Value of Professional Services 2004

APEGGA

The Association of Professional Engineers, Geologists and Geophysicists of Alberta

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JUNE 2004 SALARY SURVEY FOREWORD

To the 137 APEGGA Permit Holders and other Employers who contributed to this year's Salary Survey and to others who have contributed in the past, we thank you for making APEGGA's salary survey a high-demand product on an ongoing basis. We also appreciate your adaptation to its changing requirements, enabling the survey to maintain its value as trends and needs develop.

Our main publication - The Value of Professional Services June 2004 - has undergone a few changes. In addition to the information that we have been historically gathering and reporting on, we have added some new twists. Some industry segments have indicated that their pay structures are evolving to the point where additional cash compensation is becoming more significant. In past surveys, APEGGA has concentrated on base salaries only. This year, in addition to reporting base salaries, we are reporting on total cash compensation. Further, we are now requesting information on the gender of our members and linking that information with the salaries reported. Finally, our members have been asking for more detailed information on the differences in the cost of living in various locations around the province. Though we have not linked location with salaries, we are providing information on the relative Consumer Price Index (CPI) for various centres in Alberta

The survey is intended to provide guidelines for both Alberta Employers and individual Members of the three professions (P. Eng., P. Geol., P. Geoph.) in setting salary and other payroll and benefits rates and programs. APEGGA believes individual members are responsible for establishing with their employer the level of remuneration to be received in return for professional services provided. Using the information in the Value of Professional Services plus any other information accessible to you, you can judge if you are adequately paid given your industry sector and the economic activity within that sector, working conditions, responsibility, performance, utilization and situation.

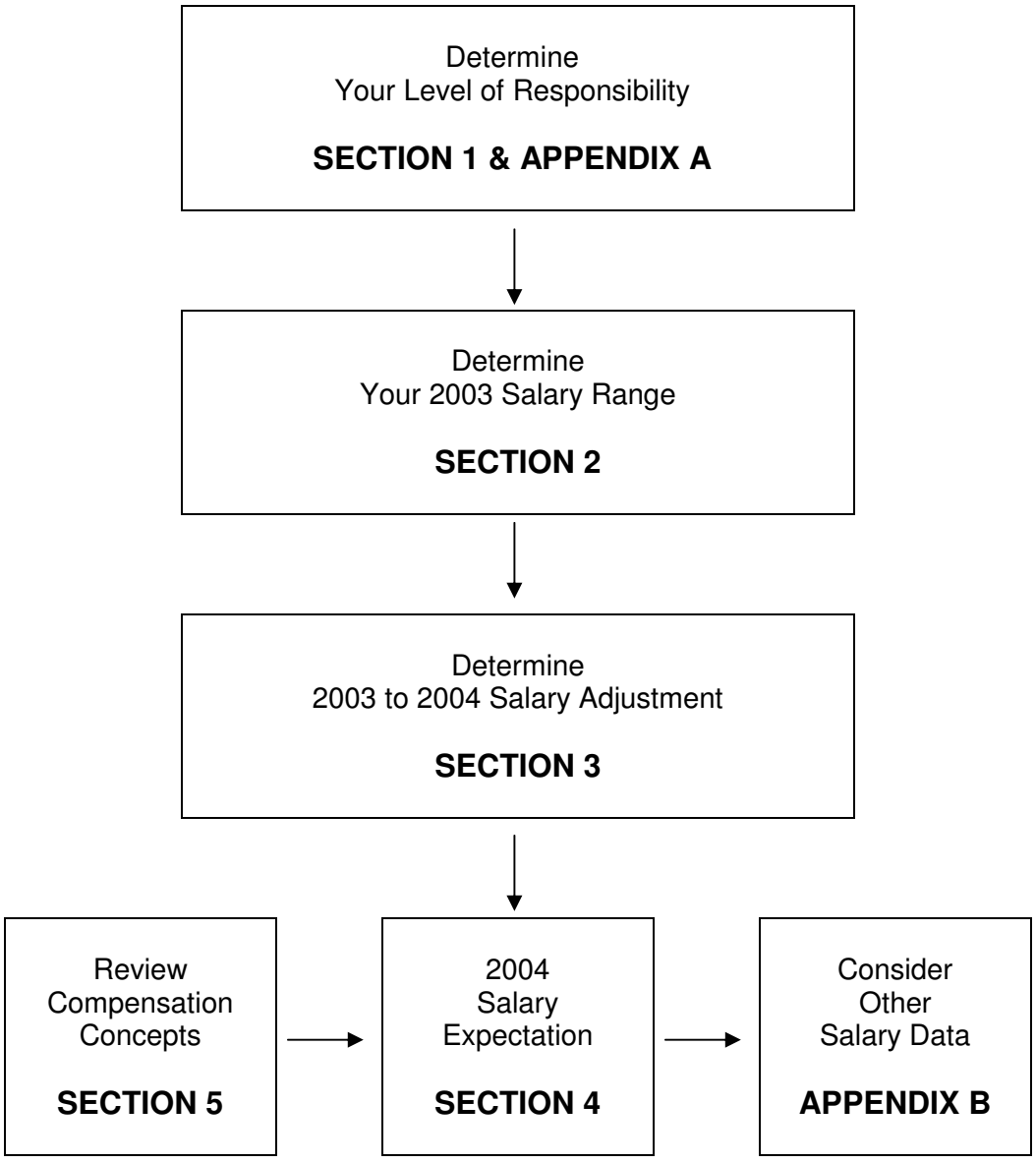
Members work in a wide variety of organizations and carry out tasks which vary just as greatly. It is therefore impossible for the Association to judge whether any given member should get or be given a salary increase. However, to stay at par in terms of purchasing power, you could expect an increase equal to the Consumer Price Index increase in your geographic area. If you are eligible for a performance increase and/or responsibility increase, these could be in addition to the CPI.

Program effectiveness is dependent on the integrity of the data in this booklet and your ability to incorporate it with other information obtained to provide your full compensation picture. It is recognized that not all employment sectors will be readily identified within the sample job descriptions and corresponding rates. However, using these as guidelines should enable you to arrive at a reasonable relationship between your situation and industry equivalents.

With the sustained support of members and employers, the Association believes this program will continue to be a positive influence in helping to maintain a reasonable balance between professional quality services, working conditions and remuneration.

TABLE OF CONTENTS

PROCEDURE FOR USING THIS GUIDE



SECTION 1
DETERMINING YOUR LEVEL OF RESPONSIBILITY

Two methods of determining the level of responsibility of a job are outlined in this section.

The Job Evaluation Guide, which uses point scores to assess a job, is more precise and accurate. The Job Classification Guide is used by many companies but is less precise.

It is recommended the Job Classification Guide be used to verify the results obtained through job evaluation.

METHOD 1: JOB EVALUATION GUIDE

Introduction

This point score guide has been developed as a technique for providing members and employers of members with an accurate, yet easy to use, system for evaluating the level of responsibility of engineering, geological and geophysical jobs. Usage will undoubtedly reveal useful improvements. Used objectively, this guide provides a base whereby any particular engineering, geological and geophysical job can be classified and ranked relative to other engineering, geological and geophysical positions. This same job evaluation system can also be used to evaluate other professional and near professional jobs, thus making comparisons with other occupational groups more systematic and credible.

Job Rating Summary

To provide the most objective rating for the job, the following procedure is recommended:

- rate the job in accordance with the points allocated for each factor: duties, education, experience, etc. on pages 3 to 9. Record points in the left hand column of Table 1 on the following page.
- compare the results with ratings assigned to the benchmark jobs in the tables on pages 10 to 16.
- make any necessary adjustments and record the final points in the right hand column of the chart.
- determine your classification (A, B, C, etc.) using Table 2 on page 17.
- Table 3 is provided as additional information to be used for comparison.
- Method 2: The Job Classification Guide can be used to verify self-evaluation.

Caution in Self-Evaluation

In self-evaluation there will be a tendency toward overrating on some factors, particularly ***duties***, as well as ***recommendations, decisions*** and ***commitments***. Where doubt exists, the next grade or half-grade lower in line will usually prove to be the more accurate choice.

TABLE 1: JOB RATING SUMMARY

Factor	Preliminary Rating Points	Final Rating Points
A. Duties		
B. Education		
C. Experience		
D. Recommendations, Decisions and Commitments		
E. Supervision Received		
F. Leadership Authority and/or Supervision Exercised		
G. Supervision Scope		
H. Physical Demands		
I. Job Environment		
J. Absence from Base of Operations		
K. Accident and Health Hazards		
Total Points		

Benchmark Job Description

A job evaluation guide is difficult to use without guidance from an experienced job analyst on how to apply the guide. To assist you in determining your level of responsibility, sample benchmark job descriptions have been provided on pages 10 to 16. The jobs range from the most junior, to that of a fairly senior manager.

As your job will not match exactly, the points you give your job will vary from the sample jobs evaluated (both on the various factors and in total points).

Job Rating Factors

A. DUTIES

This factor is concerned with the general nature of tasks assigned. The range includes duties performed in an entry level job to those carried out at an advanced level of administration. Select the description that fits your job most appropriately. Carefully consider the relationship that your duties have to those of others in your organization. If you cannot decide between two adjoining descriptions, use the midpoint value.

DESCRIPTION		POINTS
1.0	Receives training in the various phases of office, plant, field, or laboratory engineering, geological or geophysical work as on-the-job assignments. Tasks assigned include: preparation of simple plans, designs, plots, calculations, costs, and bills of material in accordance with established codes, standards, drawings, or other specifications. May carry out routine technical surveys or inspections and prepare reports.	10
1.5	Midpoint value.....	15
2.0	Normally regarded as a continuing portion of an engineer's, geologist's or geophysicist's training and development. Receives assignments of limited scope and complexity, usually minor phases of broader assignments. Uses a variety of standard engineering, geological or geophysical methods and techniques in solving problems. Assists more senior engineers, geologists or geophysicists in carrying out technical tasks requiring accuracy in calculations, completeness of data, and adherence to prescribed testing, analysis, design or combination of methods.	20
2.5	Midpoint value.....	30
3.0	This is typically regarded as a fully qualified professional engineering, geological or geophysical level. Carries out responsible and varied assignments requiring general familiarity with a broad field of engineering, geology or geophysics, as well as knowledge of reciprocal effects of the work upon other fields. Problems usually solved by use of combinations of standard procedures, modifications of standard procedures, or methods developed in previous assignments. Participates in planning to achieve prescribed objectives.	40
3.5	Midpoint value.....	55
4.0	This is the first level of direct and sustained supervision of other professional engineers, geologists or geophysicists or of full specialization. Requires application of mature engineering, geological or geophysical knowledge in planning and conducting projects having scope for independent accomplishment, and coordination of difficult and responsible assignments. Assigned problems make it necessary to modify established guides, devise new approaches, apply existing criteria in new manners and draw conclusions from comparative situations.	70
4.5	Midpoint value.....	90

DESCRIPTION		POINTS
5.0	Usually requires knowledge of more than one field of engineering, geology or geophysics or performance by a specialist in a particular field. Participates in short- and long-range planning. Makes independent decisions for devising practical and economical solutions to problems. May supervise large groups containing both professional and non-professional staff, or may exercise authority over a small group of highly qualified professional personnel engaged in complex technical applications.	110
5.5	Midpoint value.....	130
6.0	Usually responsible for an engineering, geological or geophysical administrative function; directing several professional and other groups engaged in interrelated engineering, geological or geophysical responsibilities; or as consultant, has achieved recognition as an authority in an engineering, geological or geophysical field of major importance to the organization. Independently conceives programs and problems to be investigated. Participates in discussions determining basic operating policies, devising ways of reaching program objectives in the most economical manner and of meeting unusual conditions affecting work progress.	150
6.5	Midpoint value.....	175
7.0	Within the framework of general policy, conceives independent programs and problems to be investigated. Plans or approves projects requiring the expenditure of a considerable amount of manpower and financial investment. Determines basic operating policies, and solves primary problems or programs to accomplish objectives in the most economical manner to meet any unusual condition.	200

B. EDUCATION

Rate the minimum university qualifications in an engineering, geological or geophysical discipline required in order to begin your job.

Note: A rather special situation develops with the factors of ***education*** and ***experience***. Do not rate your position on the basis of level of education and years of experience you have attained. You may have a Master's degree and thirty years of experience. However, if the job requires neither an advanced degree nor extensive experience, rating the job according to your own qualifications may result in a point score that is unreasonably high. Members should estimate the education and experience combination **required by the job**.

LEVEL OF EDUCATION	POINTS
Bachelor's Degree, or equivalent	65
Master's Degree	90
Doctorate Degree	125

C. EXPERIENCE (See "Note" in Education on previous page)

Rate the minimum number of years in full-time, permanent engineering, geological or geophysical work and/or work where an engineering, geological or geophysical background was a distinct asset which would normally be required by a person starting the job. Take your count to the nearest whole or half year.

EXP.	POINTS		EXP.	POINTS		EXP.	POINTS		EXP.	POINTS
<1 year	25		3 years	45		7-8 years	70		15-17 years	113
1 year	30		4 years	50		9-10 years	80		18-20 years	125
1½ years	35		5 years	55		11-12 years	90		21-24 years	138
2 years	40		6 years	60		13-14 years	100		25 yrs & plus	150

D. RECOMMENDATIONS, DECISIONS AND COMMITMENTS

Select the category that fits your job most appropriately. If you cannot decide between two categories, use the midpoint value.

DESCRIPTION		POINTS
1.0	Few technical decisions called for and these will be of routine nature with ample precedent or clearly defined procedures.	35
1.5	Midpoint value.....	40
2.0	Recommendations limited to solution of the problem rather than end results. Decisions made are normally within established guidelines.	45
2.5	Midpoint value.....	50
3.0	Makes independent studies, analyses, interpretations and conclusions. Difficult, complex, or unusual matters or decisions are usually referred to more senior authority.	55
3.5	Midpoint value.....	60
4.0	Recommendations reviewed for soundness of judgement, but usually accepted as technically accurate and feasible.	70
4.5	Midpoint value.....	80
5.0	Makes responsible decisions not usually subject to technical review, on all matters assigned, except those involving large sums of money or long-range objectives. Takes courses of action necessary to expedite the successful accomplishment of assigned projects.	90
5.5	Midpoint value.....	105
6.0	Makes responsible decisions on all matters, including the establishment of policies and expenditures of large sums of money and/or implementation of major programs, subject only to overall policy and financial controls.	120
6.5	Midpoint value.....	135
7.0	Responsible for long-range planning, coordination and making specific and far-reaching management decisions. Keeps management associates informed of all matters of significant importance.	150

E. SUPERVISION RECEIVED

This factor is concerned with the degree to which independent action is required or permitted. It will be limited by the amount of direction received from supervisors or provided through standard practice instructions, precedents or practice. Select the category that fits your job most appropriately. If you cannot decide between two categories, use the midpoint value.

DESCRIPTION		POINTS
1.0	Works under close supervision. Work is reviewed for accuracy, adequacy and conformance with prescribed procedures.	20
1.5	Midpoint value	25
2.0	Duties are assigned with detailed oral and occasionally written instructions as to methods and procedures to be followed. Results are usually reviewed in detail and technical guidance is usually available.	30
2.5	Midpoint value	35
3.0	Work is not generally supervised in detail and amount of supervision varies depending upon the assignment. Usually technical guidance is available to review work programs and advise on unusual features of assignment.	40
3.5	Midpoint value	45
4.0	Work is assigned in terms of objectives, relative priorities, and critical areas that impinge on work of other units. Work is carried out within broad guidelines, but informed guidance is available.	50
4.5	Midpoint value	55
5.0	Work is assigned only in terms of broad objectives to be accomplished, and is reviewed for policy, soundness of approach and general effectiveness.	60
5.5	Midpoint value	70
6.0	Receives administrative direction based on organization policies and objectives. Work is reviewed to ensure conformity with policy and coordination with other functions.	80
6.5	Midpoint value	90
7.0	Operates with broad management authority, receiving virtually no technical guidance and control; limited only by general objectives and policies of the organization.	105

F. LEADERSHIP AUTHORITY AND/OR SUPERVISION EXERCISED

This factor is concerned with the character of the supervisory responsibility. This may be direct (line) or indirect (staff). Select the category that fits your job most appropriately.

DESCRIPTION		POINTS
1	Has no supervisory role.	0
2	May assign and check work of one to five technicians or helpers.	5
3	May give technical guidance to one or two junior engineers, geologists or geophysicists or technicians assigned to work on a common project.	10
4	May give technical guidance to engineers, geologists or geophysicists of less standing or technicians assigned to work on a common project. Supervision over other engineers, geologists or geophysicists not usually a regular or continuing responsibility.	15

DESCRIPTION		POINTS
5	Assigns and outlines work; advises on technical problems; reviews work for technical accuracy and adequacy. Supervision may call for recommendations concerning selection, training, rating and discipline of staff.	20
6	Outlines more difficult problems and methods of approach. Coordinates work programs and directs use of equipment and material. Generally makes recommendations as to the selection, training, discipline and remuneration of staff.	40
7	Reviews and evaluates technical work; selects schedules, and coordinates to attain program objectives; and/or as an administrator, makes decisions concerning selection, training, rating, discipline and remuneration of staff.	60
8	Gives administrative direction to subordinate supervision, and contact with the work force is normally through such levels rather than direct.	80

G. SUPERVISION SCOPE

This factor is concerned with the size of the direct (line) responsibility and is rated in terms of the total number of persons falling into that category. Count your immediate subordinates together with all employees reporting to them, either directly or through other levels of supervision. If numbers vary seasonally or for other reasons, compute an average for the year. Exclude persons, such as students, for whose work you have no continuing responsibility. As well, do not count persons to whom you give occasional technical direction or functional guidance. In short, count persons only for whose work you are fully accountable.

Employees Supervised	0	1	2-3	4-7	8-13	14-20
Points	1	3	5	8	10	15

Employees Supervised	21-30	31-40	41-50	51-75	76-100	101-200
Points	20	25	30	35	40	45

Employees Supervised	201-400	401-750	751-1200	1201-2000	Over 2000
Points	50	55	60	65	70

H. PHYSICAL DEMANDS

This factor is concerned with the intensity and severity of the physical effort required of the job and with the continuity and frequency of that effort. Of those listed below, choose the level of exposure that most closely describes your situation and select the one value that carries the highest point score.

DEMAND	LEVEL OF EXPOSURE				
	Not Applicable	Limited	Occasional	Frequent	Continuing
Standing or Moving About (Inside Position)	0	5	8	10	15
Walking over Rough Ground, Climbing, etc. (Outside Position)	0	8	10	15	20
Heavy Physical Exertion	0	10	15	25	40
Uninterrupted Visual Concentration (as in drafting work)	0	5	10	20	30
Uninterrupted and Intense Mental Concentration	0	5	8	15	20

I. JOB ENVIRONMENT

Under this factor, select the category that describes most clearly the conditions under which your work is normally carried out.

DESCRIPTION		POINTS
1	Office and comparable conditions.	0
2	Best shop, plant or laboratory conditions. Little exposure to dirt, heat, noise, fumes or other disagreeable factors.	3
3	Average shop, plant or laboratory conditions. Would cover positions that are generally conducted under clean and pleasant conditions, but with some exposure to noise, severe weather, dust, wetness, fumes or other disagreeable factors.	5
4	Conditions that are especially dirty, oily, noisy or otherwise disagreeable. Would cover positions involving continuous outside work in all weather.	10
5	Conditions involving continuous exposure to heat and fumes, cold and wet, or to combinations of other disagreeable factors.	20

J. ABSENCE FROM BASE OF OPERATIONS

Under this factor, select the category that most closely describes the demands of your job for travelling and being absent from your base of operations.

DESCRIPTION		POINTS
1	Seldom absent.	
2	Occasionally absent - perhaps a day a week on average.	5
3	Frequently absent - commonly for a couple of days a week, sometimes longer, with considerable travel.	10
4	Absent more than 50 percent of the time, sometimes including weekends, with much travel.	15
5	Absent for long periods from base of operations and/or travel on an almost continuous basis.	20

K. ACCIDENT AND HEALTH HAZARDS

Under this factor, rate your job in terms of conditions that might result in accident or occupational disease. Consider the most prevalent hazard to which you are exposed, not some remote possibility. Select one value only.

HAZARD LEVEL	LEVEL OF EXPOSURE			
	Limited	Occasional	Frequent	Continuing
Low	0	3	5	10
Moderate	3	5	10	15
High	5	10	15	20
Extreme	10	15	20	25

SAMPLE BENCHMARK JOB DESCRIPTIONS AND CORRESPONDING RATINGS

	Engineer-In-Training	Jr. Design Engineer
Summary	For training and development in various phases of engineering work in office, sales, plant, field or laboratory, performs various assigned tasks of comparatively low complexity, normally assisting other engineers.	Assists in the design of new or revised products, equipment, installations or processes, based on established engineering principles to meet functional requirements or performance specifications. Using a variety of standard engineering methods and techniques, will usually handle design problems of moderate complexity or assist more senior engineers to solve difficult problems.
Duties	Performs a variety of tasks such as the preparation of simple plans, designs, calculations, costs and bills of material, catalogues, in accordance with established codes, standards, drawings or other specifications.	Receives assignments of limited scope and complexity, usually minor phases of broader assignments which may include one or more of: - The design of components within the particular branch of engineering (civil, mechanical, electrical, etc.) of a larger design project; - The modification of tooling, plant equipment, imported designs or prototypes of new development, to permit economical manufacturing or to meet performance specifications and requirements or serviceability; - The design of ancillary parts, not within the particular branch of engineering, or equipment pertaining to the branch e.g. foundations and supports for heavy machinery, transports for heavy machinery, transformer housings, etc.; - Confers with shop and departmental personnel while gathering information, seldom outside the company; - May prepare reports such as equipment surveys, cost estimates, process investigations, within the scope of assigned work.
Recommendations, Decisions and Commitments	Normally, decisions made will be of a routine nature invariably having ample precedent or in line with clearly defined procedures.	Recommendations are limited to the solution of the problems rather than the end results. Work requires accuracy in calculations, completeness of data and adherence to prescribed testing, analysis, design or computation methods. Refers unusual problems to more senior engineers. Errors in work would usually be detected before results become serious.
Supervision Received	Works under supervision where the work is reviewed for accuracy, adequacy and conformance with prescribed procedures.	Tasks and duties are assigned in detail and work is under close review by more senior engineers.
Leadership Authority	May give work assignments and check work of 1-5 technicians or helpers.	May give technical guidance to one or two junior engineers or draftspersons.
Guide to Entrance Qualifications	Bachelor's degree in Engineering or Applied Science or its equivalent; little or no practical experience.	Bachelor's degree in Engineering or Applied Science or its equivalent, normally with two to three years working experience from the graduation level.
Job Rating Factor A. Duties B. Education C. Experience D. Recommendations E. Supervision Received F. Supervision Exercised G. Supervision Scope H. Physical Demands I. Job Environment J. Absence from Base K. Accident and Health Hazards	 A — 20 B — 65 C — 25 D — 45 E — 25 F — 5 G — 0 H — 10 I — 5 J — 0 K — 5	 A — 40 B — 65 C — 45 D — 50 E — 30 F — 10 G — 0 H — 10 I — 0 J — 0 K — 0
Total Points	205	250

Jr. Geologist	Electrical Design Engineer	Manufacturing Engineer
Assists in the accumulation and analysis of geological data, conducts geological surveys and keeps up-to-date on current activities in the industry.	Performs assigned duties associated with electrical layout design of projects. These projects include complete substation and diesel station layouts, proposals for the same and modifications to those stations. Will use a variety of standard engineering methods and techniques and will assume responsibility for moderately complex layouts.	Performs a variety of engineering tasks including the development of plant layouts, work methods and manufacturing processes; designing tools; selecting, procuring and installing machines, tools and material-handling equipment; and establishing standard time values for production and non-production operations.
- Maintains subsurface information on a current basis and suggests lease purchases and geophysical programs to the immediate supervisor; - Makes field studies as assigned and prepares both surface and subsurface maps; - Performs microscopic examinations of samples and cores of wells for stratigraphic and reservoir studies; - Assists with the accumulation and the analysis of geological data for an exploratory and/or development drilling program; - Assists the immediate supervisor to keep informed of current activities in industry that might affect company performance.	The electrical engineering work includes: - preparing preliminary, and detailed electrical layout, other than that performed by Protection and Control, based on Assignment Sheets and one line diagrams supplied by client; - liaising with Civil Engineering Section to achieve compatibility of respective proposals; - writing specifications, usually for installation work; - checking information provided by contractors who are bidding on contracts to ensure adequacy of proposals and recommending contract awards based on that information, past experience with the contractor, capability (equipment, etc.) and price; - investigating complaints regarding design received from the field during construction and from operating staff following construction, and making design changes if justified; - making design calculations as required, applying standardized details and devising non-standard details as necessary; - reviewing manufacturers' drawings on request by the Equipment and Materials Branch.	Under general direction, makes independent studies, analyses, interpretations and conclusions in one or a combination of the following assignments: - Process Engineering - determines tools, equipment and dies required for shaping, finishing and assembling an assigned product, thus planning the sequence of operations; - Machine and Tool Design - designs and develops machinery, machine tools, gauges, dies, jigs, fixtures and special tools required as most suitable to the prescribed volume of production, materials and surfaces; - Gauge design - develops special gauges and instruments and applies statistical methods in order to attain precision specified; - Plant or Layout Engineering - arranges machines, lays out plant facilities and set-ups to ensure the most efficient and productive layout. Designs material-handling methods. Develops, designs and recommends long- and short-term plans for maintenance, repair and expansion of buildings, equipment and facilities including power plant and utilities; - Time and Motion Studies - makes studies to determine standard rates and eliminate waste of time, labour and materials; - Quality Control - develops, recommends and administers quality control techniques. Utilizes industrial statistics for the presentation and analysis of quality control and other manufacturing data. Prepares cost estimates, makes studies of feasibility and provides information, advice and engineering assistance within the scope of assigned work.
Recommendations limited to the solution of immediate problems relating to a phase of a project. Decisions relate to the selection of data and the application of techniques. Such judgments are normally made by following established guidelines and practice. Refers unusual problems to a more senior geologist.	Recommendations will include complete solutions within the scope of the job. Unusual problems and techniques of a novel nature will normally be referred to a senior engineer.	Recommendations and decisions are usually based on operational experience. Work is relied upon as sound and authoritative within the scope of an assignment. Difficult, complex or unusual decisions are usually referred to higher authority. Errors of judgement could cause serious loss of manufacturing time and material.
Work is assigned in detail and the incumbent works under close supervision. Work is normally checked for accuracy and completeness.	Projects are assigned and work will be reviewed in detail by more senior engineers.	Work is not generally supervised in detail and the amount of supervision varies depending upon the assignment. More senior supervision is usually available to review work programs and give guidance.
May check the work of one or two more junior geologists and assist them with the application of standard techniques and the interpretation of data.	Checks the work of one or two junior engineers and technicians.	May guide the work of several more junior engineers or technicians when they are employed on the same projects.
Appropriate B.Sc. degree, normally with two years of relevant experience since graduation.	Bachelor's degree in Applied Science or its equivalent, normally with three years working experience since graduation.	Bachelor's degree in Engineering or Applied Science or its equivalent, normally with three to five years of related working experience since graduation.
A — 40 B — 65 C — 40 D — 50 E — 30 F — 10 G — 0 H — 10 I — 5 J — 5 K — 5	A — 40 B — 65 C — 45 D — 55 E — 40 F — 10 G — 1 H — 10 I — 0 J — 0 K — 0	A — 55 B — 65 C — 50 D — 60 E — 40 F — 15 G — 5 H — 10 I — 3 J — 0 K — 3
260	266	306

	Senior (Petroleum) Geologist	Design Engineer
Summary	Conducts special geological studies and prepares recommendations for lease acquisitions. Conducts geophysical investigations and exploratory well drillings in areas that have been approved for a geological program. Carries out necessary geological work for the development of proven and semi-proven leases.	In a specialized field of experience within a branch of engineering (e.g. civil, mechanical, electrical, etc.) develops designs for complicated components of engineering works, structures, installations, processes. Develops plans for the modification of extension of existing facilities.
Duties	- Prepares and reviews with the District Geologist, recommendations for lease acquisitions, geophysical investigations, exploratory well drillings and other special geological studies; - Assists in making economic analyses pertaining to exploration projects, exploratory well proposals, farm-ins and farm-outs, drilling contributions, rental payments and the purchase and sale of oil and gas leases as well as other financial interests; - Reviews proposals for the abandonment of wells and/or dropping of leases and makes recommendations for company action to the District Geologist; - Collaborates with other company exploration personnel including landmen, geophysicists and engineers in matters of mutual interest; - Maintains contacts with external geological personnel, associations and others.	- Makes independent studies, analyses, interpretations and conclusions within the scope of various assigned projects; - May design structural frames in steel reinforced concrete, timber; make layouts and designs of municipal services, industrial buildings, mining plants; - May design mechanical or electrical services of buildings; materials handling installations; power installations; industrial drives; - May be concerned with the design of communications circuitry or power generation and/or transmission, including repeater stations or transformer substations; - May be concerned with the design of chemical or metallurgical process plant installations; - Based on knowledge of site conditions, methods and materials available, time factors and costs, works up a design and/or alternative designs to achieve the desired end, recommending optimum solution; - Prepares reports, cost estimates, specifications; - Consults with and provides specialized instruction for Drafting Department in respect of design notes and sketches; - Confers with more senior design engineers and one of a design project team and with Manufacturing and Purchasing personnel, as necessary to exchange information; - Confers with senior members of consultant's (or client's) organization; with contractors and suppliers.
Recommendations, Decisions and Commitments	Recommendations are usually based on operational experience and are relied upon as sound and authoritative within the scope of an assignment. Errors of judgement could cause considerable financial loss.	Assignments are responsible and varied. Within the scope of an assignment, work is relied upon as sound and authoritative. Recommendations and decisions are usually based on precedent. Difficult, complex or unusual decisions are usually referred to more senior authority. Errors of judgement might cause serious losses.
Supervision Received	Work not generally supervised in detail. More senior geological expertise is generally available for consultation.	Work is not generally supervised in detail and the amount of supervision varies with the assignment. Usually more senior supervision is available to review work programs to give guidance.
Leadership Authority	May guide the work of several more junior geologists and/or technologists when they are assigned to the same project.	May guide the work of several more junior engineers or technicians when they are employed on the same projects.
Guide to Entrance Qualifications	Appropriate B.Sc. degree, normally with three to five years' working experience since graduation.	Bachelor's degree in Engineering or Applied Science or its equivalent, normally with three to five years' related working experience since the graduation level.
Job Rating Factor	A — 55 B — 65 C — 50 D — 60 E — 40 F — 15 G — 0 H — 10 I — 5 J — 5 K — 3	A — 55 B — 65 C — 50 D — 60 E — 40 F — 20 G — 8 H — 5 I — 3 J — 0 K — 3
Total Points	308	309

Sales Engineer	Specialist (Petroleum) Geologist	Production Engineer
Responsible for field sales of apparatus and other delegated products to prospective and established customers. Discusses product application with a good knowledge of customers' technical problems. Determines customers' requirements and takes orders or reports to own department. Expedites deliveries and follows up to ensure satisfaction.	Conducts comprehensive geological studies and prepares recommendations relative to lease acquisitions and exploratory activities in areas approved for activity.	Directs the operation of two or more production units comprising a distinct area or segment of the total process, each unit being supervised by a foreperson or a series of forepersons, one or more of who may be an engineer. Maintenance and control systems based on engineering principles, as well as the susceptibility of the process to variations from standard, require an engineering background for sustained successful direction of the operation.
- Visits new or prospective customers to discuss products on the basis of the company's experience in similar fields and a knowledge of the technical customer's requirements; - Investigates product applications, recommends modifications; ensures proper servicing; proposes adjustments as required; - For fairly standardized products and adaptation, quotes prices, terms and deliveries; - May conduct correspondence on product applications and adjustments; - Transmits all pertinent information to Sales Department to facilitate cost estimating, proper design or modifications where necessary, and ensures that the requirements will be met; - Acts as technical consultant to customers on their problems to ensure best use of the company's products. May participate in the sales planning of the department; - May be required to travel extensively and to entertain customers' representatives.	In collaboration with other company personnel, including landmen, geophysicists and engineers: - Prepares and reviews with the District Geologist, recommendations for lease acquisitions, geo-physical investigations, drilling of exploratory wells and other technical studies to further the district exploratory effort; - Collects and analyses, or directs, the preparation and analysis of geophysical data in order to recommend appropriate development procedures to the District Geologist; - Prepares and/or supervises the preparation of maps and provides interpretations to aid the Production Department in making economic analyses and reserve estimates; - Maintains contact with outside geological personnel, associations and others in order to keep up to date on current events in the industry; - Assists in making or makes economic analyses pertaining to exploration plays, exploratory well proposals, farm-ins and farm-outs, drilling contributions, rental payments, and purchase and sale of oil and gas leases.	- Instructs forepersons regarding objectives. Participates with technical control, development, design and maintenance engineers in analyzing off- standard conditions and the feasibility of new procedures; - Accountable for quality, quantity, cost, safety and employee relations in the area under direction.
Within the scope of the assigned working area, work is relied upon by customers and employer superiors as accurate and sound. Recommendations and decisions are usually based on precedent. Difficult, complex or unusual decisions are usually referred to more senior authority. Errors of judgement might cause serious losses to a customer which could result in large losses to the employer.	Recommends to the District Geologist and other senior personnel in the company, lease acquisitions, geological investigations, exploratory well drilling programs, and technical studies to further the district exploratory effort.	Recommends improvements in procedures and changes in policy. Participates in formulation of policy. Approves transfers and promotions. Recommends salary increases. May approve wage rate changes. Major problems normally referred to higher authority but in emergency must be decided directly and quickly.
Work is not generally supervised in detail and the amount of supervision varies with the assignment. Usually more senior supervision is available to review work programs to give guidance.	General supervision is provided; work is assigned in terms of well-defined objectives and the results desired; informed guidance is readily available.	Daily contact with next level of supervision shared with other area supervisors.
May guide the work of several more junior sales engineers or technicians.	Supervision is incidental to other work performed. May train and direct junior professionals and technologists in work methods relating to assigned projects. May allocate and check work for accuracy and completeness. May assist in the training and development of geological personnel.	General supervision over area. Available for consultation by subordinates on a 24-hour basis, but normally constantly available during day shift only.
Bachelor's degree in Engineering or Applied Science or its equivalent, normally with three to five years' related working experience since the graduation.	B.Sc. in Geology or Geophysics with normally five to ten years of related experience, or a Master's Degree in Geology or Geophysics with four to six years of related experience.	Bachelor's degree in Engineering or Applied Science or its equivalent, normally with five to eight years' experience from graduation, preferably including three to five years in a supervisory capacity.
A — 70 B — 65 C — 50 D — 60 E — 40 F — 15 G — 5 H — 5 I — 0 J — 10 K — 0	A — 70 B — 65 C — 70 D — 80 E — 45 F — 20 G — 3 H — 8 I — 0 J — 5 K — 3	A — 70 B — 65 C — 60 D — 70 E — 50 F — 20 G — 20 H — 10 I — 5 J — 0 K — 5
320	369	375

	Project Engineer	Supervising Engineer
Summary	Acts in a staff role in the design of buildings and machinery. Coordinates design work of subordinates and supervises construction in the course of duties, may supervise a group of ten other engineers, technicians and draftspersons.	Supervises an engineering group of up to about ten professional and/or non-professional technical people performing a variety of duties, normally in a single field of engineering, e.g. structural design, mechanical design, electrical design or concerned with a single product design.
Duties	- Prepares studies and financial analyses of proposed capital expenditures. Advises management on choice of equipment and process design for these expenditures. Prepares specifications and orders for material and machinery for new installation; - Designs buildings and machinery, assisted by subordinates; - Prepares contracts, advises on choice of contractors, directs and supervises the selected contractors. Evaluates machinery; - Controls the project until it is completed.	- Plans detailed methods of solving assigned problems such as: the design of new structures; modifications or additions to existing structures; project concerned with product improvements, manufacturing method changes, equipment or process changes; - Delegates components to staff, sees the work through to meet schedules and coordinates assignments with other groups; - Prepares or requests preparation of design notes, drawings, specifications and occasionally prototypes or models; - May give technical direction to construction or installation or design projects to ensure adherence to specifications; - Prepares or requests preparation of cost estimates, engineering studies and reports as required; - Responsible for the maintenance of engineering office files, equipment and procedures; - Confers, as required, with senior engineers and management of the company, occasionally with contractors, consultants and suppliers.
Recommendations, Decisions and Commitments	Recommendations include choice among alternatives in design, machinery and process. Will be required to devise new approaches to methods of reaching solutions. Errors could cause extra expenditures in money or time.	Recommendations will normally relate to alternatives in design or use of different materials to achieve the same purpose and are subject to review to ensure accordance with overall plans and company policies. Modifies existing engineering criteria as occasion demands by devising new approaches to the solution of problems. Errors could cause delays, possibly extending into areas where expenditures might be involved.
Supervision Received	Works under general direction and guidance in order to reach objectives. Reacts to priorities. Cooperates with peer groups.	Works under general direction and guidance following instructions relating to objectives, relative priorities and necessary cooperation with other units.
Leadership Authority	Outlines work for subordinates and review of adequacy. Responsible for personnel assigned on a permanent or temporary basis. Acts as company representative in dealing with contractors.	Makes recommendations concerning selection and termination, and is responsible for the training, rating and discipline of staff. Outlines and assigns work, and reviews it for technical adequacy.
Guide to Entrance Qualifications	Bachelor's degree in Applied Science or its equivalent, normally with seven to ten years' experience in the related field since graduation.	Bachelor's degree in Engineering or Applied Science or its equivalent, normally with nine to twelve years' experience related to the type of work since graduation.
Job Rating Factor	A — 70 B — 65 C — 70 D — 80 E — 55 F — 20 G — 10 H — 5 I — 5 J — 2 K — 5	A — 70 B — 65 C — 90 D — 80 E — 55 F — 30 G — 10 H — 5 I — 0 J — 0 K — 0
Total Points	387	405

Supervising Highway Const. Engineer	Senior Engineer - Specialist	Senior Production Engineer
Supervises highway construction projects. Responsible for hiring, firing, promotion, training and discipline of about 70 professional and other subordinates. Designs certain non-complex structures. Department representative in control of contractor's work.	Under administrative and/or high technical direction, works as a senior engineer-specialist or consultant in a particular field of engineering, development or research. Participates in planning, organizes work methods and procedures. Makes independent decisions within own sphere, usually exercising technical authority over a small group of engineer specialists.	Directs the operation of two or more complex continuous processes, i.e. chemical, mining, etc., producing large quantities of product with reliance upon engineering control and maintenance systems.
- Through subordinates, supervises field crews and control equipment. Administers the personnel aspect for group; - Ensures that contractors observe the terms of the contract and adhere to specifications. Authorizes changes to specifications where necessary and negotiates bids for work not covered by the contract. - Liaises between own crew or contractors and other agencies or group; - Designs certain structures such as retaining walls, culverts and super-span culverts; - Checks claims from contractors when these refer to extras or alterations to contract.	- Provides specialized advice of an advanced technological nature for the solution of specific problems; - Participates in planning by providing original and ingenious approaches to the practical and economical solution of problems; - Within own specialized sphere, directs research into new resources, products, processes or methods; - Interprets and evaluates data obtained from various engineering and/or research investigations; - Keeps well informed of the latest technological developments relating to field of practice; - Ensures that staff morale is maintained at a high level by building a reputation for efficient planning and a high level of creative thinking.	- Plans production in coordination with other operations and customer demand; - Assists technical control personnel in establishing standards and field tests; - Coordinates, specifies and schedules production and maintenance activities. Analyzes and corrects off-standard conditions with specialized technical assistance; - Accountable for quality, quantity, costs, safety and employee relations.
Recommendations are of broad scope in achievement of objectives. Required to make decisions in the field when plans and contact require alteration. Responsible for the overall performance of crews.	Makes responsible decisions, subject only to highest technical review, on all matters assigned to jurisdiction. Decisions involving large sums of money or the selection of long-range objectives are usually referred to higher authority. Takes courses of action necessary to expedite the successful accomplishment of assigned projects.	Recommends improvements in plant procedures and changes in policy. Participates in policy formulation. Approves salary increases. Has wide latitude for decisions affecting operations.
Works from generally accepted departmental policy and from established priorities. Considers relations with municipalities and other agencies affected by construction.	Work is assigned in terms of broad objectives to be accomplished, leaving wide authority within sphere, with virtually no technical guidance, but subject to general administrative control.	Broad direction received from Plant Manager in a small plant varying to limited supervision from Production Superintendent in a large plant.
Responsible for all aspects of the work of assigned subordinates.	Gives technological advice & direction to a group of professional specialists. Understanding the necessity of maintaining an atmosphere of free-thinking creativity, outlines difficult problems and methods of approach. Coordinates work programs and directs use of equipment and material.	Directs activities of from 50 to over 200 people depending upon complexity of operation.
Bachelor's degree in Engineering or Applied Science or its equivalent, normally with seven to ten years' related experience since graduation.	Bachelor's degree in Engineering or Applied Science or its equivalent, normally with nine to twelve years (or Master's or other advanced degree with six or more years) of diversified research-development and/or design experience from the graduation level.	Bachelor's degree in Engineering or Applied Science or its equivalent, normally with nine to twelve years' experience since graduation including five to ten years in a supervisory capacity.
A — 70 B — 65 C — 70 D — 70 E — 50 F — 30 G — 35 H — 10 I — 5 J — 12 K — 5	A — 90 B — 90 C — 90 D — 80 E — 60 F — 40 G — 10 H — 5 I — 5 J — 0 K — 5	A — 90 B — 65 C — 90 D — 90 E — 60 F — 40 G — 40 H — 5 I — 5 J — 5 K — 3
422	475	493

	Chief Design Engineer	Engineering Manager
Summary	Directs the staff of an engineering office and coordinates the work of the design staff with that of field staff including several professional functions.	Manages a large staff, administers and coordinates several professional, sub-professional and/or mechanical trades functions.
Duties	- Plans and allocates work on broad general assignments with the limits of company policy; - Establishes working programs to attain objective in the most economical manner; - Acts as engineering consultant and advisor to the company; - Assists in developing and maintaining contacts inside and outside the company; - Makes direct contact with clients.	- Works independently on broad general assignments with responsibility for planning associated activities, limited only by company policy; - Participates in establishing objectives and basic operating policies. Devises ways of reaching program objectives in the most economical manner and of meeting any unusual conditions affecting work progress; - Conducts the normal administrative functions related to position; - Acts as engineering consultant and advisor to the organization; - Develops and maintains top level contacts inside and outside the company.
Recommendations, Decisions and Commitments	Makes responsible decisions within the limits of company policy. Recommends changes in company policy. Implements policies affecting company expenditure and makes decisions affecting operations.	Makes responsible decisions without reference to superiors. Implements approved major programs involving expenditures of large sums of money. Errors in judgment could cause grave losses.
Supervision Received	Broad direction from President or Vice President of company. Work is reviewed for adherence to company policy. Occasional review of technical matters.	Work is reviewed for accomplishment, adherence to company policy and coordination with other phases of company's operations.
Leadership Authority	Selects, rates, disciplines and terminates staff. Reviews and evaluates technical work. Coordinates staff requirements and disposition to suit schedule of work in hand and work planned. Allocates work to various section or project heads.	Makes decisions regarding the selection, development, rating, discipline and termination of staff. Reviews and evaluates technical work. Selects, schedules and coordinates to attain program objectives.
Guide to Entrance Qualifications	Bachelor's degree in Engineering and broad engineering experience of fifteen years or more, of which about three to five years should have been in responsible administrative duties.	Bachelor's degree in Engineering or Applied Science or its equivalent, normally with broad engineering experience including responsible administrative duties.
Job Rating Factor	A — 130 B — 65 C — 113 D — 90 E — 70 F — 60 G — 20 H — 5 I — 0 J — 5 K — 3	A — 130 B — 65 C — 138 D — 105 E — 80 F — 60 G — 40 H — 5 I — 0 J — 0 K — 0
Total Points	561	623

Use of Point Count Results

After completing the Job Rating Summary, refer to the chart below in order to determine the ***classification*** of the job. As it is not practical to have a pay range for each point count, jobs are classed together in one level or classification.

TABLE 2: JOB LEVEL CLASSIFICATION

Point Count	Classification
0 to 250	A
251 to 300	B
301 to 375	C
376 to 480	D
481 to 595	E
596 to 700	F
over 700	F+

Table 3 correlates responsibility level with years of experience. This table is provided for use as a general check of self-evaluation.

TABLE 3

APEGGA 2004 Employer Salary Survey
Years of Experience by Level of Responsibility
All Professions - All Organizations

		2004 Results - Years of Experience					
Level	Total E, G & G's	Mean	D_1	Q_1	Median	Q_3	D_9
A	445	2.0	0.0	1.0	1.0	2.0	4.0
B	580	5.0	2.0	3.0	4.0	6.0	9.0
C	835	10.0	5.0	6.0	8.0	12.0	19.0
D	1,136	17.0	8.0	10.0	15.0	22.0	25.0
E	1,041	22.0	13.0	17.0	22.0	27.0	30.0
F	741	26.0	17.0	22.0	26.0	31.0	34.0
F+	255	26.0	17.0	21.0	26.0	31.0	35.0

See Section 2 for definition of survey statistical measures (D1, Q1, etc.)

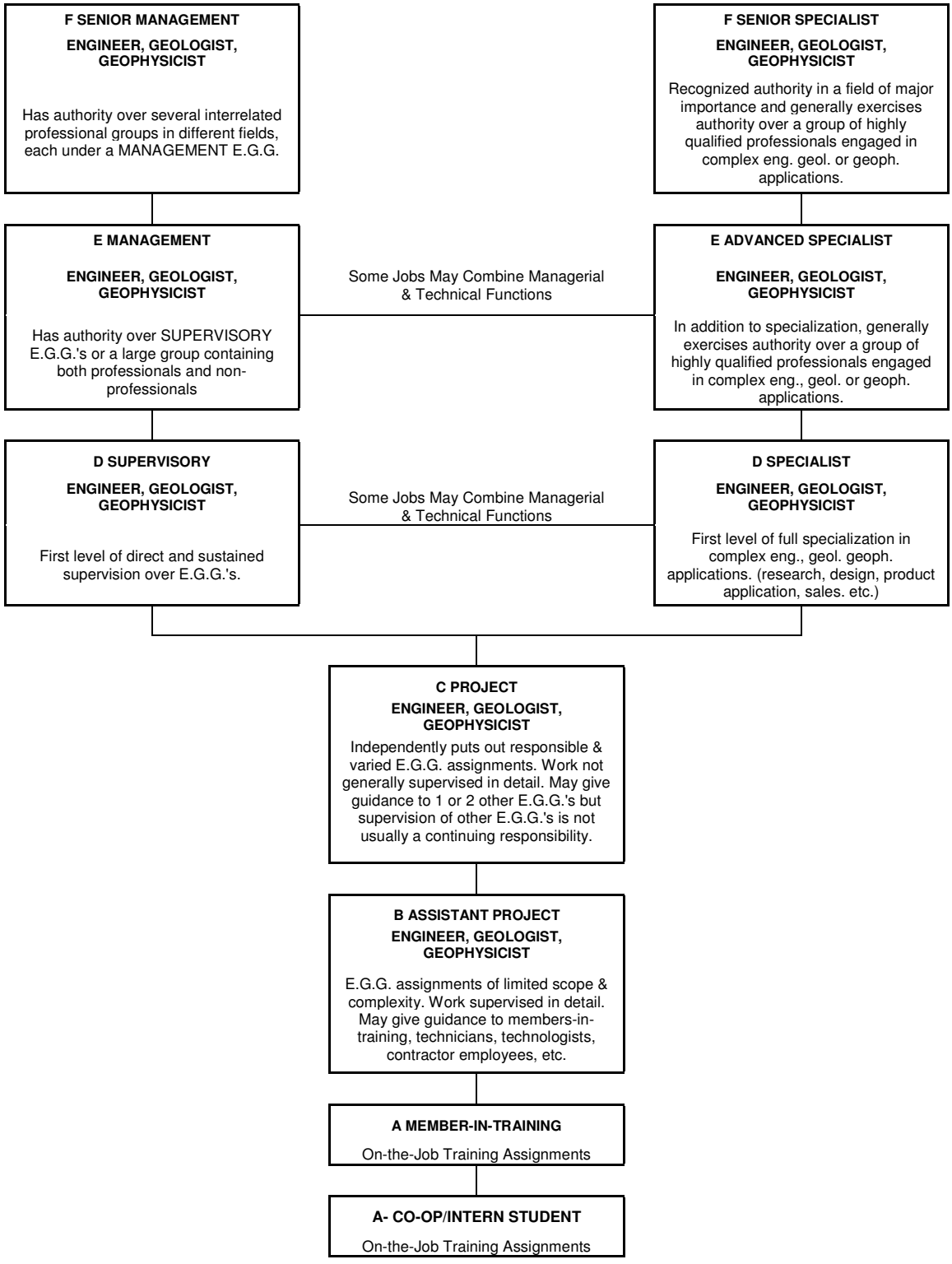
METHOD 2: JOB CLASSIFICATION GUIDE

Many companies use the generally adequate and less time consuming (but less precise) classification system commonly called the ABC system. This system broadly describes each level of responsibility according to five factors: Duties; Recommendations, decisions and commitments; Supervision received; Leadership authority and/or supervision exercised; and Guide to entrance qualifications. A copy of the description for each level of responsibility is provided in Appendix A. An abbreviated Job Classification Guide of the ABC system is shown below.

As many salary surveys are carried out using the ABC system, it is useful to be able to equate the results of the Point-Count Job Evaluation system and the Job Classification system. Application of the

two systems has not been completely standardized across companies so absolute relationships cannot be set. A reasonable relationship between the two systems can be established and this is shown in Figure 1 below. Individual companies will vary to some degree.

Figure 1: Job Classification Flowchart



SECTION 2
DETERMINING YOUR *2004 SALARY RANGE*

INTRODUCTION

The most important variable operating to determine salary ranges for any given occupational group is the market, the relationship between the supply of and the demand for the services of a particular occupational group: a single supply/demand market.

There are many factors affecting the market and those affecting the market for one occupational group are different from those affecting the market for another occupational group. Market surveys to determine the salaries paid by similar companies to members of the occupational group being studied are therefore widely used and consulted.

APEGGA MARKET SURVEY

In June of 2004 APEGGA conducted its annual Employer Salary Survey. A total of 9,156 salary statistics for Alberta engineers, geologists and geophysicists were supplied by 137 employers who are identified in Appendix D.

Participating organizations provided salary information based on the level of responsibility of each employee's position, data on year of graduation, if available, and information on the classification of their organization.

Selected salary range tables from this year's survey are reported here and various demographic survey results are given in Appendix B.

USING SURVEY RESULTS TO DETERMINE YOUR 2004 SALARY RANGE

To use salary survey data as a guideline it is important to consider all reported results and to keep in mind the following remuneration concepts.

- Salary is basically determined by the level of responsibility of the position.
- Salary levels vary between professional groups. Survey results are reported in Tables 4, 5 and 6.
- Salary levels also vary among industry sectors. Survey results are reported in Tables 7 and 8.
- Data on weekly hours of work and overtime compensation is given in Figure 3 and Table 11 in Section 5.
- Data on Additional Cash Compensation is noted in Tables 11 and 13 in Section 5. Data on Total Cash Compensation is reported in Tables 14 through 18 in Section 5.

Salaries by year of graduation should only be used as a check on career progress relative to others of an equivalent age and as a check on the more basic level-of-responsibility concept. Figure B-2 in Appendix B provides survey results on salaries by year of graduation and level of responsibility.

SURVEY NOTES

- The salaries quoted in the tables that follow are base salaries in effect as of June 2004. Base salaries include cost of living allowances, bonuses which have a continuing relationship to salary, pay for holiday days (statutory and declared) and vacation days. The base salary does not include bonuses based on unusual performance or which do not become, for the next year or the next pay period, part of the base salary. Commissions, fringe benefits, profit sharing are not included.

- The statistical measures used in compiling the tables are:

  Mean: Numerical average. The mean is not shown where there are fewer than five observations.

  Low Decile (D1): 90% of the salaries were above this point and 10% were below it. The decile rate is not shown where there are fewer than seven observations.

  Low Quartile (Q1): 75% of the salaries were above this point and 25% were below it. The low quartile rate is not shown where there are fewer than five observations.

  Median: 50% of the salaries were above this point and 50% were below it. The median rate is not shown where there are fewer than five observations.

  High Quartile (Q3): 25% of the salaries were above this point and 75% were below. The high quartile rate is not shown where there are fewer than five observations.

  High Decile (D9): 10% of the salaries were above this point and 90% were below it. The high decile rate is not shown where there are fewer than seven observations.

- Where no significant differences were found between salaries paid to engineers, geologists and geophysicists in a particular industry sector, or where there was insufficient data to break responses down by professions, data from all three professions were combined into a single table for that specific industry sector.

- Negative figures are indicated by negative signs.

APEGGA 2004 EMPLOYER SALARY SURVEY HIGHLIGHTS

ANNUAL BASE SALARIES BY LEVEL OF RESPONSIBILITY

TABLE 4

Engineers – All Industries								
Level	# of Engs.	Change in Mean '03-'04	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	318	0.7%	38,375	31,200	34,846	38,961	42,000	43,800
A	747	3.2%	50,455	44,000	46,992	50,294	54,060	56,952
B	942	2.8%	58,595	49,200	54,034	58,948	63,600	67,368
C	1,438	3.9%	71,128	59,500	65,856	72,228	76,212	80,880
D	1,709	3.4%	87,838	74,400	81,003	88,000	94,265	100,152
E	1,579	3.7%	106,152	88,900	98,291	107,800	115,000	120,480
F	983	3.2%	126,442	101,816	116,400	126,750	136,166	150,000
F+	288	1.4%	150,459	120,494	131,456	143,829	161,110	189,779

TABLE 5

Geologists – All Industries								
Level	# of Geols.	Change in Mean '03-'04	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	17	5.4%	47,259	36,900	40,800	51,000	53,400	55,200
A	50	-0.1%	52,434	41,500	48,000	55,200	57,000	58,000
B	101	4.0%	59,947	47,000	56,511	62,500	65,000	68,062
C	114	7.7%	74,775	65,000	70,500	74,457	79,413	82,020
D	128	5.1%	97,881	81,783	89,428	98,018	104,000	114,816
E	177	3.5%	115,110	102,319	112,000	117,300	120,200	123,900
F	164	1.2%	131,035	117,193	127,100	132,500	138,000	144,000
F+	41	1.8%	157,233	133,536	139,200	144,930	162,596	180,000

TABLE 6

Geophysicists – All Industries								
Level	# of Geophs.	Change in Mean '03-'04	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	0	No data reported at this level						
A	9	-0.3%	52,554	32,000	51,500	53,000	55,800	62,648
B	28	-8.1%	55,330	38,952	43,848	60,191	64,000	64,200
C	44	0.3%	72,115	49,598	70,000	74,000	78,000	82,764
D	58	0.5%	96,915	70,546	90,000	98,000	102,260	117,000
E	91	4.2%	118,880	109,818	117,000	121,000	123,600	127,700
F	97	3.5%	135,432	124,900	131,000	135,200	138,500	144,000
F+	33	-0.9%	153,397	136,415	138,247	150,000	160,980	172,000

ANNUAL BASE SALARIES BY INDUSTRY SECTOR

TABLE 7

Engineers by Industry Sector

CONSULTING SERVICE

Level	# of Engineers	Change in Mean '03-'04	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	31	5.9%	32,071	25,800	28,980	31,200	32,200	39,520
A	164	6.0%	45,223	41,080	42,994	45,006	47,800	50,018
B	183	3.8%	51,723	44,013	47,008	50,505	55,536	61,000
C	190	5.5%	59,937	51,000	55,994	60,000	64,506	68,224
D	179	4.0%	75,024	65,000	68,250	74,704	80,881	87,009
E	225	5.5%	90,319	76,200	84,494	90,000	97,562	103,000
F	147	1.0%	104,051	86,507	95,014	103,506	111,190	122,031
F+	54	11.1%	132,725	110,019	120,000	125,070	137,696	152,499

ENGINEERING, PROCUREMENT AND CONSTRUCTION

Level	# of Engineers	Change in Mean '03-'04	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	28	0.4%	37,993	31,200	36,400	38,400	40,560	43,200
A	170	-0.3%	50,478	45,760	48,000	50,398	52,941	55,526
B	194	0.7%	59,257	52,000	55,200	58,835	63,128	67,200
C	300	2.4%	72,323	62,040	67,200	72,000	76,960	83,000
D	396	1.7%	90,005	77,000	84,000	90,000	96,000	102,000
E	387	3.1%	108,971	96,949	102,000	108,000	115,200	123,600
F	351	5.4%	129,997	112,800	119,995	126,900	136,080	151,813
F+	91	5.0%	154,301	130,000	137,729	146,652	164,800	192,960

RESOURCE EXPLOITATION – EXCEPT OIL & GAS

Level	# of Engineers	Change in Mean '03-'04	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	3	No data reported at this level						
A	4	No data reported at this level						
B	11	-0.8%	57,489	53,600	55,500	58,995	59,696	60,600
C	13	2.8%	71,573	64,800	69,000	72,100	76,176	76,176
D	16	-0.4%	85,780	79,050	79,200	85,500	88,285	90,293
E	12	0.2%	103,702	95,000	99,500	105,500	107,315	107,660
F	7	-7.7%	119,096	111,990	115,500	116,500	124,620	130,790
A-	3	No data reported at this level						

TABLE 7 (cont'd)

Engineers by Industry Sector

RESOURCE EXPLOITATION – OIL & GAS

Level	# of Engineers	Change in Mean '03-'04	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	149	1.0%	40,236	33,674	36,900	40,800	43,193	45,000
A	185	2.8%	55,059	50,156	53,035	55,388	57,000	59,502
B	251	2.0%	62,625	57,281	60,000	62,882	65,434	68,500
C	295	4.7%	74,930	67,500	71,425	74,600	77,500	81,160
D	449	1.5%	93,054	82,418	87,400	92,542	97,680	104,000
E	553	3.8%	113,313	102,876	107,800	113,400	118,000	122,940
F	324	3.5%	136,834	123,560	127,466	135,000	142,028	155,000
F+	106	2.5%	160,061	135,250	140,213	150,900	169,000	195,000

MANUFACTURING – DURABLES (Includes machinery, equipment, tools, furniture, wood, concrete, steel and plastic products.)

Level	# of Engineers	Change in Mean '03-'04	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	0		No data reported at this level					
A	12	3.9%	49,428	40,426	41,413	48,000	54,072	54,432
B	24	0.6%	56,840	47,256	48,936	57,680	64,200	64,920
C	33	5.4%	70,215	60,770	66,300	69,600	74,000	78,000
D	17	-3.5%	80,973	64,800	72,312	84,000	87,360	91,000
E	10	-5.9%	97,184	87,975	90,750	93,600	101,982	105,888
F	2	2.6%	No data reported at this level					
F+	2	-5.0%	No data reported at this level					

MANUFACTURING – NON-DURABLES (Includes food products, beverages, rubber, leather, textiles, pharmaceuticals, chemicals, plants, and pulp & paper.)

Level	# of Engineers	Change in Mean '03-'04	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	18	-0.3%	37,147	31,980	34,800	38,400	38,640	40,740
A	15	3.7%	51,332	48,420	48,420	52,000	53,600	54,000
B	40	0.3%	57,959	52,644	52,644	57,252	59,700	67,055
C	42	2.8%	70,331	62,256	65,500	70,100	72,246	79,740
D	70	5.5%	84,633	78,456	80,112	83,192	88,000	91,511
E	95	4.5%	98,748	89,916	92,748	96,540	104,508	109,956
F	26	3.8%	122,780	110,509	115,900	123,048	126,852	130,656
F+	6	-8.1%	139,919		128,553	143,544	146,472	

TABLE 7 (cont'd)

Engineers by Industry Sector

SERVICE – NOT FOR PROFIT (Includes governments and their controlled R & D organizations, regulatory agencies, educational and health care organizations, and Crown corporations.)

Level	# of Engineers	Change in Mean '03-'04	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	5	-3.9%	27,384		27,318	27,318	28,756	
A	83	9.6%	49,996	45,984	47,111	49,466	52,008	55,000
B	103	11.8%	61,778	52,893	55,898	61,801	67,368	70,666
C	310	7.4%	72,777	61,795	69,179	76,092	76,212	80,079
D	201	6.6%	83,539	73,866	80,252	85,620	86,730	90,502
E	80	2.7%	92,202	80,866	85,819	90,606	96,852	105,000
F	43	2.9%	109,939	92,898	99,597	101,816	116,900	132,000
F+	13	-1.0%	126,295	111,250	118,700	119,603	137,400	145,000

SERVICE – FOR PROFIT (Includes transportation companies [pipeline, truck, etc.], storage, computer sales / maintenance, financial services, general sales and supply-wholesale or retail-manufacturers' associations.)

Level	# of Engineers	Change in Mean '03-'04	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	4	No data reported at this level						
A	4	No data reported at this level						
B	5	-10.6%	49,921	43,260	47,600	51,572	52,225	54,950
C	7	-11.4%	64,792	49,200	57,300	66,432	72,100	73,668
D	8	0.3%	88,823	75,391	80,808	88,050	94,008	115,000
E	9	-1.1%	101,279	79,800	90,000	110,000	112,766	120,400
F	5	-1.3%	118,087	110,000	120,000	120,000	120,000	120,433
F+	4	No data reported at this level						

UTILITY – RATE CONTROLLED

Level	# of Engineers	Change in Mean '03-'04	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	60	1.7%	39,180	34,602	36,018	39,550	41,421	43,267
A	78	2.5%	51,694	46,680	48,120	52,836	54,060	56,784
B	57	0.0%	58,289	51,604	56,076	58,584	61,875	62,700
C	126	4.6%	71,416	58,901	66,060	71,508	76,080	83,892
D	222	6.0%	87,972	74,992	81,784	88,600	93,576	99,408
E	128	6.1%	108,083	91,608	100,248	110,568	114,516	117,888
F	64	3.1%	120,683	99,147	112,320	120,000	131,988	136,740
F+	11	16.7%	151,641	124,020	126,000	132,000	160,000	202,080

TABLE 7 (cont'd.)

Engineers by Industry Sector								
ADVANCED TECHNOLOGIES								
Level	# of Engineers	Change in Mean '03-'04	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	20	-0.2%	36,535	33,600	34,846	34,846	38,400	39,600
A	32	4.6%	49,953	44,000	45,700	48,000	54,000	54,000
B	74	2.8%	57,658	50,967	55,000	57,788	60,472	64,174
C	122	4.0%	72,781	63,000	68,000	73,200	78,308	80,413
D	151	4.3%	89,794	76,000	85,200	92,261	96,140	100,000
E	80	3.0%	109,240	93,600	105,632	112,200	115,400	117,726
F	14	0.3%	121,912	105,000	109,200	123,760	132,840	135,128
F+	1	No data reported at this level						

TABLE 8

Geoscientists by Industry Sector								
CONSULTING SERVICE – GEOLOGISTS								
Level	# of Geologists	Change in Mean '03-'04	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	1	No Data Reported In 2003	No data reported at this level					
A	12		41,329	37,000	37,518	41,516	44,000	44,500
B	21		47,387	41,500	43,560	47,000	50,000	54,500
C	12		56,120	48,000	48,000	57,949	60,500	61,275
D	14		74,093	60,500	65,021	74,984	80,008	81,783
E	13		91,558	75,000	80,000	89,500	102,088	102,319
F	19		100,473	81,000	89,461	93,000	117,000	120,003
F+	2		No data reported at this level					
RESOURCE EXPLOITATION – OIL & GAS – GEOLOGISTS								
Level	# of Geologists	Change in Mean '03-'04	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	16	7.7%	48,262	39,600	40,800	51,000	53,400	55,200
A	35	3.9%	55,963	50,500	54,500	56,200	57,240	59,280
B	70	4.7%	63,269	57,240	60,000	64,000	66,500	68,700
C	78	8.8%	78,044	70,000	72,578	75,545	80,040	83,000
D	93	5.9%	102,693	88,140	94,710	101,000	108,687	120,000
E	162	3.9%	117,267	107,493	114,000	118,000	120,473	124,000
F	140	3.2%	135,509	126,000	129,780	133,860	139,042	145,000
F+	39	3.3%	159,527	134,820	141,163	145,530	162,596	180,000

TABLE 8 (cont'd)

SERVICE - NOT FOR PROFIT- GEOLOGISTS (Includes governments and their controlled R & D organizations, regulatory agencies, educational and health care organizations, and Crown corporations.)

Level	# of Geo-physicists	Change in Mean '03-'04	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	0	No Data Reported In 2003	No data reported at this level					
A	3		No data reported at this level					
B	9		62,862	60,000	62,500	62,500	62,910	66,300
C	23		73,879	67,760	70,500	74,800	75,200	80,600
D	18		94,169	87,024	89,428	93,570	98,030	100,180
F	0		No data reported at this level					
F	4		No data reported at this level					
F+	0		No data reported at this level					

CONSULTING SERVICE - GEOPHYSICISTS

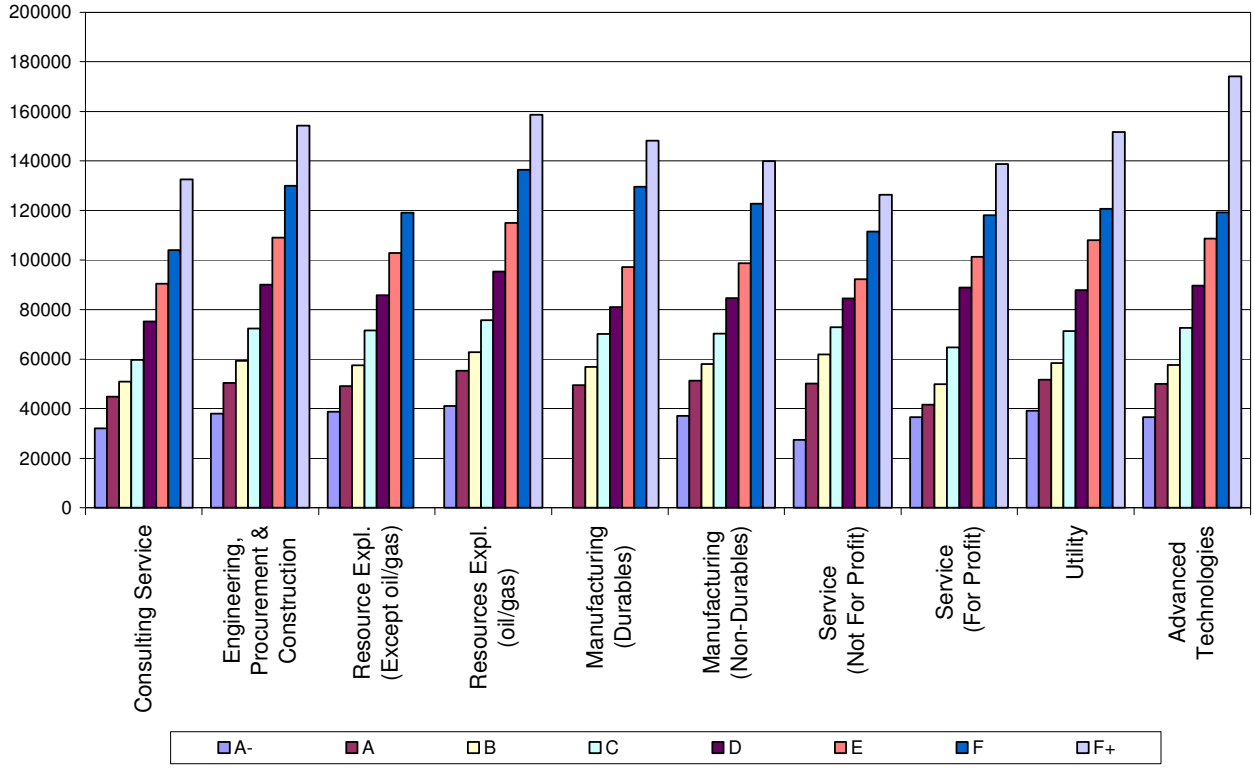
Level	# of Geo-physicists	Change in Mean '03-'04	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	0	No Data Reported In 2003	No data reported at this level					
A	2		No data reported at this level					
B	11		44,034	38,808	38,952	41,091	44,725	49,200
C	10		59,941	46,781	48,961	49,598	66,000	73,200
D	12		77,706	62,730	67,758	74,468	90,000	90,000
E	7		93,013	59,000	86,520	97,110	104,287	109,818
F	4		No data reported at this level					
F+	4		No data reported at this level					

RESOURCE EXPLOITATION - OIL & GAS - GEOPHYSICISTS

Level	# of Geo-physicists	Change in Mean '03-'04	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A	7	No data reported at this level						
B	17	3.6%	62,640	59,300	60,530	62,880	64,200	64,480
C	33	5.8%	76,475	70,800	73,000	76,000	79,000	83,000
D	45	5.9%	102,724	92,391	97,000	101,000	107,100	117,000
E	83	4.9%	121,663	115,000	118,800	121,800	124,862	127,700
F	92	4.2%	136,443	128,760	131,494	135,300	138,500	144,000
F+	26	-1.7%	152,124	136,415	139,300	150,000	159,410	167,000

FIGURE 2

Mean Yearly Salaries of Engineers, Geologists & Geophysicists by Industry
June 2004



SECTION 3
DETERMINING 2004 TO 2005 SALARY ADJUSTMENT

The market varies from year to year. After identifying your market salary for 2004 (Section 2), you should then examine the current market pressures on salaries.

1. INFLATION FACTOR

The inflation factor adds an amount (usually expressed in percent) to allow for the percentage increase in the Consumer Price Index (a restoration of the value of the dollar concept). National CPI increases as well as those for Alberta, Edmonton and Calgary are supplied below in Table 9. In Appendix C, you will find a comparative Consumer Price Index for various centres around Alberta.

TABLE 9

Consumer Price Increase Index (1992 = 100)
Year-Over-Year Percent Change

	Canada	Alberta	Edmonton	Calgary
1992	1.5	1.5	1.8	1.4
1993	1.8	1.2	0.8	1.3
1994	0.2	1.5	1.6	1.4
1995	2.5	2.4	1.9	2.7
1996	2.3	2.3	2	2.8
1997	1.8	1.8	1.6	2
1998	1	1.5	1.2	1.9
1999	1.8	2.1	2.1	2
2000	3	4	3.7	4.4
2001	2.8*	2.7*	2.7*	2.7*
2002	2.3	2.9	2	3.6
2003	2.2	3.3	4.5	2.1
2004	2.5	2.2	1.9	2.4

*Estimated

Source: Statistics Canada

2. DEMAND FACTOR

2004 was a remarkably strong year for Alberta's economy, due to extremely strong oil and gas prices. The number of people employed in the Professional, Technical, and Scientific Services sector increased from 119,600 in June 2003 to 125,400 in June 2004, and this trend is expected to continue. This industry sector includes Professional Engineers, Geologists and Geophysicists, but also includes other applied science professionals as well as technicians and technologists working in these areas. Demand for professionals in the oil and gas sector is expected to remain very strong, and demand is expected to increase in the Consulting and EPC industries supporting the public sector due to well-publicized budget surpluses and infrastructure issues. This will result in a high demand factor for APEGGA members in general. Overall we are predicting a demand factor of 1.5%.

Members who are aware that their specific expertise is in short supply may want to use a higher estimate for their demand factor; members who are aware that supply in their field of practice is abundant may want to use a lower estimate.

EXAMPLE

Using the factors outlined under our example, the June 2004 survey data in Section 2 can be adjusted to June 2004 by adding what you estimate the increase will be for each of three factors for the 12-month period.

The salary adjustment estimates (as explained under each factor) are as follows:

Inflation Factor (CPI)	2.2%
Demand Factor	1.5%
Estimated Salary Adjustment from 2004 to 2005	3.7%

This example is illustrative only. Individual situations may vary considerably.

For you as a Human Resources Manager, these factors should be considered, but may not necessarily be incrementally assessed for your salary pool. Besides these external factors, pooled salary behaviour also depends on such factors as: new hires, attrition, internal promotions, etc.

TABLE 10

APEGGA Employer Salary Surveys
Percent Change in Mean Salaries
By Level of Responsibility – 1993 to 2004

ENGINEERS

Level	93-94 %	94-95 %	95-96 %	96-97 %	97-98 %	98-99 %	99-00 %	00-01 %	01-02 %	02-03 %	03-04 %
A-	-	-	-	-	-	-	-	-	-	6.4	0.7
A	-0.7	0.8	1.2	5.3	6.8	0.6	4.2	1.9	5.9	1.6	3.2
B	1.8	0.3	1.7	4	5	-0.5	1.9	6.7	4.2	1.6	2.8
C	0.6	1.2	0.1	1.8	5.4	2.5	2.8	5.4	2.6	1.0	3.9
D	1.6	-0.5	1.4	2.3	5.3	3.6	2.6	3.3	7.9	2.6	3.4
E	1.6	0	2.2	2.1	6.3	2.8	4.6	3.2	2.2	4.1	3.7
F	1.4	1.5	0.2	2.3	6.7	4.6	1.9	4.6	4.5	3.8	3.2
F+	2.2	1.6	-5	4.3	7.6	5.1	0.6	5.8	4.1	6.9	1.4

GEOLOGISTS

Level	93-94 %	94-95 %	95-96 %	96-97 %	97-98 %	98-99 %	99-00 %	00-01 %	01-02 %	02-03 %	03-04 %
A-	-	-	-	-	-	-	-	-	-	20.2	5.4
A	0.5	7.6	5.1	0.6	9.2	1.3	1.1	8.2	-3	-8.2	-0.1
B	0.7	1.4	5.8	1.3	5.4	2.5	1.6	8.7	1.3	7.0	4.0
C	1.3	6.4	1.6	-0.3	6.4	1.9	2	9.9	-1.5	3.2	7.7
D	1.4	3.3	1.8	0.2	5.9	-2.5	4.6	11.6	-0.8	6.7	5.1
E	-1.2	2	4.1	2.5	7	-0.7	4.5	5.3	1.6	4.6	3.5
F	0.9	2.3	-0.9	3.7	5.1	-0.1	5.5	3.6	4.1	2.9	1.2
F+	-11.2	7.2	-1.8	1	12.7	0.9	-0.7	5.3	-1.7	8.7	1.8

GEOPHYSICISTS

Level	93-94 %	94-95 %	95-96 %	96-97 %	97-98 %	98-99 %	99-00 %	00-01 %	01-02 %	02-03 %	03-04 %
A-	-	-	-	-	-	-	-	-	-	13.2	-
A	-	1	1.6	-	4.4	0.9	1.7	10.9	-5.2	10.2	-0.3
B	3.4	4.5	1.1	1.6	6.8	-0.6	3.2	7.5	-1.3	8.6	-8.1
C	1.3	14.4	-0.5	-0.2	0.6	5.1	5.2	6.2	-1.9	3.0	0.3
D	4.4	6	2.4	2.1	1.2	0.3	4.5	8.2	2.3	6.0	0.5
E	1.5	1.4	1.9	2.7	4.9	1.7	5.7	2.7	3.9	4.4	4.2
F	-2	1.9	-0.7	-0.1	7.2	1.1	4.3	5.8	3.8	2.5	3.5
F+	-0.2	6.2	-6.8	2.8	3	-1.6	15.5	-2.6	5.6	7.7	-0.9

SECTION 4
2004 SALARY EXPECTATION

STEP 1
DETERMINE YOUR LEVEL OF RESPONSIBILITY

Determine your level of responsibility (see Section 1) as you will want to make comparisons which relate to your level.

STEP 2
DETERMINE YOUR 2004 SALARY RANGE

Consult the salary survey data reported for your professional group (engineer, geologist or geophysicist) and the salary survey data reported for your industry sector in Section 2. This data plus other salary survey data on engineers, geologists and geophysicists in Appendix B will help you to determine your 2003 salary range.

STEP 3
DETERMINE 2004 TO 2005 SALARY ADJUSTMENT

Using the Example in Section 3 and/or other information available to you, determine what the estimated increase may be in salary from 2003 to 2004 Use this value to adjust your 2003 salary range in order to arrive at your 2004 salary range.

For example, the 2003 salary for a level "C" engineers (all industries) ranges as follows:

2004 Results – Engineer Level C – All Industries		
D_1	Median	D_9
$59,500	$72,228	$80,880

If the 2004-2005 increase in salaries is estimated to be 3.7% as shown in Example (page 29), the salary range for the level "C" engineer would be:

2005 Projection – Engineer Level C – All Industries		
D_1	Median	D_9
$61,700	$74,900	$83,900

STEP 4
2004 SALARY EXPECTATION

Performance

At this step you turn from evaluating the job to evaluating yourself, and how well you are performing the job you hold.

Performance can range from:

(a) very low - new in the job, new in the company, with a minimum of directly related experience so that considerable and fairly close supervision is required, to

(b) very high - five or six years in the job (assuming a "C" Level of Responsibility) so that you perform quickly (you don't have to double-check because you've handled that kind of problem before), you accomplish a great deal, it's accurate and you need little supervision (people know that you will get the job done and that it will be done well).

To illustrate further, if the level "C" engineer noted in Step 3, has a few years' experience in the job, brought no or very little directly relevant experience to the job, has come to the job from outside the company and is still having trouble arriving at a decision or makes poor decisions, submits reports that still need to be checked for accuracy, the level "C" engineer should expect to be paid in the range of $59,500 to $65,900 (Decile 1 to Quartile 1) per year in 2004.

On the other hand, if after two years, the level "C" engineer makes good decisions quickly, presents reports and recommendations that are normally accepted, starts to see and suggest ways to improve the work and is generally accepted as a strong member of the team, the level "C" engineer should expect to be paid in the range of $76,200 to $80,900 (Quartile 3 to Decile 9) per year.

Salary Trends

The APEGGA Survey collected additional information from employers on anticipated salary adjustments over the next 12 months:

84% of our 137 respondents estimated salaries will increase by an average of 3.9%.
16% of our 137 respondents estimated salaries will remain stable.
none of our 137 respondents indicated that salaries would decrease.

Other Considerations

- Salary is one of two major components of remuneration received by an employee; the other being benefits. In order to determine your total compensation, it is important to consider both parts. Section 5 contains information on employee benefits and compensation concepts.

- A weakness of the single market survey is that a strong market demand for the services of a single occupational group will push salary rates for that group to unacceptably high levels (in relation to the level of responsibility assumed) causing dissatisfaction in related occupational groups and setting up high turnover rates later when demand declines. The opposite also happens when demand is low.

As such, salaries of an occupational group (determined by a strict application of the single market approach) are neither efficient in encouraging a steady inflow of quality persons nor in encouraging persons already practicing the occupation to continue to practice. Both of these factors are of concern.

In order to stabilize salaries, some companies consider changes in the economy and actual salaries paid to a variety of other occupational groups, as well as the trends in these.

There are many factors to consider and only some have been referred to above. However, using these factors and/or those considered important by your supervisor or company, you should be able to arrive at a dollar figure which will equate to the value of professional services you are providing for your company.

SECTION 5
COMPENSATION CONCEPTS

The total compensation of any employed individual or the total payroll cost of an employee is made up of two major segments — salary and benefits. Payroll costs do not include office space, secretarial help, insurance etc., which are created or added to when an employee is on or added to the payroll.

Salary is also made up of two parts - regular salary and overtime compensation (some employers do not provide overtime compensation). Table 11 summarizes data obtained from the 2004 Employer Salary Survey regarding overtime compensation.

The benefit segment is made up of two parts - the time-not-worked benefits and what might be called the general benefits. Details of what is included in each segment are provided in Employee Benefits which follow.

The percentage (of the total compensation) proportions given in Table 13 are averages which reflect values for 2004. No given company (or employee) will exactly match these. In order to provide a more accurate picture of Total Cash Compensation received by our members, which consists of base pay, overtime, pay, bonuses, and any additional cash payments made, a new tabulation of this data was introduced in this year's survey. This data can be found in Tables 14 through 18.

EMPLOYEE BENEFITS

There is a wide variation of practice and opinion as to what should be classed as an employee benefit. The definitions described below have been used in this publication.

1. Quoted Yearly Salary or Base Salary

Pay for time worked at normal rates plus the cost of the time-not-worked benefits. Quoted yearly salary does not include payment of overtime.

2. General Benefits

A payment by the employer to the employee directly or to a third party on behalf of the employee to secure for the employee, an advantage or protection of benefit to the employee.

Provision by the employer or the making available of (at no or reduced cost) some facility, object or service of benefit to the employer.

(a) Cash Benefit Payments made by the employer on behalf of the employee for:

i) pension or superannuation provisions.[1]
ii) a hospital, medical, dental, sickness, disability, life, income maintenance, etc., plan.
iii) the Canada Pension Plan, Unemployment Insurance, Workers' Compensation plans (compulsory in Alberta).
iv) termination or severance pay, the premium portion of premium pay, relocation assistance.

[1] This category should not include amounts which the employer sets aside to fund what might be called incentive or productivity plans such as profit sharing plans and one-time bonus plans which are based on productivity measure. These plans should be considered and administered apart from the basic salary and benefit system in order to preserve the integrity of the basic system.

(b) No Cash Benefit Provision by the employer, at no or reduced cost to the employee, of: recreation facilities and/or equipment, food, lodging, loans, parking, transportation, educational opportunities, discounts on company products, etc.

3. Time-Not-Worked Benefits
(payments made by the employer to the employee for time not worked)

This is included as part of the Quoted Yearly Salary.

(a) For Monthly or Yearly Paid Employees:
Time off from work (the employee does not have to be at the place of work), or periods when the employee is at work but not working and for which there is no reduction to the quoted yearly salary.

(b) For Hourly Paid Workers:
Payments in lieu of holiday days and vacation days.

(c) Holiday Days
Includes the nine statutory (also called general) holidays in Alberta and declared holidays which may be declared by federal, provincial or municipal authorities (but they become a work holiday only if the employer so declares).
i) Statutory Holidays: New Year's Day, Family Day, Good Friday, Victoria Day, Canada Day, Labour Day, Thanksgiving Day, Remembrance Day, and Christmas Day.
ii) Declared Holidays: Boxing Day and Heritage Day.

(d) Vacation Days

(e) Other Days and/or Periods Sick Leave not covered by 2 (a)ii, travel time, clean-up time, rest and/or coffee periods, personal leave (jury duty, voting, bereavement, maternity, paternity, etc.).

EMPLOYER SALARY SURVEY COMPENSATION DATA

The APEGGA survey collected additional information on other compensation provided to employees. (see Tables 11, through 14). This data indicates that most of the organizations provide benefits packages which include health care beyond Alberta Health Care (83%), long-term disability (90%), life/accident insurance (91%), drug (90%), and dental (91%) coverage. Approximately 72% of the employers offer some type of retirement plan, consisting of a pension plan (42%), RRSP contributions (43%) or both.

Information from the survey pertaining to weekly hours of work is available in Figure 3. The availability of overtime and additional cash compensation, along with the availability of other benefit programs is reported in Table 11. Vacation entitlement data is report in Table 13.

Additional cash compensation was disbursed to approximately 43% of the engineers, 79% of the geologists and 84% of the geophysicists. Table 12 reports details on additional cash compensation for those who receive it.

Reports from several industry sectors indicate that the additional cash compensation offered is becoming a more significant portion of the total compensation received by APEGGA members. Representatives from these sectors have requested that, in addition to the base salaries listed in Tables 4 through 8 that we repeat our compilation of data including additional compensation. Tables 15 though 19, therefore, contain Total Cash Compensation data, consisting of a summation of Base Salaries, Overtime Pay, and any Additional Cash paid.

FIGURE 3

Weekly Hours of Work Based on Number of Employees (n=9156)
June 2004

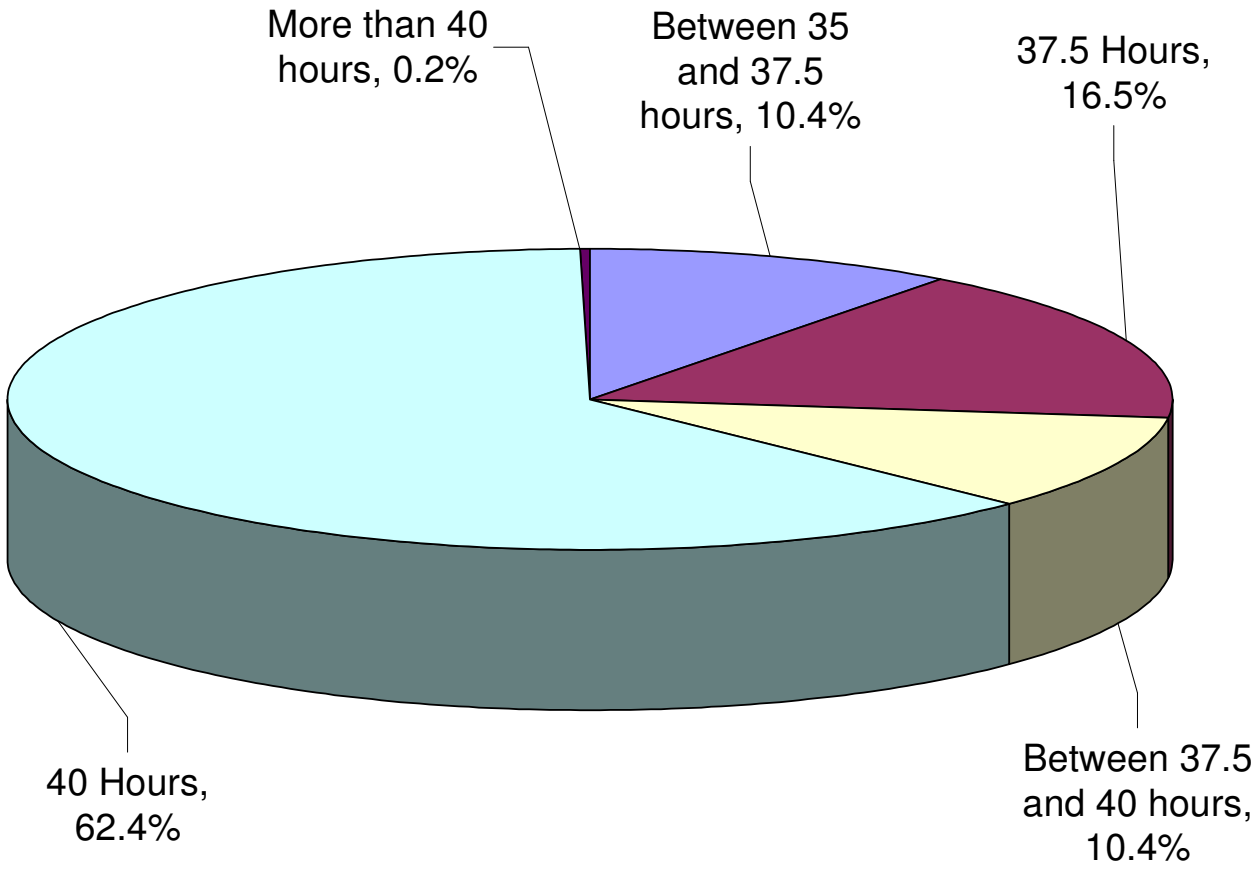


TABLE 11

Percent of Employers Providing Overtime Compensation* (Based on Level of Responsibility)		
Level	**Cash**	**Time Off in Lieu**
A-	36%	34%
A	39%	53%
B	37%	51%
C	28%	51%
D	22%	44%
E	19%	39%
F	15%	36%
F+	10%	31%

In some cases an employer may provide either cash or time off in lieu or both.

TABLE 12

Number of Organizations Providing Additional Compensation & Benefits								
Total Number of Organizations: 137								
Level	A-	A	B	C	D	E	F	F+
Additional Cash Compensation								
a. Cash Bonus Payments	13	36	37	43	41	51	47	38
b. Profit Sharing Payments	4	19	20	23	26	29	32	30
c. Performance/Merit Bonus	16	51	53	58	59	63	63	54
d. Productivity/Gain Sharing	0	2	2	2	3	2	1	1
e. Commissions	1	2	2	2	3	2	2	1
f. Other	0	4	4	5	5	5	5	5
Overtime Compensation								
g. Cash	49	53	51	39	30	26	21	14
h. Time Off In-Lieu	46	73	70	70	60	54	49	42
Other Compensation								
i. Stock Options/Purchases	2	21	23	30	35	43	44	42
j. Car/Car Allowance	1	3	3	4	6	11	14	17
k. Vehicle Allowance	7	8	9	10	8	15	19	24
l. Consulting Fees	1	1	1	1	1	1	1	2
m. Other	3	7	7	9	8	9	13	13
Benefits Package								
n. Pension Plan	6	51	51	58	53	55	56	42
o. Employer Contribution to RRSP	12	51	55	58	58	59	58	52
p. Medical Beyond AHC	24	107	109	114	113	114	107	95
q. Long Term Disability	22	113	115	123	118	121	116	101
r. Life/Accident Insurance	30	116	117	125	120	124	119	103
s. Drug Plan	23	114	115	123	118	121	116	101
t. Dental Plan	24	115	116	124	120	123	117	101
u. Vision Care	16	77	79	85	84	84	79	68
v. Legal Plan	1	3	3	3	3	3	3	3
w. Savings Plan	5	32	32	34	34	36	35	29
x. Other	7	27	26	26	27	29	27	28

TABLE 13

Vacation Entitlement

Vacation Entitlement	Minimum Years of Service to Qualify	% of Employers Providing Entitlement
2 Weeks	On Hire	20%
	1 year	33%
	2 years	1%
3 Weeks	On Hire	23%
	1 year	26%
	2 years	8%
	3 years	18%
	4 years	1%
	5 years	20%
	More than 5 years	1%
	Never	1%
4 Weeks	On Hire	1%
	2 years	2%
	4 years	1%
	5 years	4%
	6 years	2%
	7 years	4%
	8 years	15%
	9 years	7%
	10 years	52%
	More than 10 years	4%
	Never	7%
5 Weeks	Less than 10 years	1%
	10 to 14 years	4%
	15 years	5%
	16 years	6%
	17 years	3%
	18 years	10%
	19 years	3%
	20 years	16%
	25 years	3%
	More than 25 years	1%
	Never	47%
6 Weeks	10 years	1%
	20 to 24 years	7%
	25 years	17%
	More than 25 Years	2%
	Never	73%
7 Weeks	29 years	1%
	30 Years	1%
	Never	98%

TABLE 14

Additional Cash Compensation Disbursed - June 2004

ENGINEERS

Level	# of Engs.	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	30	1,695	200	429	1,017	1,547	4,957
A	273	3,635	1,000	1,656	2,700	5,000	8,024
B	423	4,436	1,196	2,120	4,298	5,841	7,605
C	551	7,429	1,539	2,999	6,500	9,200	12,753
D	768	10,456	2,120	5,120	9,911	14,000	18,300
E	837	16,269	2,120	8,384	15,312	20,060	26,226
F	433	22,798	7,502	15,000	21,849	29,745	36,627
F+	143	43,911	10,500	22,000	31,149	50,629	68,551

GEOLOGISTS

Level	# of Geols.	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	0	No data reported at this level					
A	28	3,797	1,120	1,432	3,028	4,400	7,313
B	66	5,771	2,500	4,272	5,616	6,696	9,388
C	100	8,662	2,351	4,356	7,537	10,409	16,477
D	100	14,792	5,184	8,418	12,743	17,604	26,280
E	155	22,354	6,526	15,100	19,970	26,000	34,473
F	142	24,979	15,882	19,000	25,000	29,800	35,958
F+	34	41,981	22,000	25,400	44,020	53,514	56,831

GEOPHYSICISTS

Level	# of Geophs.	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	0	No data reported at this level					
A	7	5,238	1,600	3,090	4,400	8,534	8,697
B	20	5,790	2,381	3,090	4,604	5,700	7,405
C	36	7,807	3,835	5,119	7,000	8,613	13,892
D	48	14,157	5,063	9,200	13,000	16,368	24,509
E	85	21,734	13,000	17,000	21,186	24,131	34,779
F	85	27,694	17,300	22,780	26,149	33,003	38,902
F+	29	39,778	19,600	22,000	32,000	49,500	80,000

ANNUAL TOTAL CASH COMPENSATION BY LEVEL OF RESPONSIBILITY

TABLE 15

Engineers - All Industries

Level	# of Engs.	% of Mean from Additional Cash Comp	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	318	0.4%	38,534	31,200	34,846	39,000	42,000	43,800
A	747	2.6%	51,783	44,499	47,430	51,002	55,860	59,608
B	942	3.3%	60,587	50,000	55,522	60,727	65,931	69,917
C	1,438	3.8%	73,975	60,660	67,862	74,400	79,200	84,968
D	1,709	5.1%	92,537	76,500	85,202	90,821	100,298	109,722
E	1,579	7.5%	114,776	90,472	102,154	112,174	127,134	136,258
F	983	7.4%	136,484	105,159	119,000	135,000	154,080	167,700
F+	288	12.7%	172,262	126,000	137,729	159,960	190,500	232,000

TABLE 16

Geologists - All Industries

Level	# of Geols.	% of Mean from Additional Cash Comp	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	17	0.0%	47,259	36,900	40,800	51,000	53,400	55,200
A	50	3.9%	54,560	41,500	48,000	56,380	60,268	62,300
B	101	5.9%	63,718	47,507	60,500	65,500	69,133	74,580
C	114	9.2%	82,373	66,504	76,972	81,800	88,334	96,817
D	128	10.6%	109,437	83,640	97,662	109,619	120,000	128,000
E	177	14.5%	134,685	110,000	124,800	135,125	143,968	154,600
F	164	14.2%	152,663	128,232	146,000	156,338	164,716	170,489
F+	41	18.1%	192,046	145,530	162,900	179,427	203,703	254,000

TABLE 17

Geophysicists - All Industries

Level	# of Geophs.	% of Mean from Additional Cash Comp	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-		No data reported at this level						
A	9	7.2%	56,628	32,000	54,590	55,000	60,200	71,182
B	28	7.0%	59,466	39,360	46,229	64,200	67,596	70,000
C	44	8.1%	78,503	54,246	75,295	79,440	84,613	87,056
D	58	10.8%	108,631	81,761	98,000	111,458	118,574	124,829
E	91	14.6%	139,181	117,542	134,800	141,268	147,131	159,491
F	97	15.2%	159,701	137,820	152,050	160,780	171,085	177,343
F+	33	18.6%	188,353	154,500	160,700	185,610	207,435	221,500

ANNUAL TOTAL CASH COMPENSATION BY INDUSTRY SECTOR

TABLE 18

Engineers by Industry Sector

CONSULTING SERVICE

Level	# of Engs	% of Mean from Additional Cash Comp	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	31	2.0%	32,710	25,800	28,980	31,200	36,016	39,520
A	164	1.5%	45,922	41,516	43,076	45,513	48,500	51,012
B	183	1.9%	52,717	44,895	47,502	51,584	56,511	62,000
C	190	2.5%	61,451	52,650	57,018	60,935	66,560	71,499
D	179	2.6%	77,003	65,200	69,680	76,000	84,032	90,400
E	225	3.1%	93,231	80,000	86,496	91,800	101,504	107,512
F	147	4.3%	108,725	87,069	96,325	106,995	117,625	134,106
F+	54	14.4%	155,096	114,400	123,006	132,500	145,610	175,010

ENGINEERING, PROCUREMENT AND CONSTRUCTION

Level	# of Engs	% of Mean from Additional Cash Comp	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	28	0.0%	38,011	31,200	36,400	38,400	40,560	43,200
A	170	0.6%	50,779	45,989	48,000	50,398	52,961	55,650
B	194	0.6%	59,629	52,790	55,560	59,072	63,600	67,800
C	300	0.9%	72,997	62,400	67,204	72,624	78,000	84,631
D	396	1.3%	91,212	78,000	84,478	90,376	97,153	103,800
E	387	1.0%	110,033	98,000	103,200	108,867	115,400	123,600
F	351	1.0%	131,354	115,200	120,482	128,344	137,696	153,768
F+	91	2.7%	158,605	130,594	138,662	146,652	165,610	197,200

RESOURCE EXPLOITATION - EXCEPT OIL & GAS

Level	# of Engs	% of Mean from Additional Cash Comp	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	3	No data reported at this level						
A	4	No data reported at this level						
B	11	1.1%	58,129	53,600	55,500	59,523	60,600	61,072
C	13	0.5%	71,927	64,800	69,000	72,100	76,176	76,176
D	16	1.1%	86,691	79,050	79,200	86,600	90,000	96,540
E	12	4.9%	109,082	103,460	105,000	106,190	110,320	111,200
F	7	2.0%	121,486	111,990	115,500	117,890	130,790	133,230
F+	0	No data reported at this level						

TABLE 18 (cont'd)

RESOURCE EXPLOITATION - OIL & GAS

Level	# of Engs	% of Mean from Additional Cash Comp	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	149	0.3%	40,341	33,674	36,900	40,800	43,193	45,000
A	185	5.3%	58,136	51,375	54,000	57,247	60,000	66,656
B	251	5.9%	66,571	60,600	63,398	65,759	68,981	73,100
C	295	9.2%	82,538	73,166	75,693	80,000	84,987	90,675
D	449	10.3%	103,709	88,255	94,359	102,900	111,000	120,561
E	553	11.9%	128,677	107,572	117,250	127,264	135,540	143,100
F	324	12.9%	157,182	137,000	145,100	154,407	165,874	177,970
F+	106	19.0%	197,492	152,750	167,000	181,500	203,200	250,000

MANUFACTURING - DURABLES (Includes machinery, equipment, tools, furniture, wood, concrete, steel and plastic products.)

Level	# of Engs	% of Mean from Additional Cash Comp	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	0		No data reported at this level					
A	12	1.0%	49,920	40,426	41,413	48,000	55,307	56,703
B	24	1.6%	57,736	48,000	50,171	58,281	65,535	66,116
C	33	1.5%	71,273	62,071	67,269	71,201	74,435	79,284
D	17	5.0%	85,277	68,352	77,167	87,000	91,235	94,030
E	10	9.2%	107,089	87,975	94,370	106,079	115,684	120,992
F	2	No data reported at this level.						
F+	2	No data reported at this level						

MANUFACTURING - NON-DURABLES (Includes food products, beverages, rubber, leather, textiles, pharmaceuticals, chemicals, plants, and pulp & paper.)

Level	# of Engs	% of Mean from Additional Cash Comp	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	18	0.5%	37,334	31,980	34,800	38,400	39,600	41,680
A	15	4.7%	53,856	50,442	50,454	52,000	56,400	58,100
B	40	8.1%	63,057	57,080	57,526	62,561	66,000	70,630
C	42	8.5%	76,867	67,758	72,228	75,821	80,200	87,330
D	70	7.3%	91,268	85,042	87,292	89,778	92,800	98,160
E	95	13.9%	114,631	101,626	107,045	111,662	120,000	131,492
F	26	15.4%	145,176	120,287	130,923	152,007	157,925	160,391
F+	6	22.5%	180,581	133,000	162,416	195,655	199,555	201,085

TABLE 18 (cont'd)

SERVICE - NOT FOR PROFIT (Includes governments and their controlled R & D organizations, regulatory agencies, educational and health care organizations, and Crown corporations.)

Level	# of Engs	% of Mean from Additional Cash Comp	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	5	0.0%	27,384	24,770	27,318	27,318	28,756	28,756
A	83	0.3%	50,129	45,984	47,114	49,500	52,008	55,860
B	103	0.4%	62,037	52,893	56,495	61,971	68,000	70,666
C	310	0.4%	73,077	61,908	70,001	76,212	76,212	81,375
D	201	1.0%	84,401	73,866	80,769	85,620	86,730	90,502
E	80	1.5%	93,583	80,866	86,019	90,782	99,601	110,540
F	43	2.2%	112,407	92,898	99,597	101,816	116,900	141,900
F+	13	0.0%	126,295	111,250	118,700	119,603	137,400	145,000

SERVICE - FOR PROFIT (Includes transportation companies [pipeline, truck, etc.], storage, computer sales / maintenance, financial services, general sales and supply-wholesale or retail-manufacturers' associations.)

Level	# of Engs	% of Mean from Additional Cash Comp	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	4	No data reported at this level						
A	4	No data reported at this level						
B	5	24.8%	66,361	55,760	63,625	63,884	67,475	81,060
C	7	15.5%	76,703	66,432	72,100	75,670	81,751	87,000
D	8	9.6%	98,280	84,808	90,570	93,780	116,050	128,325
E	9	17.6%	122,901	80,000	109,800	130,966	143,500	160,000
F	5	19.6%	146,927	110,000	120,000	159,633	170,000	175,000
F+	4	No data reported at this level						

UTILITY - RATE CONTROLLED

Level	# of Engs	% of Mean from Additional Cash Comp	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	60	0.3%	39,297	34,602	36,018	39,550	41,916	43,267
A	78	3.8%	53,712	47,000	50,712	54,060	56,608	58,644
B	57	5.2%	61,509	54,600	57,413	62,460	65,134	66,852
C	126	7.6%	77,264	64,632	69,983	75,700	81,844	93,960
D	222	6.6%	94,173	82,260	86,028	91,416	102,204	107,310
E	128	11.4%	121,989	96,352	107,412	125,634	133,602	138,884
F	64	12.6%	138,016	106,788	115,872	135,000	157,738	177,140
F+	11	12.7%	173,755	126,000	126,000	142,000	160,000	291,380

TABLE 18 (cont'd.)

ADVANCED TECHNOLOGIES								
Level	# of Engs	% of Mean from Additional Cash Comp	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	20	0.6%	36,760	33,600	34,846	34,846	39,600	39,900
A	32	1.4%	50,686	45,696	46,610	49,983	54,000	55,500
B	74	2.4%	59,103	52,288	56,348	59,509	62,000	64,174
C	122	1.5%	73,860	65,095	69,528	73,402	78,390	80,996
D	151	1.7%	91,353	79,711	86,585	92,576	96,820	101,500
E	80	3.3%	112,954	99,840	108,202	113,428	116,723	124,726
F	14	7.2%	131,309	107,000	122,764	132,080	135,128	141,273
F+	1	No data reported at this level						

TABLE 19

Geoscientists by Industry Sector								
CONSULTING SERVICE – GEOLOGISTS								
Level	# of Geols	% of Mean from Additional Cash Comp	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	1	No data reported at this level						
A	12	2.5%	42,400	37,518	38,000	41,516	44,000	44,500
B	21	2.3%	48,519	42,000	44,700	47,507	53,800	54,768
C	12	1.7%	57,074	49,000	50,000	58,000	61,989	62,388
D	14	2.7%	76,134	62,100	65,021	74,984	83,220	88,783
E	13	3.2%	94,633	79,997	84,700	89,500	104,974	110,160
F	19	11.2%	113,083	89,981	101,600	112,200	124,400	131,040
F+	2	No data reported at this level						
RESOURCE EXPLOITATION - OIL & GAS – GEOLOGISTS								
Level	# of Geols	% of Mean from Additional Cash Comp	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	16	0.0%	48,262	39,600	40,800	51,000	53,400	55,200
A	35	4.3%	58,463	50,500	55,000	58,778	60,712	62,400
B	70	6.9%	67,951	61,000	64,000	67,513	70,837	76,311
C	78	11.3%	87,981	77,000	80,000	84,889	93,937	98,562
D	93	11.9%	116,513	97,662	103,368	115,900	122,588	135,692
E	162	15.3%	138,378	118,000	127,850	136,313	144,718	154,819
F	140	14.5%	158,456	144,146	152,250	159,491	165,945	171,200
F+	39	18.3%	195,170	148,926	162,900	184,006	203,703	254,000

TABLE 19 (cont'd)

SERVICE - NOT FOR PROFIT- GEOLOGISTS (Includes governments and their controlled R & D organizations, regulatory agencies, educational and health care organizations, and Crown corporations.)

Level	# of Geophs	% of Mean from Additional Cash Comp	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	0	No data reported at this level						
A	3	No data reported at this level						
B	9	4.0%	65,483	60,000	64,105	65,449	66,854	71,171
C	23	4.2%	77,155	70,252	73,435	77,398	79,350	84,068
D	18	7.7%	102,058	90,304	94,628	102,957	106,073	110,658
E	0	No data reported at this level						
F	4	No data reported at this level						
F+	0	No data reported at this level						

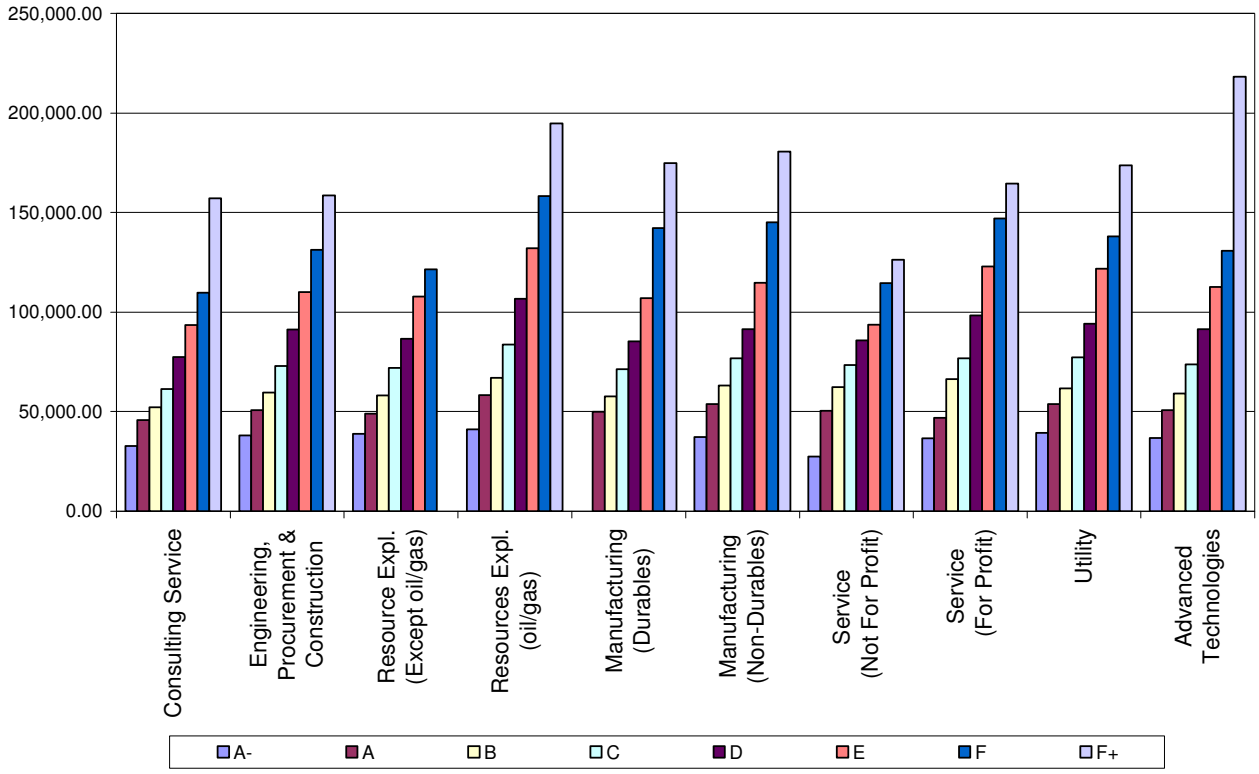
CONSULTING SERVICE – GEOPHYSICISTS

Level	# of Geophs	% of Mean from Additional Cash Comp	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	0	No data reported at this level						
A	2	No data reported at this level						
B	11	7.7%	47,687	38,808	39,360	44,181	47,815	50,259
C	10	7.3%	64,690	50,616	53,561	54,605	69,778	80,934
D	12	9.2%	85,549	72,393	74,143	84,812	90,000	91,200
E	7	7.1%	100,148	59,500	92,699	104,654	112,433	117,542
F	4	No data reported at this level						
F+	4	No data reported at this level						

RESOURCE EXPLOITATION - OIL & GAS – GEOPHYSICISTS

Level	# of Geophs	% of Mean from Additional Cash Comp	Mean $	D_1 $	Q_1 $	Median $	Q_3 $	D_9 $
A-	0	No data reported at this level						
A	7	7.0%	60,379	53,000	54,590	59,042	70,039	71,182
B	17	6.6%	67,088	64,162	64,300	66,300	69,300	70,000
C	33	8.5%	83,553	75,733	78,760	83,000	85,790	91,214
D	45	11.0%	115,383	98,829	108,335	114,550	120,240	126,100
E	83	15.0%	143,068	127,692	137,800	141,966	148,490	159,491
F	92	15.6%	161,582	143,880	153,964	161,916	171,197	177,343
F+	26	17.2%	183,739	154,500	160,000	182,609	191,275	210,650

Figure 4: Mean Annual Total Cash Compensation for Engineers, Geologists & Geophysicists by Industry Type - June 2004



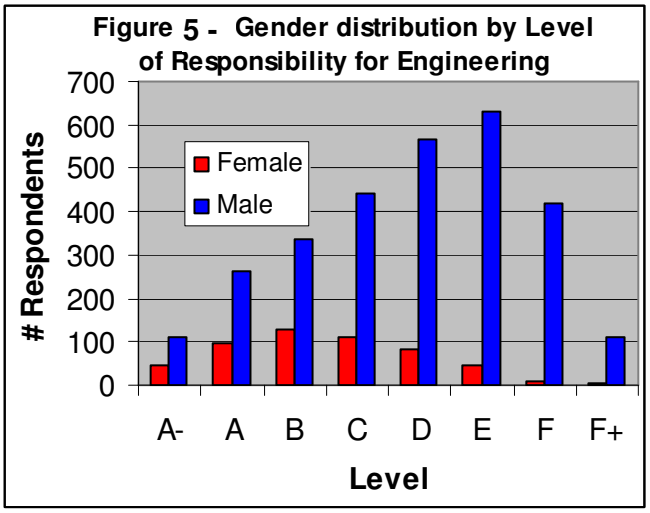
SECTION 6
Additional Analysis

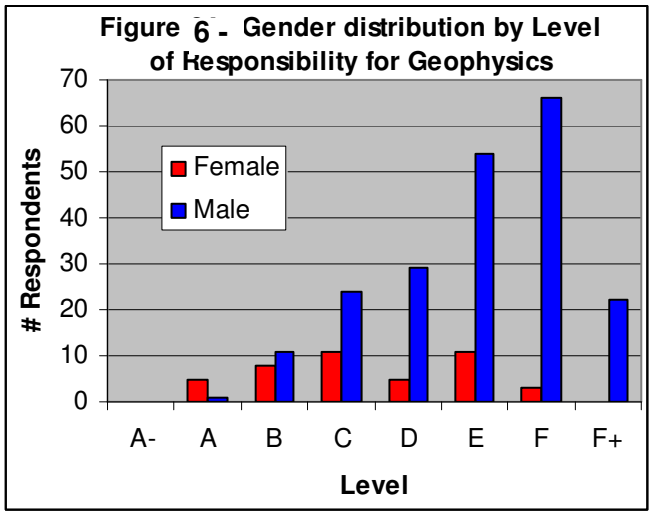
Gender

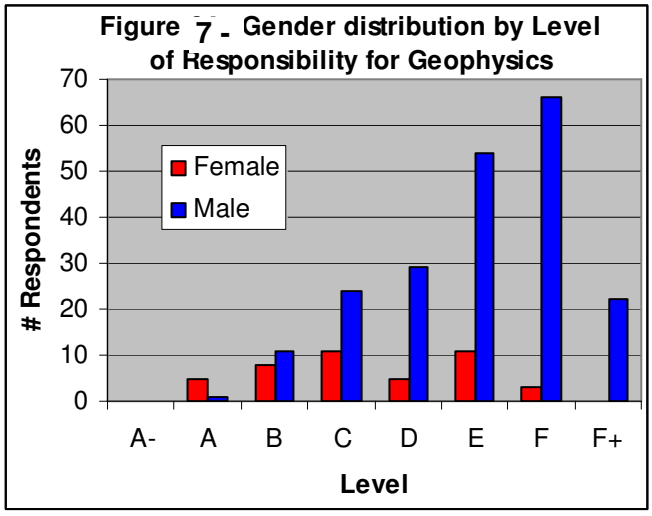
This is the first year that APEGGA has included questions regarding the gender of individuals. Note that the overall response rate for the salary survey was approximately 25%, and only 46% of respondents answered the gender questions (4193 of 9156 individuals). Therefore, the data presented in this subsection are based on only 12% of APEGGA members who responded to the gender question, and not generalizable to the membership as a whole.

Of those who responded to the gender question, 696 (16.6%) were female and 3497 (83.4%) were male. The proportion of female members in APEGGA's member database (not including Life Members), is currently 11.1%.

The distribution of respondents by level of responsibility varies by gender for engineering, geology, and geophysics (see Figures 5 - 7)







An examination of the salaries reported (Table 20) indicates that, on average, women in the professions make $69,677 per year, compared to the average for men at $90,661. The overall average for all respondents, including those who did not respond to the gender question was $88,620. Since not all responses included gender information, the total number of males and females does not add up to the total number reported in each designation and level. Further, the mean salaries reported for each gender are compared to the overall mean salaries for the entire group (including those not declaring gender), resulting in the possibility of both male and female salaries having a positive or negative variance from the overall average.

Table 20

Average Salary – All Designations – June 2004							
	Number	Mean $	D1 $	Q1 $	Median $	Q3 $	D9$
Overall	9156	88,620	50,563	64,000	85,620	110,700	130,000
Female	696	69,677	44,000	51,300	64,000	81,753	107,580
Variance		-13.0%	-19.8%	-25.3%	-26.1%	-17.2%	-21.4%
Male	3497	90,661	50,400	64,896	89,000	114,290	132,700
Variance	+2.3%	-0.3%	+1.4%	+3.9%	+3.2%	+2.1%	+2.3%

In comparing salary by level of responsibility and by profession, gender differences become less evident (Figures 8 - 10).

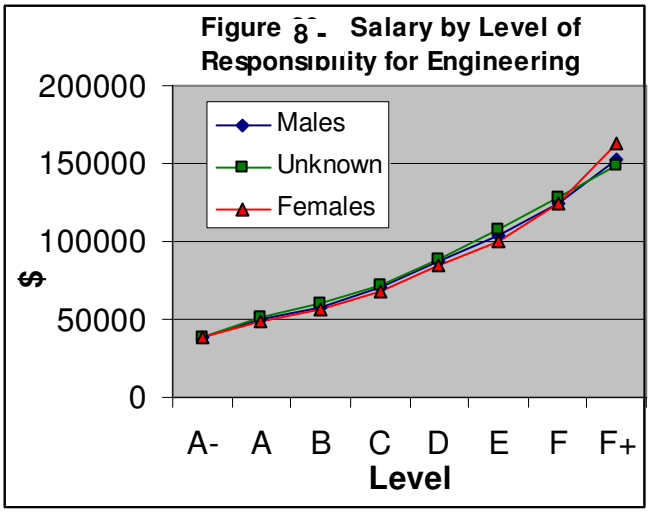


Figure 8 - Salary by Level of Responsibility for Engineering
200000
150000
100000
50000
0
$
Males
Unknown
Females
A- A B C D E F F+
Level

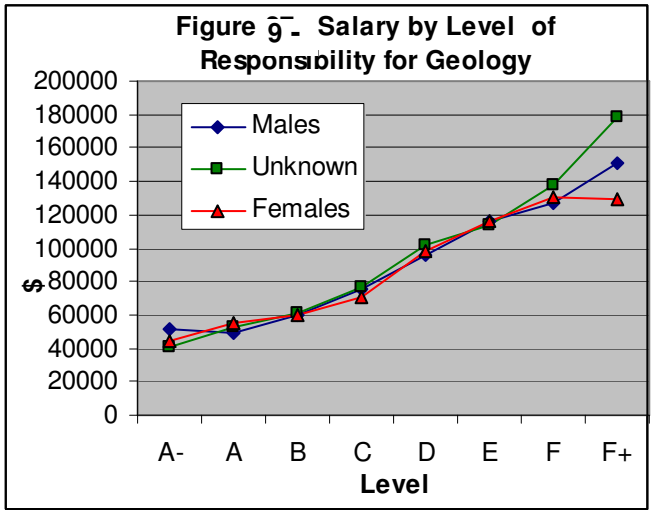


Figure 9 - Salary by Level of Responsibility for Geology
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
$
Males
Unknown
Females
A- A B C D E F F+
Level

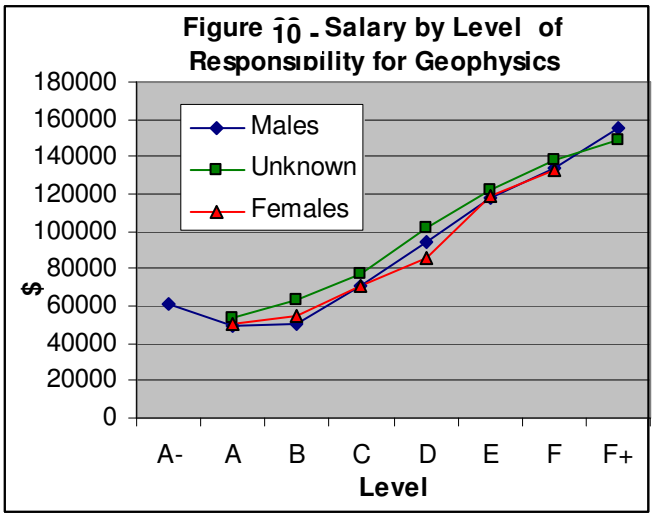


Figure 10 - Salary by Level of Responsibility for Geophysics
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
$
Males
Unknown
Females
A- A B C D E F F+
Level

A more detailed examination of mean salaries by professional designation and level of responsibility reveals better overall parity in salaries. It also reveals that the percentage of female respondents drops off at the higher responsibility levels.

Table 21

Average Salaries by Designation and Responsibility Level – All Industries

ENGINEERS

Level	# of Engs. *	Overall Mean Salary - $	# of Female Engs.	Female Mean Salary - $	Variance from Mean	# of Male Engs.	Male Mean Salary - $	Variance from Mean
A-	318	38,375	44	38,610	0.6%	112	39,078	1.8%
A	747	50,455	98	48,768	-3.3%	261	49,976	-0.9%
B	942	58,595	131	56,539	-3.5%	336	57,073	-2.6%
C	1,438	71,128	111	68,143	-4.2%	441	69,925	-1.7%
D	1,709	87,838	81	85,145	-3.1%	567	87,218	-0.7%
E	1,579	106,152	47	99,714	-6.1%	630	103,972	-2.1%
F	983	126,442	10	124,567	-1.5%	418	124,174	-1.8%
F+	288	150,459	3	163,302	8.5%	109	152,065	1.1%

GEOLOGISTS

Level	# of Geols. *	Overall Mean Salary - $	# of Female Geols.	Female Mean Salary - $	Variance from Mean	# of Male Geols.	Male Mean Salary - $	Variance from Mean
A-	17	47,259	7	44,786	-5.2%	8	50,962	7.8%
A	50	52,434	17	55,367	5.6%	17	49,106	-6.3%
B	101	59,947	30	59,717	-0.4%	42	59,479	-0.8%
C	114	74,775	27	70,768	-5.4%	57	75,612	1.1%
D	128	97,881	21	98,039	0.2%	66	95,234	-2.7%
E	177	115,110	20	115,794	0.6%	103	115,634	0.5%
F	164	131,035	5	130,793	-0.2%	94	126,544	-3.4%
F+	41	157,233	1	-	-	29	150,339	-4.4%

GEOPHYSICISTS

Level	# of Geophs. *	Overall Mean Salary - $	# of Female Geophs.	Female Mean Salary - $	Variance from Mean	# of Male Geophs.	Male Mean Salary - $	Variance from Mean
A	9	52,554	5	49,970	-4.9%	1	-	-
B	28	55,330	8	54,986	-0.6%	11	49,216	-11.1%
C	44	72,115	11	71,047	-1.5%	24	70,847	-1.8%
D	58	96,915	5	86,015	-11.2%	29	94,500	-2.5%
E	91	118,880	11	119,257	0.3%	54	117,432	-1.2%
F	97	135,432	3	133,189	-1.7%	66	134,230	-0.9%
F+	33	153,397	0	-	-	22	155,723	1.5%

.

*Again, the total number of respondents within each profession, includes those who did not declare gender.

An examination of the data sorted by industry type indicates that some specific industries, particularly those that have larger firms employing large numbers of APEGGA members, fare better in wage equity than others.

Table 22

APEGGA Members by Industry Sector – June 2004

ENGINEERING, GEOLOGICAL, GEOPHYSICAL CONSULTING SERVICE

Level	# of Members *	Overall Mean Salary - $	# of Females	Female Mean Salary - $	Variance from Mean	# of Males	Male Mean Salary - $	Variance from Mean
A-	32	32,044	4	28,000	-12.6%	10	31,806	-0.7%
A	178	44,902	40	43,877	-2.3%	74	44,128	-1.7%
B	215	50,906	44	49,026	-3.7%	113	51,210	0.6%
C	212	59,721	37	57,575	-3.6%	98	59,737	0.0%
D	205	75,117	15	67,078	-10.7%	114	75,046	-0.1%
E	245	90,462	14	85,269	-5.7%	152	89,869	-0.7%
F	170	104,051	0	-	-	134	103,355	-0.7%
F+	60	132,636	1	-	-	38	129,035	-2.7%

ENGINEERING, PROCUREMENT AND CONSTRUCTION

Level	# of Members *	Overall Mean Salary - $	# of Females	Female Mean Salary - $	Variance from Mean	# of Males	Male Mean Salary - $	Variance from Mean
A-	28	37,993	6	34,349	-9.6%	5	37,508	-1.3%
A	170	50,478	23	49,771	-1.4%	72	48,808	-3.3%
B	194	59,257	22	59,158	-0.2%	71	58,563	-1.2%
C	300	72,323	28	70,644	-2.3%	103	71,280	-1.4%
D	397	89,995	16	86,650	-3.7%	111	89,719	-0.3%
E	387	108,971	8	103,100	-5.4%	150	106,605	-2.2%
F	351	129,997	1	-	-	104	132,496	1.9%
F+	91	154,301	0	-	-	11	165,574	7.3%

RESOURCE EXPLOITATION (EXCEPT OIL & GAS)

Level	# of Members *	Overall Mean Salary - $	# of Females	Female Mean Salary - $	Variance from Mean	# of Males	Male Mean Salary - $	Variance from Mean
A-	3	38,800	2	40,800	5.2%	1	-	-
A	4	49,076	0	-	-	1	-	-
B	11	57,489	0	-	-	0	-	-
C	13	71,573	0	-	-	0	-	-
D	16	85,780	0	-	-	0	-	-
E	13	102,894	0	-	-	0	-	-
F	7	119,096	0	-	-	0	-	-

Table 22 (cont.)

RESOURCE EXPLOITATION (OIL & GAS ONLY)

Level	# of Members *	Overall Mean Salary - $	# of Females	Female Mean Salary - $	Variance from Mean	# of Males	Male Mean Salary - $	Variance from Mean
A-	165	41,015	27	43,655	6.4%	68	42,684	4.1%
A	227	55,232	31	56,951	3.1%	66	57,041	3.3%
B	338	62,759	54	62,770	0.0%	95	62,896	0.2%
C	406	75,654	44	74,991	-0.9%	145	76,489	1.1%
D	587	95,322	51	96,696	1.4%	194	97,321	2.1%
E	798	114,984	45	115,234	0.2%	319	117,025	1.8%
F	556	136,436	11	136,530	0.1%	269	135,997	-0.3%
F+	171	158,732	3	168,669	6.3%	88	160,410	1.1%

MANUFACTURING (DURABLES)

Level	# of Members *	Overall Mean Salary - $	# of Females	Female Mean Salary - $	Variance from Mean	# of Males	Male Mean Salary - $	Variance from Mean
A	12	49,428	2	54,000	9.2%	10	48,514	-1.8%
B	24	56,840	5	57,431	1.0%	19	56,685	-0.3%
C	33	70,215	2	76,125	8.4%	30	70,361	0.2%
D	17	80,973	1	-	-	16	81,236	0.3%
E	10	97,184	0	-	-	9	96,650	-0.5%
F	2	129,585	0	-	-	2	129,585	0.0%
F+	2	148,242	0	-	-	2	148,242	0.0%

MANUFACTURING (NON DURABLES)

Level	# of Members *	Overall Mean Salary - $	# of Females	Female Mean Salary - $	Variance from Mean	# of Males	Male Mean Salary - $	Variance from Mean
A-	18	37,147	7	36,559	-1.6%	11	37,522	1.0%
A	15	51,332	5	49,036	-4.5%	10	52,480	2.2%
B	40	57,959	12	56,523	-2.5%	28	58,574	1.1%
C	42	70,331	6	64,335	-8.5%	35	71,305	1.4%
D	70	84,633	13	84,576	-0.1%	55	84,540	-0.1%
E	95	98,748	7	97,413	-1.4%	87	98,807	0.1%
F	26	122,780	3	117,598	-4.2%	22	123,994	1.0%
F+	6	139,919	0	-	-	6	139,919	0.0%

SERVICE AND CONTROL (NOT FOR PROFIT)

Level	# of Members *	Overall Mean Salary - $	# of Females	Female Mean Salary - $	Variance from Mean	# of Males	Male Mean Salary - $	Variance from Mean
A-	5	27,384	0	-	-	0	-	-
A	86	50,194	5	55,412	10.4%	3	52,833	5.3%
B	112	61,865	9	63,500	2.6%	9	61,481	-0.6%
C	333	72,853	11	72,819	0.0%	26	72,248	-0.8%
D	219	84,412	3	98,772	17.0%	37	91,550	8.5%
E	80	92,202	0	-	-	11	105,115	14.0%
F	47	111,422	2	108,870	-2.3%	15	123,391	10.7%
F+	13	126,295	0	-	-	2	122,658	-2.9%

Table 22 (cont.)

SERVICE (FOR PROFIT)

Level	# of Members *	Overall Mean Salary - $	# of Females	Female Mean Salary - $	Variance from Mean	# of Males	Male Mean Salary - $	Variance from Mean
A-	4	36,600	0	-	-	4	36,600	0.0%
A	4	41,545	1	-	-	3	40,805	-1.8%
B	5	49,921	1	-	-	4	49,346	-1.2%
C	7	64,792	0	-	-	5	64,829	0.1%
D	8	88,823	0	-	-	7	85,084	-4.2%
E	9	101,279	0	-	-	5	113,743	12.3%
F	5	118,087	0	-	-	3	120,144	1.7%
F+	4	138,800	0	-	-	2	140,100	0.9%

UTILITY (RATE CONTROLLED)

Level	# of Members *	Overall Mean Salary - $	# of Females	Female Mean Salary - $	Variance from Mean	# of Males	Male Mean Salary - $	Variance from Mean
A-	60	39,180	2	37,106	-5.3%	4	38,876	-0.8%
A	78	51,694	9	49,925	-3.4%	24	52,607	1.8%
B	58	58,404	12	57,144	-2.2%	17	57,476	-1.6%
C	127	71,360	11	77,374	8.4%	46	76,197	6.8%
D	224	87,900	2	82,776	-5.8%	92	90,113	2.5%
E	129	107,972	2	104,437	-3.3%	29	109,076	1.0%
F	64	120,683	1	100,839	-16.4%	20	113,333	-6.1%
F+	11	151,641	0	-	-	7	165,960	9.4%

ADVANCED TECHNOLOGIES

Level	# of Members *	Overall Mean Salary - $	# of Females	Female Mean Salary - $	Variance from Mean	# of Males	Male Mean Salary - $	Variance from Mean
A-	20	36,535	3	34,614	-5.3%	17	36,874	0.9%
A	32	49,953	4	45,425	-9.1%	16	49,418	-1.1%
B	74	57,658	10	51,502	-10.7%	33	56,101	-2.7%
C	123	72,595	10	65,779	-9.4%	34	66,065	-9.0%
D	152	89,638	6	70,583	-21.3%	36	79,487	-11.3%
E	81	108,743	2	109,700	0.9%	25	96,718	-11.1%
F	16	119,173	0	-	-	9	109,076	-8.5%
F+	4	174,218	0	-	-	4	174,218	0.0%

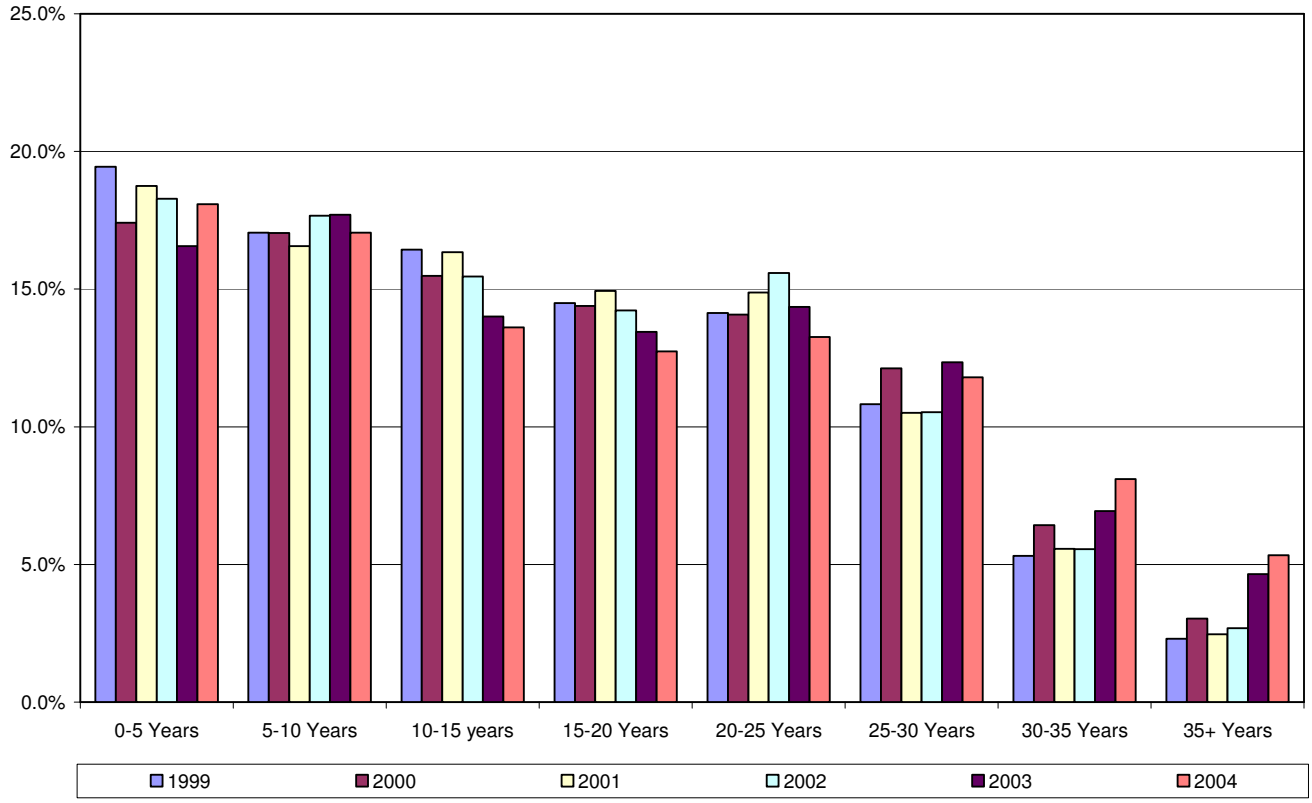
Experience and Responsibility Level Distribution

In recent years, much has been said about the "aging" of the work force, and significant efforts have been made to ensure that the next generation of professionals is properly prepared to take over. Though the APEGGA Salary Survey does not directly look at the age of our respondents, information is gathered about the graduation date and responsibility level of the employees.

Figure 11 shows that over the last five years there has been a trend towards members with a greater number of years experience since graduation. There has been an overall increase in the percentage of respondents in the groups with 25 to 30 years, 30 to 35 years, and more than 35 years experience since graduation. Likewise, there has been a decrease in the percentage of respondents in each 5-year grouping, from 0 to 25 years experience since graduation, with the exception of the 5 to 10-year grouping, which has remained essentially constant.

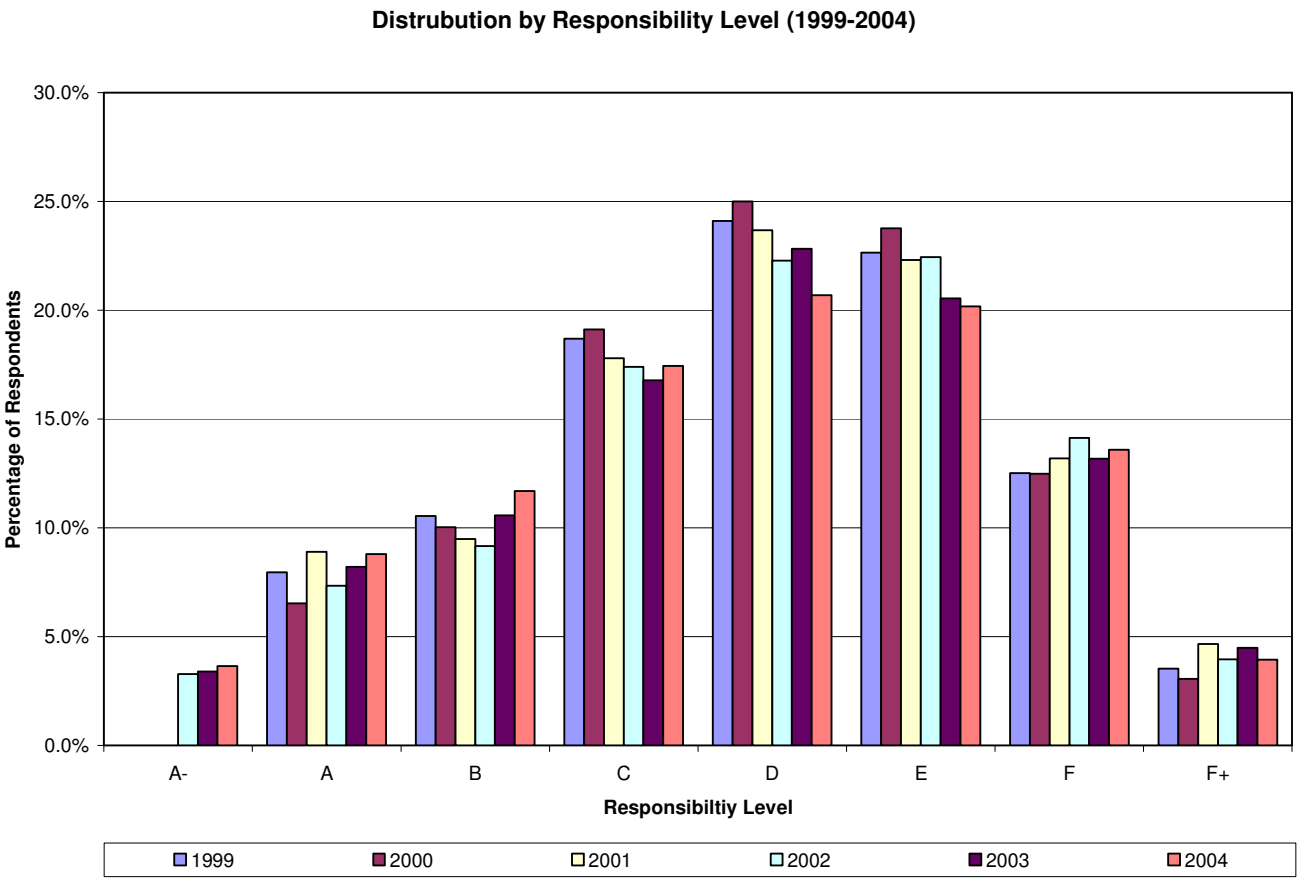
FIGURE 11

Age Distribution Based on Years Since Graduation (1999-2004)



In addition to looking at years since graduation, the Survey also examined the number of respondents at each responsibility level. Figure 12 shows that over the past five years, the percentage of respondents at the upper (F and F+) and lower (A- and A) levels have been relatively constant. The percentage of respondents at Level B (essentially the first level of responsibility as a Professional Engineer, Geologist or Geophysicist) has increased slightly. The mid-level professional positions, at Levels C, D, and E have shown a decreasing trend.

FIGURE 12



The five-year history reflected in these figures is inadequate to predict any long-term trends. This information should be looked upon as a starting point. The Survey will continue to gather and report information in these categories so that long-term trends can be identified.

APPENDIX A
DETAILED JOB CLASSIFICATION GUIDE

LEVEL OF RESPONSIBILITY	LEVEL A -	LEVEL A
DUTIES	Receives training in the various phases of office, plant, field or laboratory engineering or geoscience work as classroom instruction or as supervised "on-the-job" assignments, often accompanied by a pre-assigned "A" or higher level “buddy”. Tasks assigned and well supervised include: preparation of simple plans, designs, calculations, costs and bills of material in accordance with established codes, standards, drawings or other specifications. Under supervision, may carry out routine technical surveys or inspections and prepare reports. Recognizing short duration of Co-op/Intern Student placements, assignments are usually non-complex projects with deadlines that finish within the Co-op/Intern term.	Receives training in the various phases of office, plant, field or laboratory engineering / geoscience work as classroom instruction or "on-the-job" assignments. Tasks assigned include: preparation of simple plans, designs, calculations, costs and bills of material in accordance with established codes, standards, drawings or other specifications. May carry out routine technical surveys or inspections and prepare reports.
RECOMMENDATIONS, DECISIONS AND COMMITMENTS	Few if any technical decisions called for and these will be of routine nature with ample precedent or clearly defined procedures as guidance. All such responsibilities usually cleared through “buddy” and supervisor before being accepted.	Few technical decisions called for and these will be of routine nature with ample precedent or clearly defined procedures as guidance.
SUPERVISION RECEIVED	Works under close supervision, often side-by-side with a pre-assigned “A” or higher “buddy”. Work is reviewed for accuracy and adequacy and conformance with prescribed procedures.	Works under close supervision. Work is reviewed for accuracy and adequacy and conformance with prescribed procedures.
LEADERSHIP AUTHORITY AND/OR SUPERVISION EXERCISED	None	May assign and check work of one to five technicians or helpers.
GUIDE TO ENTRANCE QUALIFICATIONS	Enrolled in an accredited University Engineering /Geosciences or Applied Sciences Bachelor degree program and on a structured Co-Op/Intern Student assignment. May have no practical experience except previous co-op assignments.	Bachelor's degree in Engineering / Geosciences or Applied Sciences, or its equivalent, with little or no practical experience.

LEVEL OF RESPONSIBILITY	LEVEL B	LEVEL C
DUTIES	Normally regarded as a continuing portion of an engineer's/geoscientist's training and development. Receives assignment of limited scope and complexity, usually minor phases of broader assignments. Uses a variety of standard engineering methods and techniques in solving problems. Assists in carrying out technical tasks requiring accuracy in calculations, completeness of data and adherence to prescribed testing analysis, design or computation methods.	This is typically regarded as a fully qualified professional engineering level. Carries out responsible and varied engineering / geoscience assignments, requiring general familiarity with a broad field of engineering and knowledge of reciprocal effects of the work upon other fields. Problems usually solved by use of combination of standard procedures, or methods developed in previous assignments. Participates in planning to achieve prescribed objectives.
RECOMMENDATIONS, DECISIONS AND COMMITMENTS	Recommendations limited to solution of the problem rather than end results. Decisions made are normally within established guidelines.	Makes independent studies, analyses, interpretations and conclusions. Difficult, complex or unusual matters of decisions are usually referred to more senior authority.
SUPERVISION RECEIVED	Duties are assigned with detailed oral and occasionally written instructions, as to methods and procedures to be followed. Results are usually reviewed in detail and technical guidance is usually available.	Work is not generally supervised in detail and amount of supervision varies depending upon the assignment. Usually technical guidance is available to review work programs and advise on unusual features of assignment.
LEADERSHIP AUTHORITY AND/OR SUPERVISION EXERCISED	May give technical guidance to one or two junior engineers / geoscientists or technicians, assigned to work on a common project.	May give technical guidance to engineers / geoscientists of less standing, or technicians assigned to work on a common project. Supervision over other engineers / geoscientists not usually a regular or continuing responsibility.
GUIDE TO ENTRANCE QUALIFICATIONS	Bachelor's degree in Engineering / Geosciences or Applied Sciences, or its equivalent, normally with two to three years working experience from the graduation level.	Bachelor's degree in Engineering / Geosciences, or Applied Sciences, or its equivalent, normally with a minimum of five to six years related working experience from the graduation level.

LEVEL OF RESPONSIBILITY	LEVEL D	LEVEL E
DUTIES	This is typically the level of direct and sustained supervision of other professional engineers / geoscientists or the first level of full specialization. Requires application of mature engineering / geoscience knowledge in planning and conducting projects having scope for independent accomplishment and coordination of the difficult and responsible assignments. Assigned problems make it necessary to modify established guides, devise new approaches, apply existing criteria in new manners, and draw conclusions for comparative situations.	Usually requires knowledge of more than one field of engineering / geoscience or performance by an engineering /geoscience specialist in a particular field of engineering / geoscience. Participates in short and long range planning; makes independent decisions on work methods and procedures within an overall program. Originality and ingenuity are required for devising practical and economical solutions to problems. May supervise large groups containing both professional and non-professional staff; or may exercise authority over a small group of highly qualified professional personnel engaged in complex technical applications.
RECOMMENDATIONS, DECISIONS AND COMMITMENTS	Recommendations reviewed for soundness of judgment but usually accepted as technically accurate and feasible.	Makes responsible decisions not usually subject to technical review, on all matters assigned except those involving large sums of money or long range objectives. Takes courses of action necessary to expedite the successful accomplishment of assigned projects.
SUPERVISION RECEIVED	Work is assigned in terms of objectives, relative priorities and critical areas that impinge on work of other units. Work is carried out within broad guidelines, but informed guidance is available.	Work is assigned only in terms of broad objectives to be accomplished, and is reviewed for policy, soundness of approach and general effectiveness.
LEADERSHIP AUTHORITY AND/OR SUPERVISION EXERCISED	Assigns and outlines work; advises on technical problems; reviews work for technical accuracy, and adequacy. Supervision may call for recommendations concerning selection, training, rating and discipline of staff.	Outlines more difficult problems and methods of approach. Co-ordinates work programs and directs use of equipment and material. Generally makes recommendations as to the selection training, discipline, and remuneration of staff.
GUIDE TO ENTRANCE QUALIFICATIONS	Bachelor's degree in Engineering / Geosciences or Applied Sciences, or its equivalent, normally with a minimum of seven to eight years of experience in the field of specialization from the graduation level.	Bachelor's degree in Engineering / Geosciences, or Applied Sciences, or its equivalent, normally with a minimum of ten to twelve years of engineering / geosciences, and/or administrative experience from the graduation level.

LEVEL OF RESPONSIBILITY	LEVEL F	LEVEL F+
DUTIES	Usually responsible for an engineering / geoscience administrative function, directing several professional and other groups engaged in interrelated engineering / geoscience responsibilities; or as an engineering / geoscience consultant, achieving recognition as an authority in an engineering/geoscience field of major importance to the organization. Independently conceives programs and problems to be investigated. Participates in discussion determining basic operating policies, devising ways of reaching program objectives in the most economical manner and of meeting any unusual conditions affecting work progress.	Within the framework of general policy, conceives independent programs and problems to be investigated. Plans or approves projects requiring the expenditure of a considerable amount of manpower and financial investment. Determines basic operating policies, and solves primary problems or programs to accomplish objectives in the most economical manner to meet any unusual condition.
RECOMMENDATIONS, DECISIONS AND COMMITMENTS	Makes responsible decisions on all matters including the establishment of policies and expenditures of large sums of money and/or implementation of major programs, subject only to overall company policy and financial controls.	Responsible for long range planning, co-ordination, making specific and far-reaching management decisions. Keeps management associates informed of all matters of significant importance.
SUPERVISION RECEIVED	Receives administrative direction based on organization policies and objectives. Work is reviewed to ensure conformity with policy and co-ordination with other functions.	Operates with broad management authority, receiving virtually no technical guidance and control; limited only by general objectives and policies of the organization.
LEADERSHIP AUTHORITY AND/OR SUPERVISION EXERCISED	Reviews and evaluates technical work; selects, schedules, and co-ordinates to attain program objectives; and/or as an administrator, makes decisions concerning selection, training, rating, discipline and remuneration of staff.	Gives administrative direction to subordinate managers and contact with the work force is normally through such levels rather than direct.
GUIDE TO ENTRANCE QUALIFICATIONS	Bachelor's degree in Engineering / Geosciences or Applied Sciences, or its equivalent, with broad engineering / geoscience experience, including responsible administrative duties.	Bachelor's degree in Engineering / Geosciences, or Applied Sciences, or its equivalent with many years authoritative engineering / geoscience and administrative experience. The incumbent is expected to possess a high degree of originality, skill and proficiency in the various broad phases of engineering / geoscience applications.

APPENDIX B
APEGGA SALARY SURVEY DATA

Additional results from APEGGA's June 2004 Employer Salary Survey. Other survey results are published in sections 2, 4, 5 and 6 of this booklet.

TABLE B-1

Annual Salaries by Highest Degree - All Professions - June 2004							
Highest Degree Completed	Count	Mean $	D_1 $	Q_1 $	Median	Q_3 $	D_9 $
Ph.D.	156	96,206	59,280	68,052	93,192	120,309	135,000
M.Sc., M.Eng.	765	97,641	57,000	72,200	94,800	122,220	140,400
B.Sc., B.Eng.	7901	89,705	53,897	66,000	86,279	110,719	129,420

FIGURE B-1

APEGGA JUNE 2004 EMPLOYER SALARY SURVEY
Mean Salaries by Year of Graduation and Level of Responsibility
All Professions (Eng., Geol., Geoph.)

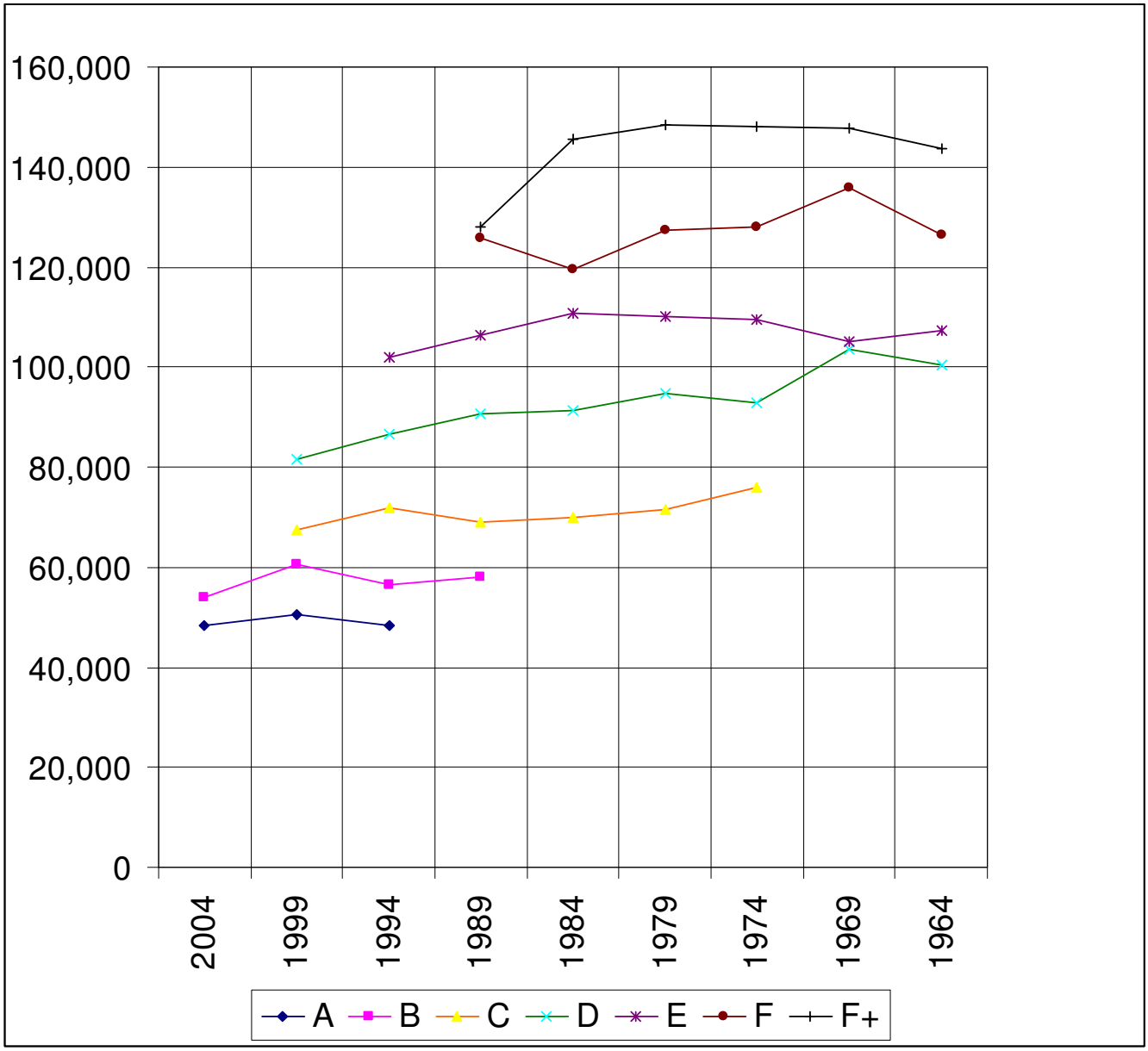


TABLE B-2

Size of Organizations June 2004	
Size of Organization (All Employees)*	No. of Organizations Reporting
1 - 10	9
11 – 20	9
21 – 50	18
51 - 100	15
101 - 250	24
251 - 500	14
Over 500	48
TOTAL	**137**

* Includes all support and non-technical staff.

TABLE B-3

Size of Organizations and Amount of Data - Reported by Level of Responsibility - June 2004									
Size of Organization (All Employees*)	Amount of Data Reported By Level of Responsibility								
	A-	A	B	C	D	E	F	F+	TOTAL
1 - 10	1	5	8	4	4	7	8	1	**38**
11 - 20	2	9	15	8	8	11	10	7	**70**
21 - 50	8	25	40	45	41	33	31	14	**237**
51 - 100	14	43	34	41	26	28	12	9	**207**
101 - 250	19	64	88	145	121	94	77	23	**631**
251 - 500	10	44	69	119	138	133	100	31	**644**
Over 500	281	616	817	1,234	1,557	1,541	1,006	277	**7329**
TOTAL	**335**	**806**	**1071**	**1596**	**1895**	**1847**	**1244**	**362**	**9156**

* Includes all support staff and non-technical staff.

TABLE B-4

Annual Base Salaries by Size of Organization, June 2004								
Level	Size (# of Employees)	# of Eng., Geol., Geoph.	MEAN $	D1 $	Q1 $	MEDIAN $	Q3 $	D9 $
A-	2-10	1						
	11-20	2						
	21-50	8	36,830	27,040	38,400	38,400	39,600	39,600
	50-100	14	37,443	31,200	31,200	37,500	39,600	42,500
	101-250	19	33,152	25,800	28,980	32,200	36,400	38,400
	251-500	10	38,847	33,565	38,640	40,646	40,646	40,740
	Over 500	281	39,358	32,390	36,000	39,600	42,000	45,000
A	2-10	5	40,800	35,700	38,000	40,800	41,500	48,000
	11-20	9	47,748	40,000	43,560	45,760	53,333	55,000
	21-50	25	46,745	39,000	42,960	46,877	52,200	54,000
	50-100	43	47,309	41,413	45,000	48,000	49,920	51,459
	101-250	64	48,452	42,000	46,000	48,256	51,376	53,000
	251-500	44	47,497	39,000	41,500	45,000	53,268	57,000
	Over 500	616	51,553	45,000	47,840	51,720	55,370	57,488
B	2-10	8	49,900	41,600	45,000	50,000	53,600	64,000
	11-20	15	51,105	41,000	44,520	48,600	53,400	63,000
	21-50	40	49,995	39,360	44,725	49,707	56,000	57,500
	50-100	34	58,408	50,967	54,200	57,600	62,000	65,000
	101-250	88	55,044	45,400	50,000	55,500	60,000	65,000
	251-500	69	52,157	45,000	48,000	51,000	56,000	61,984
	Over 500	817	60,228	52,500	56,472	60,252	64,488	68,000
C	2-10	4						
	11-20	8	69,428	50,880	62,358	75,000	79,040	89,125
	21-50	45	60,949	48,000	50,000	60,000	67,440	73,267
	50-100	41	66,436	57,500	62,395	65,000	68,000	80,000
	101-250	145	69,745	58,240	62,400	67,485	74,000	83,200
	251-500	119	65,734	53,580	58,500	66,000	71,628	77,100
	Over 500	1,234	72,739	62,256	68,819	73,600	76,971	81,375
D	2-10	4						
	11-20	8	78,940	58,320	74,280	78,780	87,000	104,000
	21-50	41	74,297	61,200	66,000	72,000	82,180	91,200
	50-100	26	80,993	66,967	71,000	77,000	88,000	95,000
	101-250	121	93,585	71,100	80,808	88,900	108,000	123,000
	251-500	138	83,890	70,000	76,000	84,200	90,336	98,000
	Over 500	1,557	89,425	77,109	83,584	89,400	95,700	101,703
E	2-10	7	87,900	72,000	75,000	90,000	100,000	101,300
	11-20	11	94,647	64,800	75,000	100,000	106,000	110,000
	21-50	33	95,479	72,000	80,000	98,475	105,000	110,000
	50-100	28	98,282	85,000	90,000	94,800	110,000	111,500
	101-250	94	105,319	87,984	92,976	102,336	109,408	128,100
	251-500	133	95,483	80,000	87,975	94,800	103,000	112,260
	Over 500	1,541	109,441	91,800	102,852	111,000	117,500	122,720
F	2-10	8	90,172	69,600	69,600	90,000	120,000	139,600
	11-20	10	112,158	75,000	100,000	108,000	108,000	146,500
	21-50	31	115,136	80,373	96,000	120,000	129,229	137,388
	50-100	12	124,015	100,000	104,000	123,600	136,300	137,696
	101-250	77	133,443	106,200	117,600	130,000	152,000	166,400
	251-500	100	116,979	93,000	104,900	116,280	129,000	140,400
	Over 500	1,006	129,270	109,500	120,950	130,000	137,700	148,000
F+	2-10	1						
	11-20	7	152,430	120,000	120,000	154,500	164,500	221,900
	21-50	14	143,473	108,000	119,623	138,000	148,441	170,000
	50-100	9	134,226	100,000	115,000	129,200	130,000	245,523
	101-250	23	165,957	120,000	131,456	142,500	200,000	215,000
	251-500	31	147,890	122,916	128,340	135,000	152,600	194,400
	Over 500	277	151,637	126,664	138,629	145,530	161,720	181,500

Note: Organization size is based on total number of employees.

TABLE B-5

Frequency Distribution of Annual Salaries by Level of Responsibility
Engineers, Geologists, Geophysicists
June 2004

UPPER LIMIT	A-	A	B	C	D	E	F	F+	TOTAL
$26,400	7								7
$28,800	5								5
$31,200	12	1							13
$33,600	29	2							31
$36,000	37	3							40
$38,400	57	8	2						67
$40,800	59	12	10						81
$43,200	66	43	12						121
$45,600	38	78	27	4					147
$48,000	5	108	36	4					153
$50,400	2	138	60	18	1				219
$52,800	13	102	75	13	2				205
$55,200	2	136	87	21	2				248
$57,600	3	111	124	48	1				287
$60,000		33	134	55	2	1			225
$62,400		17	152	85	12	1			267
$64,800		12	137	78	6				233
$67,200		1	94	116	34	7			252
$69,600		1	79	136	27	1			244
$72,000			32	161	40	4	3		240
$74,400			9	218	52	7	1		287
$76,800			1	269	67	11	1		349
$79,200				132	95	5	1		233
$81,600				117	117	27	5		266
$84,000				44	105	12	2		163
$86,400				34	205	39	4		282
$88,800				15	175	48	10		248
$91,200				11	197	68	13		289
$93,600				3	131	60	13		207
$96,000				5	170	65	12		252
$98,400				1	128	56	15		200
$100,800				2	92	105	20		219
$103,200				2	83	87	24		196
$105,600					42	97	20		159
$108,000					28	139	10	4	181
$110,400					28	161	33	4	226
$112,800					5	127	30	3	165
$115,200				1	13	166	26	5	211
$117,600					4	140	39	2	185
$120,000				3	4	121	56	6	190
$132,000					24	258	387	55	724
$144,000					3	31	349	98	481
$156,000						1	106	72	179
$168,000						2	42	44	88
$180,000							18	20	38
>$180,000							4	49	53
TOTAL	**335**	**806**	**1,071**	**1,596**	**1,895**	**1,847**	**1,244**	**362**	**9,156**

APPENDIX C
ALBERTA CONSUMER PRICE INDICES

Table C-1

EDMONTON-BASED COMPARISONS
ALL COMMODITY INDICES
Number of Items Surveyed, Aggregate Indices and Weighting Patterns
Selected Alberta Communities
JUNE 2004

COMMUNITY	NUMBER OF ITEMS SURVEYED*	WEIGHTING PATTERN*	ALL COMMODITY INDICIES
Edmonton	299	83.1	100
Athabasca	288	81.7	101.5
Barrhead	297	82.9	93.2
Brooks	296	82.6	99.9
Calgary	299	83.1	105.0
Camrose	297	82.7	99.4
Canmore	294	82.7	118.7
Cold Lake	290	82.4	97.0
Drayton Valley	294	82.8	97.0
Drumheller	294	82.3	93.3
Fort McMurray	299	83.1	109.2
Grande Cache	273	71.7	99.3
Grande Prairie	297	83.1	100.3
Hanna	289	82.3	94.6
High Level	288	82.2	101.0
High Prairie	295	82.8	101.2
High River	292	82.1	99.5
HInton	292	82.4	101.2
Jasper	266	72.4	124.3
Lethbridge	299	83.1	94.8
Lloydminster	298	82.9	100.2
Medicine Hat	299	83.1	91.8
Olds	297	82.7	96.6
Peace River	294	82.7	100.6
Pincher Creek	284	81.2	99.2
Ponoka	291	82.2	94.9
Red Deer	299	83.1	97.7
Rocky Mountain House	294	82.4	96.7
Slave Lake	293	82.2	104.1
St. Paul	289	81.7	92.6
Stettler	298	82.9	97.0
Taber	277	79.4	95.2
Vegreville	290	82.1	94.9
Wainwright	295	82.6	88.2
Whitecourt	293	82.8	97.5

*Notes: Variations in the weighting patterns and number of items surveyed arise due to the lack of availability and comparability of certain items in some communities.

** Edmonton = 100.0

From the 2003 Place-to-Place Price Comparison Survey for Selected Alberta Communities, Policy and Economic Analysis, Alberta Economic Development, May 2004,
http://www.alberta-canada.com/statpub/pdf/priceCompSurv2003.pdf

APPENDIX D
LIST OF PARTICIPANTS

Acclaim Energy Inc.
Accutech (2003) Ltd.
AD Williams Engineering Ltd.
Alberta Energy & Utilities Board
Agrium Inc.
Alberta Government
Alberta Research Council
AMC Technologies Corporation
AMEC Earth & Environmental
AMEC Energy & Mining
AMEC Infrastructure
Anadarko Canada Corporation
Associated Engineering Alberta Ltd.
ATCO Electric
ATCO Frontec
ATCO Gas
ATCO Pipelines
Bank of Montreal Oil & Gas Department
Bantrel Co.
BAR Engineering Company Ltd.
Beck Engineering (1992) Ltd.
Bel-MK Engineering Ltd.
Bettis Canada Ltd.
Bunge Canada Holdings Inc.
Burlington Resources Canada Ltd.
CANA Construction Company Ltd.
CANSPEC Group Inc.
Cascade Engineering Group Inc.
CCI Thermal Technologies Inc.
CDL Systems Ltd.
CGG Canada Services Ltd.
CH2M Hill Canada Limited
Chevron Canada Resources
City of Calgary
City of Edmonton
City of Lethbridge
City of Medicine Hat
Colt Engineering Corporation
Compton Petroleum Corporation
ConocoPhillips Canada Ltd.
DACRO Industries Inc.
Deer Creek Energy Limited
Degussa Canada Inc.
Devon Canada Corporation
Direct Energy Marketing Ltd.
Dominion Construction Company Inc.
Dow Chemical Canada Inc.
DPH Engineering Inc.
Duke Energy Gas Transmission
Earth Tech (Canada) Inc.
Eastern Irrigation District
EBA Engineering Consultants Ltd.
Emerson Electric Canada Ltd.
Enbridge Pipelines Inc.
EnCana Corporation
Enerflex Systems Ltd.
Enersul Limited Partnership
ENMAX Corporation
EPCOR Corporation
EXH Engineering Services Ltd.
Field, Field, & Field Architecture-Engineering Ltd.
Fluor Canada Ltd.
GEDCO
Gemini Corporation
General Dynamics Canada
GLM Tanks and Equipment
Golder Associates Ltd.
Graham Ryan Consulting
Grant Structural Engineering
Group2 Architecture Engineering Interior Design
GX Technology Canada Ltd.
Hampson-Russell Limited Partnership
Hanover Maloney Inc.
Hemisphere Engineering Inc.
Horton CBI Ltd.
Imperial Oil Limited
IMV Projects Inc.
Inland Pipe Ltd.
Integra Energy Consulting Ltd.
Jacobs Canada Inc.
Kemex Engineering Services Ltd.
Kilowatts Design Company Inc.
Klohn Crippen Consultants Ltd.
Komex International Ltd.
Kvaerner Process Systems Canada Inc.
Lehigh Inland Cement
Luscar Ltd.
Mack, Slack & Associates
MEG Energy Corporation
MEG Worley Ltd.
Mentor Engineering Inc.
Micralyne Inc.
NAL Resources Management Ltd.
NewAlta Corporation
Nexen Canada Ltd
Nichols Environmental (Canada) Ltd.
Northwest Hydraulic Consultants Ltd.
Norwest Corporation
NovaTel Inc.
O'Connor Associates Environmental
Paramount Resources Ltd.
Pembina Pipeline Corporation
Petro-Canada
Pioneer Land Services Ltd.
Progressive Engineering Ltd.
Ready Engineering Corporation
Rostel Industries Ltd.
Ryan Energy Technologies Inc.

2004 EMPLOYER SALARY SURVEY - LIST OF 137 PARTICIPANTS (cont'd)

Scheffer Andrew Ltd.
Seneca Energy Canada Inc.
Sherritt International Corporation
Sintra Engineering Inc.
Slave Lake Pulp Corporation
SNC-Lavalin Inc.
SolTech Engineering Inc.
St. Mary River Irrigation District
Stantec Consulting Ltd.
Stewart, Weir & Co. Ltd.
Stuart Olson Construction (Southern Alberta)
Suncor Energy Inc.
Syncrude Canada Ltd.
Talisman Energy Inc.
Telvent Canada Ltd.
T G Engineering Inc.
TIC Canada
Tracer Industries Canada Limited
TransCanada Pipelines Limited
Tri Ocean Natchiq Engineering Ltd.
Trican Well Service Ltd.
UMA Engineering Ltd.
UMA Engineering Ltd. - Lethbridge
Univar Canada Limited
Vermilion Energy Trust
Weldwood of Canada Ltd., Hinton Pulp
Westerra Environmental Management Inc.
Weyerhaeuser Company Limited
Wiebe Forest Engineering Ltd.