

In addition to the above charges, the applicant or interested party shall pay for the transportation of bureau personnel from official station to the area and return and other incidental expenses incurred therein.

3.9	Rock Mechanics Laboratory Services (subject to availability of equipment)	
3.9.1	Unconfined compressive (rock ore)	
3.9.1.1	Without Strain Measurements	200.00
3.9.1.2	With Strain Measurements	400.00
3.9.2	Discontinuity shear strength (Rock Cores or Chunks of Size NX or 6 cm x 6 cm)	1,000.00
3.9.3	Triaxial	
3.9.3.1	NX	1,000.00

3.9.3.2	AX	1,000.00
3.9.4	Tensile (Brazilian)	200.00
3.9.5	Cutting Charges, per square decimeter	50.00
3.10	Processing of Applications	
3.10.1	License to Possess Explosive	250.00
3.10.2	Amendment to License to Possess Explosives	250.00
3.10.3	Purchase/Transfer/Import Explosive	100.00
3.10.4	Foreman's (Blaster's) License	250.00
3.10.5	Temporary Safety Inspector's Permit (including renewal)	250.00
3.10.6	Temporary Safety Engineer's Permit (including renewal)	250.00
3.10.7	Permanent Safety Inspector's Permit (including renewal)	250.00
3.10.8	Permanent Safety Engineer's Permit (including renewal)	250.00
3.10.9	Alien's Local Employment	2,000.00
3.10.10	Electrical Wiring Installation	125.00
3.10.11	Machinery Installation	125.00
3.10.12	Mine, Quarry and Mill Permits	150.00

4.0 LEASE OR DRILLING EQUIPMENT

4.1 Schedule of rent or lease of drill machines, pumps and drilling accessories enumerated. below, the lessee shall pay monthly rental fee to the Mines and Geosciences Bureau (MGB), as follows:

4.1.1	Drilling Machine	
4.1.1.1	X-Ray Drill	3,500.00
4.1.1.2	Longyear Model "24" Wireline Drill	7,500.00
4.1.1.3	Longyear Model "24" Conventional Drill	6,000.00
4.1.1.4	Longyear Model "34" Wireline Drill	9,500.00
4.1.1.5	Longyear Model "34" Conventional Drill	8,000.00
4.1.1.6	Longyear Model "38" Wireline Drill w/ automatic chuck	10,500.00
4.1.1.7	Longyear Model "44" Wireline Drill w/ Automatic Chuck	12,000.00

4.1.2	Drill Pumps	
4.1.2.1	Longyear Model 315 Pump	1,000.00
4.1.2.2	Longyear Model 535 Pump	4,000.00
4.1.2.3	Longyear Model 520 Pump	3,500.00
4.1.3	Drill Rods	
4.1.3.1	One (1) pc. AQ Rod, 10 ft.	100.00
4.1.3.2	One (1) pc. BQ Rod, 10 ft.	130.00
4.1.3.3	One (1) pc. NQ Rod, 10 ft.	150.00
4.1.3.4	One (1) pc. HQ Rod, 10 ft.	200.00
4.1.3.5	One (1) pc. AW Rod, 10 ft.	100.00
4.1.3.6	One (1) pc BW Rod, 10 ft.	130.00
4.1.3.7	One (1) pc NW Rod, 10 ft.	150.00
4.1.3.8	One (1) pc HW Rod, 10 ft.	200.00
4.1.3.9	One (1) pc ELW Rod, 10 ft. (smaller than AQ)	80.00
4.1.3.10	One (1) pc. XRT Rod, 10 ft (smaller than EWL)	60.00
4.1.4	Casings	
4.1.4.1	One (1) pc. AW Casing, 10 ft.	100.00
4.1.4.2	One (1) pc. BW Casing, 10 ft.	130.00
4.1.4.3	One (1) pc. NW Casing, 10 ft.	150.00
4.1.4.4	One (1) pc. HW Casing, 10 ft.	200.00
4.1.4.5	One (1) pc. EWL Casing, 10 ft	80.00
4.1.4.6	One (1) pc. RW Casing, 10 ft.	60.00
4.1.5	Miscellaneous Accessories	
4.1.5.1	One (1) set Tripod Sheave Wheel, 24"Ø with clevis and bolt	1,000.00
4.1.5.2	One (1) set Tripod Sheave Wheel, 18"Ø with clevis and bolt	800.00
4.1.5.3	One (1) pc. Heavy Duty Water Swivel Assy. with lifting hail	500.00
4.1.5.4	One (1) pc. Lifting Plug with rod box adapter	200.00
4.1.5.5	One (1) pc. Snatch Block 6" Ø	100.00
4.1.5.6	One (1) set BX Casing Clamp	100.00
4.1.5.7	One (1) set NX Casing Clamp	100.00

4.1.5.8 One (1) set HQ Safety Foot Clamp Assy.
complete with clamp jaws 500.00

4.2 Bond

To guarantee the faithful compliance with the terms and conditions of the lessee, and to answer for any loss and/or damages of the equipment during the term of the lease, the lessee shall file with the Mines and Geosciences Bureau a bond which may either be in Cash, Manager's/Treasurer's Check or Surety Bond drawn from the GSIS, the amount of which shall be as follows:

400,000.00	For X-Ray Diamond Drill, Pump and Accessories
500,000.00	For Longyear Model "24" Drill (Conventional), Pump and Accessories
550,000.00	For Longyear Model "24" Wireline Drill, Pump and Accessories
750,000.00	For Longyear Model "34" Drill Machine (Conventional), Pump and Accessories
800,000.00	For Longyear Model "34" Wireline Drill, Pump and Accessories
950,000.00	For Longyear Model "38" Drill (Automatic Chuck, Wireline), Pump and Accessories
1,500,000.00	For Longyear Model "44" Drill (Automatic Chuck, Wireline), Pump and Accessories
100,000.00	For Additional Longyear 535 Pump
90,000.00	For Additional Longyear 520 RQ Pump
50,000.00	For Additional 315 RQ Pump

4.3 Cash Deposits

The Lessee shall replace and/or repair all parts rendered unusable thru breakage, loss or abnormal wear during the term of the lease. All parts missing at the time the equipment is returned shall be replaced within one month from the time such equipment are returned. For this purpose, the Lessee shall make the cash deposit at the rates specified as follows:

20,000.00	For X-Ray Diamond Drill, Pump and Accessories
35,000.00	For Longyear Model "24" Drill (Conventional), Pump and Accessories
40,000.00	For Longyear Model "24" Wireline Drill, Pump and Accessories
45,000.00	For Longyear Model "34" Drill Machine (Conventional), Pump and Accessories
50,000.00	For Longyear Model "34" Wireline Drill, Pump and Accessories
60,000.00	For Longyear Model "34" Drill (Automatic Chuck, Wireline), Pump and Accessories
70,000.00	For Longyear Model "44" Drill (Automatic Chuck, Wireline), Pump and Accessories
10,000.00	For Additional Longyear 535 Pump
8,000.00	For Additional 520 RQ Pump
6,000.00	For Additional Longyear 315 RQ Pump
30,000.00	For Demobilization of Drilling Equipment and Accessories

5.0. PETROLOGICAL, MINERALOGICAL, GEOCHRONOLOGICAL AND OTHER SERVICES

		<u>Cost per Sample</u> <u>(in Pesos)</u>
5.1	Sample Preparation and Gemology Unit	
5.1.1	Rock cutting and polishing	
5.1.1.1	Soft rocks (as soft as or softer than marble), per sq. dm. or a fraction thereof	
	- cutting	90.00
	- polishing	100.00
5.1.1.2	Hard rocks (harder than marble), per sq. dm. or a fraction thereof	
	- cutting	110.00
	- polishing	140.00
5.1.2	Thin section preparation	
5.1.2.1	unmounted rocks and minerals	200.00
5.1.2.2	mounted rock and mineral grains	200.00
5.1.2.3	mounted cutting/ditch samples	250.00
5.1.3	Polished section preparation	
5.1.3.1	unmounted rocks and minerals	200.00
5.1.3.2	mounted rocks and minerals	250.00
5.1.4	Polished-thin section preparation	
5.1.4.1	unmounted rocks and minerals	250.00
5.1.4.2	mounted rock and mineral grains	250.00
5.1.4.3	mounted cutting/ditch samples	300.00
5.1.5	Doubly polished wafer preparation for fluid inclusion analysis	400.00
5.1.6	Sample preparation (drying, crushing, grinding, sieving and splitting) of geological materials for sedimentological/mineralogical analysis, per kilogram or fraction thereof	
5.1.6.1	oven drying	10.00
5.1.6.2	crushing using jaw crusher	30.00
5.1.6.3	grinding using vibrating disc mill	30.00
5.1.6.4	sieving	
	5.1.6.4.1 coarse (14-150 mesh)	
	- dry sample	20.00

	- wet sample	30.00
	5.1.6.4.2 coarse (170-400 mesh)	
	- dry sample	30.00
	- wet sample	40.00
5.1.7	5.1.6.5 splitting using Jones riffle splitter	10.00
	Sample preparation (drying, crushing, and grinding, up to -200 to -300 mesh) of geological materials for x-ray bulk analysis	50.00
5.1.8	Sample preparation (drying, crushing and grinding, sieving and splitting) for chemical analysis	50.00
5.1.9	Sample preparation for paleomagnetic analysis	
	5.1.9.1 mounting	100.00
	5.1.9.2 coring	200.00
	5.1.9.3 cutting	150.00
	5.1.9.4 grinding	150.00
5.1.10	Sample preparation for paleontological analysis	
	5.1.10.1 thin section	200.00
	5.1.10.2 washing, per 200 grams	100.00
	5.1.10.3 polished block (3 x 2 x 2 cm.)	250.00
	5.1.10.4 chemical treatment, washing and smear slide preparation for radiolarian analysis	500.00
5.1.11.	Gemstone preparation, per piece	
	5.1.11.1 Preparation of cabochon with oval, round, triangle, square, pear and four-sided forms	
	5.1.11.1.1 Mohs' hardness up to 7	
	- 7 to 18 mm. diameter	70.00
	19 to 32 mm. diameter	110.00
	5.1.11.1.2 Mohs' hardness between 7 and 9	
	- 7 to 18 mm. diameter	160.00
	- 19 to 32 mm. diameter	200.00
	5.1.11.2 Preparation of cabochon with heart, clover, star, cross, hexagon, octagon and more than four-sided forms	
	5.1.11.2.1 Mohs' hardness up to 7	
	- 7 to 18 mm. diameter	110.00
	- 19 to 32 mm. diameter	160.00
	5.1.11.2.2 Mohs' hardness between 7 and 9	

	- 7 to 18 mm. diameter	200.00
	- 19 to 32 mm. diameter	250.00
5.1.11.3	Preparation of other shapes and forms such as teardrop, half-moon, shark's tooth, sphere, cone, cylinder, etc. for materials with Mohs' hardness up to 7	
	- 7 to 18 mm. diameter	200.00
	- 19 to 32 mm. Diameter	300.00
5.1.11.4	Faceting (64 index gear)	
	Standard brilliant cut (round)	
	- with Mohs' hardness up to 7	200.00
	- with Mohs' hardness bet. 7 & 9	320.00
	Brilliant oval cut, emerald cut	
	- with Mohs' hardness up to 7	210.00
	- with Mohs' hardness bet. 7 & 9	400.00
	Gemstone drilling	
	- first 10 mm.	30.00
	- per 1 mm. or a fraction thereof, in excess of 10 mm.	15.00
5.1.11.5	Preparation of tumbled stones, per kg.(minimum of three kg.)	700.00
5.2	Megascopic/Microchemical Testing Laboratory Unit	
5.2.1	Megascopic description of minerals including mineral name, color, streak, form, hardness and uses/recommendation for further analysis	100.00
5.2.2	Megascopic description of rocks including mineral composition, texture, rock name and uses/recommendation for further analysis	100.00
5.2.3	Qualitative microchemical test, per element	100.00
5.2.4	Qualitative chemical stain test, per mineral	100.00
5.3	Sedimentology Laboratory Unit	
5.3.1	Sample preparation for grain size analysis	
	- dilution and chemical treatment with H ₂ O ₂	400.00
	- pipetting	400.00
	- determination of weight loss	80.00
5.3.2	Mineral separation per 100 gram sample or a fraction thereof	

	- using hand magnet	80.00
	- using isodynamic magnetic separator	120.00
	- using heavy liquid medium, per mineral	400.00
5.3.3	Grain size analysis including description of grains	150.00
5.3.4	Identification of transparent and translucent detrital minerals, with qualitatively estimated mineral abundances	
	- as received	250.00
	- polished/thin section	200.00
5.3.5	Identification of transparent and translucent detrital minerals, with quantitatively estimated mineral abundances by point counting, per mineral	
	- as received	100.00
	- polished/thin section	80.00
5.4	Clay Mineralogy Laboratory Unit	
5.4.1	Differential thermal analysis (DTA)	350.00
5.4.2	Physical tests	
5.4.2.1	Water plasticity test	70.00
5.4.2.2	Pyrometric cone equivalent (PCE) test	300.00
5.4.2.3	Swelling test	
	5.4.2.3.1 unactivated	70.00
	5.4.2.3.2 activated with soda	100.00
5.4.2.4	Oil bleaching test (inclusive of oil)	
	5.4.2.4.1 unactivated	150.00
	5.4.2.4.2 activated	175.00
5.5	Petrography Laboratory Unit	
5.5.1	Thin section analysis	
5.5.1.1	Standard petrographic description including rock name, textures, qualitatively estimated mineral abundances and interpretation of alteration assemblages and/or paragenesis	350.00
5.5.1.2	mineral identification and rock name only, with qualitatively estimated	

		mineral abundances	250.00
	5.5.1.3	mineral identification only, with quantitatively estimated mineral abundances by point counting, per mineral	80.00
	5.5.1.4	Grain size determination only, per mineral	100.00
5.5.2		Polished section analysis	
	5.5.2.1	Standard petrographic description of ore minerals including textures, qualitatively estimated mineral abundances and interpretation of paragenetic sequence	350.00
	5.5.2.2	Mineral identification only, with qualitatively estimated mineral abundances	250.00
	5.5.2.3	Mineral identification only, with quantitatively estimated mineral abundances by point counting, per mineral	80.00
	5.5.2.4	Grain size determination only, per mineral	100.00
5.5.3		Photomicrography (exclusive of costs of film, developing and printing), per exposure	25.00
5.6		Fluid Inclusion Laboratory Unit	
	5.6.1	Inspection of samples for presence Of fluid inclusions	100.00
	5.6.2	Petrographic description of fluid inclusions, including abundance, size, shape, nature of inclusion, etc.	250.00
	5.6.3	Measurement of homogenization temperatures of as many inclusions as practical within the sample	400.00
	5.6.4	Measurement of freezing temperatures of as many inclusions as practical within he sample (exclusive of cost of liquid nitrogen) for salinity determination	700.00
	5.6.5	Measurement of salt dissolution	

	temperatures of as many inclusions as practical within the sample for salinity determination	400.00
5.6.6	Photomicrography (exclusive of costs of film, developing and printing), per exposure	25.00
5.7	X-Ray Laboratory Unit	
5.7.1	X-ray diffraction (XRD) analysis	
5.7.1.1	Sample preparation for orientation of clay minerals	
	- air drying	20.00
	- heating	50.00
	- glycolation	30.00
5.7.1.2	XRD scan (2°-41°) and qualitative mineral identification	500.00
5.7.2	X-ray fluorescence (XRF) spectrometric analysis	
5.7.2.1	Sample preparation	
	- briquetting of powdered sample	50.00
	- glass bead/fused sample preparation	150.00
5.7.2.2	Qualitative XRF analysis	
	- using LIF analyzing crystal (scan 10°-116°)	800.00
	- using EDDT analyzing crystal (scan 10°-146°)	1,000.00
5.7.2.3	Quantitative XRF analysis, per element (charge varies according to cost of standards)	
5.7.3	Electron Probe Microanalysis (EPMA)	
5.7.3.1	Sample preparation, per section	
	- carbon coating	150.00
	- ion coating (charge varies according to cost of element to be used for coating and surface area to be coated)	
5.7.3.2	Electron Microcopy/Photography	
	- high magnification aeroview, back scattered electron image, secondary	

		electron beam image, characteristic x-ray, per photograph, per element	800.00
		- per additional photograph of same element	200.00
5.7.3.3	Line profile analysis		
	- per 10 mm line, per element		900.00
5.7.3.4	Qualitative point analysis		
	- per point, per element		800.00
5.7.3.5	Quantitative point analysis		
	- per point, per element		1,000.00
5.8	Isotope Laboratory Unit		
5.8.1	14c age determination (charges subject to the discretion of the Director of Mines and Geosciences)		
5.8.2	K-Ar age determination (charges subject to the discretion of the Director of Mines and Geosciences)		
5.9	Paleomagnetic Laboratory Unit		
5.9.1	Paleomagnetic analysis		
	5.9.1.1	Demagnetizing (thermal alternating field)	300.00
	5.9.1.2	Magnetic declination	200.00
	5.9.1.3	Magnetic inclination	200.00
	5.9.1.4	Magnetic moment	200.00
	5.9.1.5	Magnetic susceptibility	200.00
	5.9.1.6	North, east and vertical component	160.00
	5.9.1.7	Bedding correction	160.00
	5.9.1.8	Sample orientation correction	160.00
	5.9.1.9	Virtual geomagnetic pole	240.00
5.10	Paleontology Laboratory Unit		
5.10.1	Standard paleontological analysis of sedimentary rock samples, including picking/isolation of fossils, faunal identification and listing, and age and paleoecology determination		
			300.00

- 5.10.2 Photomicrography (exclusive of costs of film developing and printing)
 - 5.10.2.1 Thin section, per exposure 25.00
 - 5.10.2.2 Whole specimen, three exposures for three positions 150.00

- 5.11 Petrochemistry Laboratory Unit
 - 5.11.1 Chemical analysis of rocks, minerals, soils stream sediments and similar materials
 - 5.11.1.1 Minor and trace element analysis, after partial decomposition
 - 5.11.1.1.1 Flame atomic absorption spectrometry
 - using aqua regia, hydrochloric acid and nitric acid digestion methods

<u>Element</u>	<u>Detection Limit</u> (ppm)	
Ag	1)	P60.00
Cd	1)	(first element)
Co	3)	P20.00
Cu	2)	(each additional
Fe	50)	element)
Mn	50)	
Ni	3)	
Pb	10)	
Zn	2)	
Mo	2	65.00
Mo(with organic extraction)	0.4	130.00

- using hydride and vapor generation method

<u>Element</u>	<u>Detection Limit</u> (ppm)	
As	1	120.00
Bi	0.1	120.00
Sb	0.1	120.00

Hg 0.1 120.00

- using acidic fusion method

<u>Element</u>	<u>Detection Limit</u> (ppm)
Cr	100) 80.00
Li	1) (first element)
Ni	10) 50.00 (each additional element)

- using NH₄I fusion method

<u>Element</u>	<u>Detection Limit</u> (ppm)
Sn	1 200.00

- using cold extraction method

<u>Element</u>	<u>Detection Limit</u> (ppm)
Cu	20) 60.00
Pb	40) (first element)
Zn	20) 40.00 (each additional element)

5.11.1.1.2 Graphite furnace atomic absorption spectrometry

- using organic extraction method

<u>Element</u>	<u>Detection Limit</u> (ppm)
Ag	0.1) 400.00
Cd	0.1) (per element)
Se	0.2) 800.00
Te	0.1) (all five elements)
TI	0.1) (all five elements)

5.11.1.1.3 Calorimetry, using dithiol method

<u>Element</u>	<u>Detection Limit</u> (ppm)
W	4 200.00

5.11.1.2 Major, minor and trace element analysis, after total decomposition (whole rock analysis)

5.11.1.2.1 Flame atomic absorption spectrometry
- complete silicate analysis

Oxide	
SiO ₂	120.00
Al ₂ O ₃	120.00
TiO ₂	120.00
Fe ₂ O ₃ T	120.00
MnO	120.00
MgO	120.00
CaO	120.00
Na ₂ O	120.00
K ₂ O	120.00
FeO	120.00
P ₂ O ₅	140.00
LOI	40.00
H ₂ O-	40.00
H ₂ O+	105.00
all of the above except FeO and H ₂ O+	980.00

- minor and trace element analysis
= using hydrofluoric and perchloric

acid digestion method

<u>Element</u>	<u>Detection Limit</u> (ppm)	
Ag	1	120.00
Be	1	120.00
Cd	10	120.00
Co	5	120.00
Cr	5	120.00
Cu	2	120.00
Li	1	120.00
Ni	10	120.00
Mo	10	120.00
Pb	10	120.00
Rb	10	120.00
Zn	2	120.00
Ba	25	120.00

Sr	20	120.00
V	10	120.00

= using hydride and vapor generation method

<u>Element</u>	<u>Detection Limit</u> (ppm)	
As	1	120.00
Be	0.1	120.00
Sb	0.1	120.00
Hg	0.1	120.00

= using MIBK extraction method

<u>Element</u>	<u>Detection Limit</u> (ppm)	
Au	0.02	235.00
Ga	0.02	235.00
Pt	(qualitative)	260.00

5.11.1.2.2 Graphite furnace atomic absorption spectrometry

- using organic extraction method

<u>Element</u>	<u>Detection Limit</u> (ppm)	
Au	0.001	390.00
Pd	0.002	390.00
Te	0.1	390.00
Tl	0.1	390.00
Se	0.2	390.00

- using fire assaying method

<u>Element</u>	<u>Detection Limit</u> (ppm)	
Au	0.002)	1,040.00
Pt	0.005)	(first element
Pd	0.003)	130.00
Rh	0.0005)	(next element in the same button)

5.11.2 Chemical analysis of ground and surface water

5.11.2.1 Major cation and anion analysis

5.11.2.1.1 Flame atomic absorption spectrometry

<u>Ion</u>	
Na	90.00
K	90.00
Mg	90.00
Ca	90.00
Si	90.00

5.11.2.1.2 Wet chemical methods

<u>Ion</u>	
SO ₄ ⁻²	90.00
HCO ₃ ⁻¹	90.00
Cl ⁻	90.00

5.11.2.1.3 Ion selective electrode method

<u>Ion</u>	
F ⁻	130.00
I ⁻	130.00
CN ⁻	700.00

5.11.2.1.4 Spectrophotometry

<u>Ion</u>	
NO ₃ ⁻¹	130.00
HPO ₄ ⁻²	130.00

5.11.2.2 Water property determination

Property

pH	40.00
Total dissolved solids	65.00
Total hardness	90.00
Total alkalinity	90.00
Total acidity	90.00
Turbidity (NTU)	90.00
Suspended solids	65.00

5.11.2.3 Trace element analysis using atomic absorption spectrophotometry

<u>Element</u>	<u>Detection Limit (mg/L)</u>	
Ag	0.05	80.00
Ag	0.002	110.00

Ag	0.0002	260.00
As	0.005	120.00
Al	1.0	90.00
Au	0.005	235.00
Ba	1.0	105.00
Be	0.02	105.00
Bi	120.00	
Cd	0.02	105.00
Cd	0.002	110.00
Cd	0.0002	260.00
Co	0.05	105.00
Cr	0.05	105.00
Cu	0.02	105.00
Fe	0.05	105.00
Hg	0.0001	120.00
Li	0.01	105.00
Mn	0.03	105.00
Mo	10.0	105.00
Mo	0.01	260.00
Ni	0.05	120.00
Pb	0.2	105.00
Pb	0.005	110.00
Pb	0.0005	260.00
Rb	5.0	105.00
Se		260.00
Sb		120.00
Sr		105.00
Te		260.00
V	1.0	105.00
Zn	0.1	105.00

Discount rates:

15	elements/sample	10%
22	elements/sample	15%
44	elements/sample	30%

6.0 FIRE ASSAYS, METALLURGICAL TEST AND CHEMICAL ANALYSIS

6.1 Fire Or Wet Assay of Rocks, Ores, Sands or Concentrates, Bullions, Alloys Including Liquids or Solutions

6.1.1 Fire-Assays — Ore samples submitted for fire assays should weigh at least one (1) kilogram. Bullion drillings in excess of three (3) grams shall be returned to the owner upon request.

6.1.1.1	Gold or silver in ores, sands or concentrates, per sample	220.00
6.1.1.2	Gold & Silver in ores, sands or concentrates, per sample	250.00
6.1.1.3	Fineness determination for gold, in bullion or alloys, per sample	450.00
6.1.1.4	Fineness determination for silver, in bullion or alloys, per sample	300.00
6.1.1.5	Fineness determination for gold and silver in bullions, per sample	550.00
6.1.1.6	Certification of weight of gold or silver bullions	75.00

6.1.2 Wet Assays (Per element submit at least one (1) kilo sample)

6.1.2.1	Aluminum	90.00
6.1.2.2	Antimony	100.00
6.1.2.3	Barium	90.00
6.1.2.4	Bismuth	100.00
6.1.2.5	Calcium	85.00
6.1.2.6	Available Lime	85.00
6.1.2.7	Chlorine (as Cl-)	90.00
6.1.2.8	Chromium	350.00
6.1.2.9	Cobalt	90.00
6.1.2.10	Copper	90.00
6.1.2.11	Iron (Total)	85.00

6.1.2.12	Iron (Metallic, Fe ⁰)	100.00
6.1.2.13	Iron (Ferrous, Fe ++)	100.00
6.1.2.14	Iron (Ferric, Fe +++)	185.00
6.1.2.15	Lead	90.00
6.1.2.16	Magnesium	85.00
6.1.2.17	Manganese	90.00
6.1.2.18	Molybdenum	100.00
6.1.2.19	Nickel	90.00
6.1.2.20	Phosphorous	90.00
	P2O5, water soluble	90.00
	P2O5, Citrate soluble	90.00
6.1.2.21	Potassium	80.00 (AA)
6.1.2.22	Silica	100.00
	Free Silica	100.00
	Insolubles	60.00
6.1.2.23	Sodium	80.00 (AA)
6.1.2.24	Sulfur	90.00
6.1.2.25	Tin	100.00
6.1.2.26	Titanium	90.00
6.1.2.27	Zinc	90.00
6.1.3	Specific Gravity	
	6.1.3.1 True	60.00
	6.1.3.2 Apparent	40.00
	6.1.3.3 Bulk Density	40.00
6.1.4	Moisture, oven dried (105°)	50.00
6.1.5	Moisture, as received only	80.00
6.1.6	Combined H2O	70.00
6.1.7	Loss on Ignition	40.00
6.1.8	Determination of Atomic Absorption Spectrophotometry and Flame Photometry of copper, iron, lead, manganese, sodium, potassium, zinc, per element	80.00
6.2	Metallurgical Tests on Ores, Minerals, Mill or Industrial Plant By-Products, Etc.	

(Note: A maximum of fifty (50) kilograms may be accepted for testing)

6.2.1	Sample Preparation
6.2.1.1	Crushing

	6.2.1.1.1	First 5 kg sample	100.00
	6.2.1.1.2	For each additional 1 kg	5.00
6.2.1.2	Grinding		
	6.2.1.2.1	First 5 kg sample	150.00
	6.2.1.1.2	For each additional 1 kg	10.00
6.2.2	Particle Size Determination (using sieves)		
	6.2.2.1	Dry sample, coarse (coarser than 100-mesh) per fraction, per kilo	20.00
	6.2.2.2	Dry sample, fine (150-mesh to 400 mesh) per fraction, per kilo	30.00
	6.2.2.3	Wet sample, coarse (coarser than 100 mesh) per fraction, per kilo	30.00
	6.2.2.4	Wet sample, fine (150 to 400 mesh) per fraction, per kilo	40.00
6.2.3	Classification Test:		
	6.2.3.1	Air Classification, per test	120.00
	6.2.3.2	Hydroclassification, per test	170.00
	6.2.3.3	Sedimentation/Elutriation/Scrubbing, per test	40.00
6.2.4	Gravity Concentration Test		
	6.2.4.1	Heavy Media Separation, per specific gravity, per test	180.00
	6.2.4.2	Jigging, per test	170.00
	6.2.4.3	Tabling, per test	170.00
6.2.5	Flotation		
	6.2.5.1	Bulk Flotation, per test	200.00
	6.2.5.2	Differential Flotation, per test	350.00
6.2.6	Magnetic Separation		
	6.2.6.1	Dry, per test	100.00
	6.2.6.2	Wet, per test	150.00
6.2.7	Leaching		
	6.2.7.1	Cyanidation, per test	700.00
	6.2.7.2	Percolation leaching, per test	450.00
	6.2.7.3	Acid curing/agitation leaching, per test	300.00
	6.2.7.4	Leaching-precipitation-flotation, per test	600.00
6.2.8	Amalgamation, per test		450.00
6.2.9	Calcination		
	6.2.9.1	up to 800°C	

	- one sample only	300.00
	- 2 or more samples per sample	250.00
	6.2.9.2 Up to 1050°C	
	- one sample only	350.00
	- 2 or more samples, per sample	300.00
6.2.10	Roasting/Sintering	
	6.2.10.1 Using Electric Furnace (batch),	
	- one sample only	300.00
	- 2 or more samples, per sample	250.00
	6.2.10.2 Using small rotary kiln (continuous),	
	per test	400.00
6.2.11	Chiddy Method (Sponge), per test	400.00
6.2.12	Smelting, per test	700.00
6.2.13	Pelletizing	
	6.2.13.1 Using pelletizing drum (batch),	
	per test	150.00
	6.2.13.2 Using pelletizing disc (continuous)	
	per test	250.00
6.2.14	Work Grindability Index	900.00
6.2.15	Swelling Test (Bentonite)	40.00
6.2.16	Oil Bleaching	50.00
6.2.17	Acid/Sodium Activation	180.00
6.2.18	Cation Exchange Capacity	120.00
6.2.19	Settling Rate	40.00
6.2.20	Recovery of Chrysotile Asbestos, per kg	350.00

(Note: The Metallurgical Laboratory is also accepting samples for pilot testing on flotation, classification, roasting & magnetic separation (dry). Charges will be estimated for each case and job performed on contractual basis).

6.3	Analysis of Water	
6.3.1	pH	30.00
6.3.2	Dissolved Oxygen	30.00
6.3.3	Bicarbonate	70.00
6.3.4	Carbonate	70.00
6.3.5	Total Solids	50.00
6.3.6	Total suspended solids	50.00
6.3.7	Total dissolved solids	50.00
6.3.8	Total acidity	70.00

6.3.9	Total alkalinity	70.00
6.3.10	Total hardness	70.00
6.3.11	Sulfate	70.00
6.3.12	Chloride	70.00
6.3.13	Silica	70.00
6.3.14	Iron	80.00
6.3.15	Lime	70.00
6.3.16	Magnesia	70.00
6.3.17	Sodium	70.00
6.3.18	Potassium	70.00

7.0 MARINE GEOPHYSICAL AND GEOLOGICAL INVESTIGATION AND VERIFICATION

7.1	Marine Geophysical Survey	
7.1.1	Single-Channel seismic reflection, per km	2,000.00
7.1.2	Single-Channel seismic reflection + echo sonder, per km	2,500.00
7.1.3	Echo sonder, per km	750.00
7.1.4	Side Scan Sonar, per km	2,000.00
7.1.5	Side Scan Sonar+Echo Sounder, per km	2,500.00
7.1.6	Survey Vessel (RPS Explorer) mobilization/demobilization, per day	34,000.00
	actual survey, per day	24,000.00

(Note: Including Radio Positioning (Mini-Ranger), excluding fuel and scientific staff)

7.2	Marine Geological Survey		
7.3			
7.2.1	Piston Coring, per sample		1,000.00
7.2.2	Grab Sampling, per sample		500.00
7.3	For Geophysical Services		
		Man/Day Rate	Total Daily Rate
7.3.1	Induced Polarization	1,300.00	9,100.00
7.3.2	Resistivity Survey	1,300.00	9,100.00
7.3.3	Self Potential		
7.3.3.1	Vertical Loop	1,300.00	9,000.00

7.3.3.2	Potable Soil	1,300.00	9,000.00
7.3.4	Seismic Surveys		
7.3.4.1	12-Channel refraction)	2,000.00	12,000.00
7.3.4.2	12-Channel (reflection)	2,000.00	12,000.00
7.3.5	Magnetics		
7.3.5.1	Precision Type	1,100.00	8,000.00
7.3.5.2	Fluxgate	1,300.00	8,000.00

(In addition to the charges under item 7.3.1, the applicant or interested party shall pay for transportation of Bureau personnel from official station to the area and return as well as the expenses for freight, labor, materials and analysis of the samples.)

7.4	Certification of Documents		
7.4.1	For each certification of correctness		20.00
7.4.2	Letter certification		40.00

8.0 **MGB FORMS (P 2.00/page)**

No. 5-1	Application for Exploration Permit
No. 5-2	Exploration Permit
No. 5-3	Outline of Project Feasibility Study
No. 5-4	Exploration Work Program
No. 6-1	Application for Mineral Agreement
No. 6-2	Three-year Work Program
No. 7-1	Application for Financial or Technical Assistance Agreement
No. 8-1	Application for Industrial Sand and Gravel (SAG) - (MGB)
No. 8-1A	Application for Industrial SAG (LGU)
No. 8-2	Industrial Sand and Gravel Permit (MGB)
No. 8-2A	Industrial Sand and Gravel Permit (LGU)
No. 8-3	Quarry or Sand and Gravel Permit Application
No. 8-3A	Commercial Permit Application
No. 8-4	Quarry or Sand and Gravel Permit
No. 8-4A	Commercial Sand and Gravel Permit
No. 8-4B	Exclusive Sand and Gravel Permit

No. 8-5	Application for Guano Permit
No. 8-6	Guano Permit
No. 8-7	Application for Gemstone Gathering Permit
No. 8-8	Gemstone Gathering Permit
No. 11-1	Mineral Processing Permit
No. 11-2	Application for Mineral Processing Permit
No. 12-1	Ore Transport Permit
No. 12-2	Sworn Statement of the Apprehending Officer
No. 12-3	Affidavit of Witness
No. 13-1	Application for Accreditation of Traders, Dealers and Retailers in the Trading of Minerals/Mineral Products and By-Products
No. 13-2	Certificate of Accreditation of Traders, Dealers and Retailers in the Trading of Minerals/Mineral Products and By-Products
No. 15-1	Permanent Safety Engineer's Permit
No. 15-2	Temporary Safety Inspector's Permit
No. 15-3	Permanent Safety Inspector's Permit
No. 15-4	Monthly Employer's Report of Accident or Sickness
No. 15-5	Monthly General Accident Report
No. 15-6	License to Possess Explosives
No. 15-7	Monthly Report of Explosives Transactions
No. 15-8	Explosives and Accessories Consumption Report
No. 16-1	Environmental Work Program (EWP)
No. 16-1A	Environmental Work Program for Offshore
No. 16-2	Environmental Protection and Enhancement Program (EPEP)
No. 16-3	Annual Environmental Protection and Enhancement Program Outline (AEPEPO)
No. 18-1	Semi-Annual Report On Mine Waste and Mill Tailings
No. 18-2	Application for Compensation for Damages
No. 18-3	Field Investigations and Assessment of Claims For Damages
No. 25-1	Application for Order of Survey
No. 25-2	Order of Survey
No. 25-3	Survey Plan (21 + 17 CM)
No. 25-4	Field Notes
No. 25-5	Azimuth Computations from Astronomical Observations

No. 25-6	Topographic Survey Computations
No. 25-7	Traverse Computations
No. 25-8	Area Computations
No. 25-9	Coordinate Conversion-Geographic to Grid
No. 25-10	Coordinate Conversion-Grid to Geographic

9.0 PUBLICATIONS

9.1	Technical Information Series	
1-83	Production Cost: Philippine Copper Mining Firms 1975-1981	20.00
5-79	Preliminary Report on the Hydrogeological Survey of Ilocos Norte	20.00
17-80	Preliminary Report on the Groundwater Geology of Southern Quezon Province	25.00
21-80	Quarry Resources for Concrete Aggregate in Cavite Province	15.00
28-80	Report on the Regional Geological Mapping and Mineral Canvassing of Abra de Ilog Quadrangle, Occidental Mindoro	15.00
32-80	Geochemical Survey of the Pandocondocon-Maranonarea Bgy. Suso, Hinoba-an Negros-Occidental	10.00
37-81	Perlite in the Philippines	30.00
43-81	Pumice and Other Pumiceous Materials in the Philippines	20.00
56-82	Some Planktonic Foraminifera from the Guimbal Mudstone Member, Tarao Formation, Iloilo, Panay	20.00
67-86	Orbitolina from Tuburan, Cebu	20.00
68-86	Notes on the Paleontology of Northern Marinduque	15.00
69-86	Larger Foraminifera from St. Paul's Limestone Northern Palawan	20.00
70-86	Geology of the Exposed Ophiolite and Surrounding Rocks in Puerto Galera Mindoro	15.00
71-86	Preliminary Report on the Fossil Findings in Comagaycay River Alibuag, San Andres Calolbon Catanduanes	20.00

72-86	Fuller's Earth of the Sampiro-Calatagan Prenza Area Batangas Province	20.00
73-86	Studies on the Growth of Globorotalia Mernardii Parker, Jones and Brady in Tablas Island, Romblon	15.00
74-86	The Occurrence of Bentonitic Clay Deposit in Barrio Homapon Legaspi City	15.00
75-86	The Geology of Unconsolidated Sediments in Central Palawan	50.00
76-87	A Re-Evaluation of the Cretaceous-Paleogene Sediments Of A Portion Of The Sierra Madre in the Baras Quadrangle, Rizal	25.00
77-87	Preliminary Interpretation of RPS Explorer's Seismic Data in Bohol Sea	25.00
78-87	Notes on the Size Variation of Globocassidulina Subglobosa (Brady) from Tablas Island, Romblon	15.00
79-87	Paleontology and Stratigraphy of Mabinay and Nearby Areas, Negros Oriental	25.00
80-87	Inventory and appraisal survey of Marble Resources in Northern Luzon and part of Quezon Province in Connection with the Stone Industry Resources Development Project	50.00
X-1-82	Progress Report on the Reconnaissance Geologic Mapping and Stream Sediment Sampling of Gingo-og quadrangle, Misamis Oriental	30.00
X-5-82	Geology of Malita and Mabayawa Quadrangle Davao del Sur	30.00

9.2 UNDP (Strengthening the Government Capability in Gold Operation)

UNDP Report #

1	Geology and Mineralization in the Panganiban Tabas and Bulala Areas, Camarines Norte	165.00
2	Geology and Hydrothermal Alteration of the Amian-Okoy River Pamplona and Ayungon Areas, Eastern Negros	205.00

3	Geology and Mineralization in Northwestern Bohol	120.00
4	Geology and gold Mineralization of Surigao Del Norte	140.00
5	Geology and Mineralization in the Baguio Area, Northern Luzon	160.00
6	Geochemical Nature of Epithermal Gold Mineralization and related Anomalies in the Philippines	185.00
7	Reconnaissance Geochemical Surveys in the Philippines	110.00
8	Geology of Southwestern Panay	137.00
9.3	TECHNICAL REPORT	
2	Geology of Northern Agusan, Mindanao	80.00
3	Stream Sediments and Soil Orientation Survey in Taysan and Asiga Prospects Philippines	50.00
6.	Geology of Central Palawan	85.00
9.4	INFORMATION CIRCULAR	
I.C.#		
21	Geochemical Prospecting by Determination of Gold-Extractable Copper in Stream-Silt and Soil	15.00
23	Analytical Procedures Adapted by the Bureau of Mines	15.00
27	Feldspar in the Philippines	30.00
28	Gypsum in the Philippines	20.00
31	Gravimetric Determination of Zinc	15.00
9.5	REPORT OF INVESTIGATION	
R.I. No.#		
57	Volumetric Analysis of Titanium	10.00
58	Report on the Discovery of Pusslininds in the Phil. Notes on the Occurrence of a Giant Numulite in the Philippines	10.00
59	Blending Carbonization of Foreign & Local Coals	15.00

60	Geology of the Barlo Mine and Vicinity Dasol, Pangasinan, Province, Luzon Philippines	15.00
62	The Geology and Mineral Resources of Catanduanes province	15.00
63	Preliminary Report on the Geology of the Laur-Dingalan Fault Zone, Luzon Philippines	15.00
64	Washability Characteristic of Some Philippine coals	30.00
65	Beneficiation of a Complex Lead-Zinc Copper Sulfide Ore from Ayala District, Zamboanga	10.00
67	Geological Study of the Effects of the August 1968 Series of Earthquakes	15.00
68	The Use of Local Binders in Exploratory Pelletizing Tests	20.00
69	Faunal Successions in the Eastern Luzon Central Valley	15.00
72	Formation of Dowsonite by Decomposition of Sodium Aluminate Solution with Carbon Dioxide	10.00
73	Mineral Resources of Kalinga-Apayao Province	10.00
74	Geology and Mineral Resources of Nueva Viscaya Prov.	15.00
75	Technology and Mineral Resources of Pangasinan Prov.	15.00
76	Geology and Mineral Resources of Sorsogon Province	20.00
78	Geology and Mineral Resources of Mindoro Province	30.00
79	Geology and Mineral Resources of Isabela Province	35.00
80	Geology and Mineral Resources of Nueva Ecija	20.00
81	Geology and Mineral Resources of South Cotabato Province	15.00

87	Rapid Methods of Water Analysis	10.00
88	The Phosphotungstate Method of Determining Vanadium in Magnetic sands	15.00
89	Bauxite Deposits of Samar	15.00
91	Geology and Mineral Resources of Agusan Province	15.00
92	Refractory Raw Materials in the Philippines	70.00
94	Determination of Copper Lead and Zinc	70.00
98	Silicate Rock Analysis	25.00
100	The Geology and Mineral Resources of Aklan-Capiz Province	15.00
102	Geology and Mineral Resource of Surigao del Norte	15.00
103	Mineral Resources of Cavite	10.00
105	Geology and Mineral Resources of Camarines Sur	35.00
108	Geology and Mineral Resources of Catanduanes Prov.	25.00
109	Comprehensive Report on "Coal Chemical from Low-Grade Coal"	25.00
110	Preliminary Interpretation of the Marine Geophysical Data in Leyte Gulf, Surigao Strait and Dinagat Sound	15.00
111	Foraminifera of Lucena 1 Iloilo basin, Panay	15.00
114	Geological Interpretation of Landsat Imageries of Luzon Central Cordillera	15.00
115	Geology and Mineral Resources of Davao del Norte	15.00
117	Geology and Groundwater Resources of Batangas	35.00

9.6 BOOKS AND OTHER PUBLICATION

Standard Analytical Procedures of the Bureau of Mines and Geosciences Laboratories	125.00
Geology and Mineral Resources of the Philippines Vol. 11	1,000.00
Philippine Mining Operations Copper Mining Methods Mineral Investment Data (1)	55.00

Compilation of Environmental Laws and Regulations Pertinent to the Philippine Mining Industry	100.00
Revised Mines Safety Rules and Regulations	200.00
Mineral News Service # 84	50.00
Mineral News Service # 85	50.00
Proceedings of the Annual Mines and Geosciences Technical Seminar	100.00

All other rules and regulations or parts thereof, which are in conflict or inconsistent with any of the provisions of this Administrative Order are hereby repealed or modified accordingly.

This Order shall take effect fifteen (15) days after its publication in a newspaper of general circulation.

(SGD.) VICTOR O. RAMOS
Secretary

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