

Consultant Fees for Geological and Geophysical Assignments

A Guideline

This Guideline was prepared by a subcommittee of the Practice Standards Committee whose mandate is “to enhance the quality and value of professional service provided to the public”. Practicing engineers representing Clients and Consultants participated directly in developing the contents of the Guideline. It was approved for publication by the Council of the Association in February 1989.

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FOREWORD

APEGGA's objective in publishing this Guideline is to encourage fee negotiations that result in quality professional services being provided by Consultants which fulfil the needs of their Clients at reasonable and fair costs. It is intended that it reflect the full intent of the Engineering, Geological and Geophysical Professions Act, including the Code of Ethics.

The principles outlined in this Consultant Fee Guideline represent what APEGGA believes to be an appropriate basis for remuneration of geological or geophysical consulting services. It is primarily a guide for APEGGA members when acting as Consultants or Clients. It is also intended to be used by Client representatives, who are not members of APEGGA, in order that they may gain a better understanding of the manner in which a Consultant's fees are derived.

Members of APEGGA are authorized to offer professional services to Clients either as individual Consultants or as corporations that have a Permit to Practice. They are expected to undertake only those assignments in which they are fully competent and to negotiate a scope of services and fees necessary to provide a level of professional service that fully satisfies the requirements of the Engineering, Geological and Geophysical Professions Act. In keeping with APEGGA's Code of Ethics, professionals should strive to compete primarily on the basis of their qualifications and experience. The Association suggests that buyers of consultant services not compel either individuals or corporations to compete primarily on the basis of cost of services.

This guideline is a discretionary document and is not intended to supersede or replace contractual arrangements that are designed to satisfy specific situations. It is complementary to two other APEGGA guidelines; "Selecting a Consultant" and "Engagement and Payment of Consultants and Subconsultants", and should be read in conjunction with them.

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SECTION 1

CATEGORIES OF SERVICE

1.0 INTRODUCTION

The type, nature, and extent of professional services required for a successful geological and/or geophysical project will vary according to the characteristics and complexity of the project. Professional services in the geological and/or geophysical disciplines may require one time consultation or may extend from inception of a project to its realization. For the purpose of determining an appropriate fee basis, consulting services for geological and geophysical projects are divided into categories according to the nature of the assignment and the predictability of the cost of providing the service without compromising professional standards of practice and conduct.

The three service categories are:

1. Consultative and Advisory Services
2. Geological or Geophysical Services of Defined Scope
3. Geological or Geophysical Services on Comprehensive Projects

1.1 CATEGORY 1 — CONSULTATIVE AND ADVISORY SERVICES

For this category of service, the scope of the project is difficult to predict accurately. In particular, the amount of analysis and the number of consultations required to produce optimum service cannot be established with reasonable precision.

Examples of this category are:

1. Expert testimony;
2. Appraisals or studies based on existing data;
3. Natural resource reserve evaluations;
4. Economic evaluations;
5. Project planning and organization;

6. Feasibility studies;
7. Technical representation on behalf of a Client at meetings, as operations representative, etc.; and,
8. Advice and/or assistance in obtaining project funding.

1.2 CATEGORY 2 — GEOLOGICAL OR GEOPHYSICAL SERVICES OF DEFINED SCOPE

This category of assignment represents professional services for which the scope, including the quality and duration of specific services, can be established with reasonable precision. This type of assignment will not normally require analysis of alternatives nor much discussion with Clients in order to optimize the services being provided. These services are characteristically routine and could be performed by a Professional Geologist or Geophysicist, or by a technologist acting under the direct supervision of the professional.

Services within this category are based upon established criteria, examples of which are:

1. On-site geological or geophysical duties at a drill site;
2. Supervision of geological or geophysical data acquisition and data processing,
3. Supervision of geological or geophysical laboratory work.

1.3 CATEGORY 3 — GEOLOGICAL OR GEOPHYSICAL SERVICES ON COMPREHENSIVE PROJECTS

Assignments in this category can involve aspects of both the first and second categories but the level of service required is more comprehensive and typically longer term. In providing such services, the Consultant is usually responsible for planning, coordinating, supervising, administering, interpreting, and reporting on a project according to a Client's needs. The Consultant provides directly, or through subcontract or subagreement, all or a portion of the requirements for personnel, equipment, and ancillary services. These projects may involve some on-site work.

Examples of this category are:

1. Assessment of a mineral, or oil/gas play;
2. Assessment of a geographic area by geological, geochemical, geophysical, or other technical means;
3. Examination and recommendations regarding a geologic formation at a particular geographic location;
4. Assessment of a mineral property or oil/gas lease.

SECTION 2

FEE BASIS OPTIONS

2.0 INTRODUCTION

The cost of professional geological or geophysical services is normally a small percentage of the potential total costs of a successful project. Care should be taken to select the best qualified Consultant on a fee basis that satisfactorily compensates for the services required.

There are three concepts upon which fees for geological or geophysical services are commonly based:

1. Time Basis
2. Fixed Fee Basis
3. Combination of Time Basis and Fixed Fee Basis

Each fee basis has distinct applications and frequently, combinations of the concepts are applied to different stages of a project. From time to time bonuses or perhaps costs plus an agreed fee can be used to reward a Consultant for innovativeness or timely completion of a project. Special applications of the concepts may be required to accommodate the unique needs of a complex or major project.

In negotiating a Consultant fee for a specific project, a preliminary step should be to establish the categories of service required which properly address the needs of the Client. When the categories of service have been established, the appropriate basis of fee for each category should be determined. Projects which require a broad scope of professional services commonly use the Combination of Time Basis and Fixed Fee Basis.

2.1 TIME BASIS

This fee basis is particularly applicable in circumstances where the scope of the assignment is not well defined. A Time Basis fee is also appropriate where the Consultant does not have control over the time required for project completion and the disbursements required for specific stages of a project.

Time Basis fees should be used for:

1. Consultative and Advisory Services;
2. Geological or Geophysical Services on Comprehensive Projects,

3. Special Services, as described in Section 3.

Fees on a Time Basis are determined by multiplying the number of time units each member of the Consultant's staff expends on the project by their respective unit time billing rates and adding the disbursements marked up by an appropriate disbursement factor.

Hence, the Total Cost of Professional Services using the Time Basis is:

$$\text{TOTAL COST OF PROFESSIONAL SERVICES} = \text{CONSULTANT FEE} + \text{DISBURSEMENTS}$$

Where:

$$\text{CONSULTANT FEE} = \text{UNIT TIME BILLING RATE} \times \text{TIME EXPENDED}$$

And:

$$\text{DISBURSEMENTS} = \text{DISBURSEMENTS} \times \text{FACTOR}$$

Note: See Appendix A for explanatory details.

2.2 FIXED FEE BASIS

This fee basis is applicable only to projects or components of projects where the scope of the work can be clearly defined and where service, if applicable, will be completed over a known schedule. The Fixed Fee for such assignments should be negotiated following preparation of a comprehensive estimate of the professional time and overhead costs. The key assumptions made in developing the estimate must be identified and agreed to in the negotiation process.

An agreement, which describes in detail the services to be provided and all categories of costs to be included in the Fixed Fee, is essential. The agreement should cover schedule, time limits, inflation and other identifiable items that influence costs. Changes in the scope of the work after the Fixed Fee has been established should be compensated for on a Time Basis or by a negotiated Fixed Fee adjustment for each change.

Hence, the Total Cost of Professional Services using a Fixed Fee Basis is:

$$\text{TOTAL COST OF PROFESSIONAL SERVICES} = \text{CONSULTANT FEE} + \text{DISBURSEMENTS}$$

Where:

$$\text{CONSULTANT FEE} = \text{NEGOTIATED FIXED FEE}$$

And:

DISBURSEMENTS = DISBURSEMENTS × FACTOR

Note: See Appendix A for explanatory details.

2.3 COMBINATION TIME BASIS AND FIXED FEE BASIS

Projects frequently require several Categories of Services; some can be accurately quantified at the commencement of the project and others vary with schedule and conditions that cannot be predicted. In these circumstances, the services that can be accurately described and quantified can be appropriately covered by a Fixed Fee and those that are unpredictable should be on a Time Basis.

This fee basis will usually be most appropriate for geological or geophysical services on comprehensive projects.

SECTION 3

SPECIAL SERVICES AND CONDITIONS

3.0 INTRODUCTION

Special services are those which do not form part of an existing agreement. For all special services and conditions, the Consultant and Client should mutually determine the appropriate fee basis to be used. The following statements reflect the principle described in Section 2 that the Time Basis should be used in circumstances where the scope of the assignment is not well defined. In circumstances where the amount of work involved in the special service can be accurately predicted, the Fixed Fee Basis is also appropriate.

3.1 PROJECT SERVICES WHEN PERFORMED BY SOMEONE OTHER THAN THE ORIGINAL CONSULTANT

The Consultant responsible for the planning of a project would normally be retained to provide coordination, supervision, administration services, and reporting on a project. In circumstances where a Consultant is retained to perform these services on a project for which the specifications were prepared by others, or the work was initiated by others, the Consultant's unfamiliarity with the project should be taken into account in the fee negotiation process. At a minimum, it is recommended that the fee be on a Time Basis.

3.2 PROJECT SERVICES WHEN PERFORMED BY SOMEONE OTHER THAN A PROFESSIONAL MEMBER

In circumstances where project services are performed by someone other than a professional member, salary plus cost-plus factor as agreed to by the Client and the Consultant should be used.

3.3 EXTRA WORK

Service required beyond the agreed scope of an agreement, regardless of the original basis of fee, should be negotiated on a Time Basis, or on such other basis as mutually agreeable to both Client and Consultant.

3.4 DELAYS

In circumstances where the fee is on other than a Time Basis and delays beyond the Consultant's control cause an increase in the cost of the services provided by the Consultant, the additional costs should be paid for on a Time Basis, or on such other basis as mutually agreeable to both Client and Consultant.

3.5 ABANDONMENT OF PROJECT

If a project is abandoned or suspended through no fault of the Consultant, the value of the service supplied by the Consultant should be determined on a Time Basis. The intent is to recover costs associated with efforts expended to date. The fee should include an appropriate allowance for costs resulting from the suspension. The compensation should be mutually agreeable to both Client and Consultant.

3.6 TRAVEL TIME

Payment for travel time should be negotiated, taking into account the variations in circumstances from one project to another, and be included in the agreement.

3.7 AGREEMENT

A written agreement should be prepared which covers as a minimum, the scope of assignment, schedule of execution, basis of fee and payment conditions. An example of such a Client/Consultant Agreement is included in Appendix B.

SECTION 4

DISBURSEMENTS

4.0 INTRODUCTION

This section identifies items which usually are not part of overhead (see Appendix A) and thus are treated as disbursements. Unless otherwise agreed between the Consultant and the Client, disbursements incurred by the Consultant in completing an assignment are properly chargeable to the Client.

4.1 REIMBURSABLE EXPENSES

The following categories of expenses should be reimbursable for all Fee Basis Options on a "cost plus" basis:

1. Reproduction of drawings and documents beyond those specified in the Agreement to be included within a Fixed Fee;
2. Travel expenses, including the cost of rotation of personnel on some timely basis, where applicable;
3. Telecommunications expenses;
4. Living expenses for personnel where agreed to by the Client;
5. Advertising for tenders on the Client's behalf;
6. Use of special Consultants and Subcontractors as approved by the Client;
7. Use of equipment which is not included in normal overhead costs as detailed in the Agreement;
8. Messenger Service;
9. Any other proper expense paid out by the Consultant on the Client's behalf, and not covered by the agreed fee; and,
10. Other similar expenses for items consumed on a project such as testing materials, survey stakes, etc.

COSTS OF PROFESSIONAL SERVICES

The cost of Professional Services is commonly expressed as a function of a Consultant's operating costs. This Appendix describes the components that comprise a Consultant's Time Billing Rate, payroll factors, example of hourly billing calculations, and a formula which can be applied for determining the costs of Professional Services.

1. TIME BILLING RATES

Time Billing Rates are comprised of three basic elements; direct payroll costs, overhead costs, and profit. **For purposes of uniformity and practical use, they should be based upon actual payroll costs with a payroll multiplier factor to cover overhead and profit.**

1.1 Direct Payroll Cost

This element of costs relates to the payroll and disbursements incurred by staff while engaged on an assignment which are chargeable directly to the project.

1. Daily Rate Payroll Cost

Daily payroll costs can be expressed as a per day rate. As an example, if based upon 260 working days per year:

$$\text{Daily Payroll Cost} = \frac{\text{Annual Salary} + \text{Fringe Benefits}}{260 \text{ Days}}$$

Where: 52 weeks × 5 days/week = 260 days

2. Hourly Rate Payroll Cost

Hourly payroll costs are typically expressed as an hourly rate. As an example, if based on a 37.5 hour week:

$$\text{Hourly Payroll Cost} = \frac{\text{Annual Salary} + \text{Fringe Benefits}}{1950 \text{ hours}}$$

Where: 52 weeks/year × 37.5 hours/week = 1950 hours

3. Fringe Benefits

Fringe Benefits including annual vacation and statutory holidays are typically 20% to 30% of salary. The actual cost of fringe benefits and the actual annual working days or hours should be used to calculate payroll costs. They include the employers share of:

- UIC charge*
- Workers' Compensation levies*
- Statutory holiday provisions (currently 4%)*
- Canada Pension* and Company Pension
- Vacation pay*
- Medical and Hospitalization insurance
- Life, Dental, and other insurance premiums
- Sick leave provisions and compassionate leave

* Required by Government

4. Disbursements

These costs are those incurred by staff engaged on an assignment and are chargeable directly to the project as described in Section 4.

1.2 Overhead Costs

This category of cost relates to the general operation and maintenance of a Professional Practice which is not chargeable directly to the project.

1. Physical Plant may include:

- office rental
- furnishings
- usual tools and equipment (excluding specialized equipment covered by negotiated rates)
- switchboard, telephones, fax, etc.
- typewriters, word processing equipment, copiers, etc.

2. Operating Costs may include:

- financing
- business and professional licenses
- professional and general business insurance
- stationery and office supplies
- technical library and periodicals
- staff recruitment and training
- audit and legal fees
- bad debts
- administrative salaries
- accountants and clerks
- receptionists
- librarians
- secretaries whose time is not directly chargeable to Client projects

- non-chargeable time by professional and technical staff in updating procedures, attending technical seminars, and other activities which are not chargeable to projects
- business development

Overhead Costs will vary according to the size of an operation, the office location, and the nature of the services provided. Some of the overhead elements may be included in negotiations as reimbursable categories. In these situations, a lower payroll factor could be negotiated.

1.3 Profit

Profit is the balance, after direct costs and overhead costs are deducted from the total revenue, prior to the payment of taxes, dividends and bonuses.

Clients should expect to pay fees that provide a profit to Consultants in return for competent and efficient services from these Consultants.

The level of profit on a specific project would reflect a Consultant's technical and management skills, efficiency, and exposure to risk for that project. Recovery of this profit would be incorporated in the Payroll Multiplier Factor, so described in Section 2 of Appendix A.

2. PAYROLL FACTOR

A payroll multiplier is the means by which overhead costs and profit are recovered from billing. This factor will vary according to the conditions which affect the efficiency of an organization or which affect the overhead costs directly.

Typically, Overhead and Operating Costs are approximately equal to Payroll Costs (Salary + Fringe Benefits) incurred by staff engaged on an assignment.

Based upon cost records for projects with varying manhours, APEGGA believes a Payroll Multiplier Factor of 2.0 to 2.5 is required to sustain a mature and competent consulting practice. In circumstances where some of the overhead items are provided by the Client or where contract employees are utilized, the Payroll Factor should be negotiated to account for potentially reduced overhead costs.

3. EXAMPLE HOURLY RATE CALCULATIONS

(Based on selected annual salaries and assumed annual working hours and fringe benefits)

Position			**	***	Hourly Billing Rate at Payroll Cost Factors:	
* Respon- sibility Level	Typical Title	Typical Experience	Annual Salary (\$/yr)	Hourly Payroll Cost (\$/hr)	2.0 (\$/hr)	2.5 (\$/hr)
B	Junior Geologist/ Geophysicist	2-5 yrs	47,700	31	62	78
			to 50,500	to 32	to 64	to 80
C	Geologist/ Geophysicist	4-10 yrs	61,992	39	78	97
			to 63,000	to 40	to 80	to 100
D,E	Senior Geologist/ Geophysicist	10 + yrs	77,600	50	100	125
			to 94,800	to 61	to 122	to 152
	Principal ****	Hourly billing rates will vary according to this individual's qualifications and level of experience. They should reflect the additional responsibility the Principal carries.				

* Abstracted from APEGGA publication titled "Value of Professional Services".

** Abstracted from APEGGA publication titled "Industry Salary Survey June 1998" using the salary range for each responsibility level. For 1996 and subsequent years, reference should be made to current publications.

*** Hourly Payroll Cost = $\frac{\text{Annual Salary} + 25\% \text{ Fringe Benefits}}{1950 \text{ hours per year}}$

**** Principal is defined as a Professional Geologist or Geophysicist who undertakes to provide responsible direction, both technically and organizationally, to the professional practice performed by a Consultant and who represents that professional practice to Clients.

4. FORMULA

Eg. Calculating and Tabulating the Total Cost of Professional Services on a Unit Time Basis

$$\text{TOTAL COST OF PROFESSIONAL SERVICES} = \text{CONSULTANT FEE (UNIT TIME BILLING RATES} \times \text{TIME EXPENDED)} + \text{DISBURSEMENTS (DISBURSEMENTS} \times \text{FACTOR)}$$

Where:

~ Unit Time Billing Rate — Hourly or Daily Payroll Cost \times Payroll Factor

(The payroll cost may be calculated for each individual employee engaged on a project or rates may be established for each of the various employee classifications.)

~ Time Expended — The actual number of days or hours that each member of the project staff expends on the project.

~ Disbursements — Reimbursable expenses incurred on the project (See Section 4)

~ Disbursement Factor — Typically 1.10 but subject to negotiation for special circumstances and conditions

Eg. Calculating and Tabulating the Total Cost of Professional Services on a Fixed Fee Basis

$$\text{TOTAL COST OF PROFESSIONAL SERVICES} = \text{CONSULTANT FEE (ESTIMATED PROJECT COST, EXCLUDING CONSULTANT'S FEE} \times \text{FACTOR)} + \text{DISBURSEMENTS (DISBURSEMENTS} \times \text{FACTOR)}$$

Where: The Estimated Project Cost Factor depends on several circumstances and conditions, including:

- a) How much time the Consultant Principals must spend on supervision of the project, assuming their time is not directly chargeable to the project,
- b) The amount of time required for secretarial, accounting, administrative staff, or other professional or technical staff whose time is not directly chargeable to the project,

CLIENT/CONSULTANT AGREEMENTS

Standard forms of agreement are available from a number of sources including CIM Special Publication 32. Many Clients who deal with Consultants on a regular basis have also developed their own standard forms which reflect their particular needs. Consultants and Clients using these standard forms should ensure that all of the elements of the agreement outlined in the attached format are included.

The following format is intended as a guide to APEGGA members in drafting Client/Consultant Agreements. It covers the four primary elements of an agreement — scope, schedule, fee basis and payment. Other items included are those that are commonly required in agreements but are not intended to represent a comprehensive list. Each assignment must be considered specifically for its own special requirements.

CLIENT/CONSULTANT AGREEMENT

THIS AGREEMENT made this _____ day of _____ 19 ____ .

BY AND BETWEEN

_____ Client

and

_____ Consultant

WHEREAS the Client intends to engage the services of the Consultant in connection with the provision of _____ services for the _____ *name of project* project.

NOW THEREFORE THIS AGREEMENT WITNESSES that the parties hereby agree as follows:

[Note: If space provided under each of the articles is inadequate, indicate by notation that numbered schedules are attached as appendices.]

ARTICLE I

SCOPE OF SERVICES

1.01 Professional Services

Concise but comprehensive description of services to be provided

1.02 Supplementary Services

Concise but comprehensive description of support services and subcontracts

ARTICLE II

SCHEDULE

Work will commence no later than _____ 19 ____ and the services described in Article I will be performed in accordance with the following schedule:

Concise description of the schedule including dates of significant stages of the work

ARTICLE III

CLIENT RESPONSIBILITIES

3.01 Information

The Client shall provide the Consultant with a written description of the project and provide all background plans, reports and records that will be required to complete the consulting services.

3.02 Authority

The Client shall provide the Consultant with the authority to act as his agent, to gain entrance to property or to seek information from government and other authorities as required in the performance of the consulting services.

3.03 Other

Describe specific items

ARTICLE IV

CONSULTANT RESPONSIBILITIES

4.01 Work Schedule

Describe the schedule for the main elements of the assignment

4.02 Progress Report

Describe scope and frequency

4.03 Cost Estimate

Define the type and quality of estimate to be provided and any specific limitations in schedule or quality

4.04 Other

Describe specific items

ARTICLE V

FEE BASIS

5.01 Professional Services

The Client agrees to compensate the Consultant on the following basis:

Concise description of basis of fee or hourly rates including any targets or lump sum limits

5.02 Disbursements

The Client agrees to reimburse the Consultant for disbursements as described below:

Concise description including mark-ups if applicable and rates for equipment or vehicles as applicable

5.03 Special Services and Conditions

Example

Standby

Standby is defined as days spent on call to report to the field site. Standby rates should be negotiated between the Consultant and the Client.

Rotation

For long-term field projects, rotation of personnel every several weeks (commonly 2 to 3) is considered appropriate.

Concise description of basis of fee or hourly rates

ARTICLE VI

PAYMENT

Invoices including documentation for professional services and disbursements will be submitted to the Client by the Consultant at the end of each month. Invoices are due and payable on receipt by the Client and are overdue days later.

Describe documentation including format and interest on overdue accounts if applicable

ARTICLE VII

TERMINATION OF AGREEMENT

7.01 By Client

Concise description of circumstances and procedures including responsibility and payment

7.02 By Consultant

Concise description of circumstances and procedures including responsibility and payment

ARTICLE VIII

OWNERSHIP OF DOCUMENTS

Describe ownership of originals and schedule for transmittal in relation to completion of the assignment

ARTICLE IX

INSURANCE

Detailed description of insurance coverage to be provided

ARTICLE X

CONFIDENTIALITY

Describe the specific undertaking, if any, to maintain confidentiality of information associated with the assignment

ARTICLE XI

OTHER

Describe specific items such as special requirements for Arbitration

ARTICLE XII

GOVERNING LAW

This Agreement shall be governed by the laws of _____

IN WITNESS WHEREOF the parties hereto have executed this Agreement all as of the day and year first above written.

[Client]

Per: _____

Per: _____

[Consultant]

Per: _____

Per: _____