Job Class Profile:

Petroleum Engineer

Pay Level:

CG-43

Point Band:

1038-1081

						Accountability		Development	Environmental	
		Interpersonal				& Decision		and	Working	Total
Factor	Knowledge	Skills	Physical Effort	Concentration	Complexity	Making	Impact	Leadership	Conditions	Points
Rating	8	6	2	5	8	6	6	2	3	
Points	373	100	13	24	240	130	124	43	32	1079

JOB SUMMARY

The Petroleum Engineer provides engineering expertise in the areas of exploration, development and production of oil and gas with emphasis on reservoir, drilling and production engineering and participates in the development and administration of legislation, regulations and guidelines.

Key and Periodic Activities

- Participates in the technical review and assessment of drilling program approvals and development plans for the exploitation of oil and gas reserves. This involves evaluation of various systems and exploitation schemes, with due consideration for operational safety, protection of the environment and efficient recovery of the resource.
- Provides advice and consultation to senior officials of the Department and government on policy matters related to petroleum exploration, development and production.
- Participates with other officials of the Department in the assessment of hydrocarbon resources and reserves, and in the development of production and drilling forecasts, development strategies and policy recommendations.
- Evaluates data submitted from the Canada-Newfoundland and Labrador Offshore Petroleum Board (CNLOPB), industry or consultants regarding drilling, reservoir, production and other engineering related studies.
- Participates in the development and administration of legislation, regulations and guidelines governing the practices necessary for ensuring safety, protection of the environment and conservation of resources in the exploration, development and production of oil and gas.
- Performs independent studies with respect to drilling, reservoir, production and project engineering.
- Provides direction to Junior Technologists within the Department.
- Responsible for liaising with counterparts in the CNLOPB, federal government, other provinces and industry regarding petroleum engineering related activities.
- Prepares written material including cabinet papers, briefing notes, reports and presentations.
- Evaluates and makes recommendations on purchasing petroleum application software.
- Represents the Department at public forums and meetings related to all aspects of petroleum engineering, as well as speaking engagements at technical conferences, exhibits and educational institutions.

SKILL

Knowledge

General and Specific Knowledge:

- Expertise in petroleum exploration, development and production
- Petroleum engineering software

Formal Education and/or Certification(s):

 Minimum: Undergraduate Degree in Engineering; Professional Engineer (P. Eng.) Designation

Years of Experience:

— Minimum: 4 - 5 years

Competencies:

- Operate a computer to perform mathematical and other types of specialized analyses
- Written and verbal communication skills
- Policy development
- Conduct analysis or assessment
- Apply established techniques
- Coordinate a range of related work or project activities
- Develop new solutions

Interpersonal Skills

- A range of interpersonal skills are utilized such as listening, asking questions, providing routine and communicating complex information through speech or written text, promoting ideas, gaining the cooperation of others, conducting formal interviews, negotiating contracts and agreements, making formal presentations, providing expert advice and dealing with upset or angry people and resolving disputes.
- Communications occur with employees within the immediate work area and department, outside the organization and include Supervisor/Manager, other government representatives, departmental executive, industry stakeholders and customers/clients and general public.
- Most significant contacts are Supervisor/Manager; Internal Department Executive (provide advice, consultation and updates on petroleum related activities); and Stakeholder and/or representatives (during time of application review and drilling operations).

EFFORT

Physical Effort				
 The demands of the job do not result in considerable fatigue as majority of tasks and activities are performed in an office environment. 				
— Lifting or moving objects are not required.				
— The use of fine finger/precision work when using a computer to evaluate data is constant.				
— Occasionally may be required to visit sites.				
Concentration				
— Visual concentration is required when reviewing and assessing information to ensure a				

- review is properly conducted which involves reading and utilizing a computer.
- Auditory concentration is required during consultations with senior departmental officials and for liaising with counterparts in the CNLOPB, federal government, other provinces and industry regarding petroleum engineering related activities.
- Time pressures and deadlines are experienced when decisions are required on specific drilling related requests, such as a request for change from approved drilling programs (for items such as casing setting depths, etc.). Requests have to be analyzed to ensure they maintain regulatory requirements and good engineering practices.
- Lack of control over work pace is experienced when documentation requires interdepartmental review.
- **Exact results and precision is required** when evaluating data regarding drilling, reservoir, production and other engineering related studies; technical review and assessment of drilling program approvals and development plans and when preparing cabinet papers, briefing notes, reports and presentations.

Complexity

- Tasks range from repetitive/well defined to different and unrelated including diverse tasks involving a wide variety of responsibilities and situations. A broad range of skill and knowledge is required to participate in a technical review and assessment of drilling program approvals and development plans for the exploitation of oil and gas reserves. Work involves highly technical tasks including evaluating data regarding drilling, reservoir, production and other engineering related studies as well as tasks with strategic or policy significance.
- Typical problems involve the assessment of hydrocarbon resources and reserves and in the development of production and drilling forecasts, development strategies and policy recommendations.
- Some challenges/problems/issues can be addressed by following procedures and/or guidelines; however, others require creative problem definition and analysis and the development of complex solutions.
- Required to keep abreast of trends and developments in the petroleum industry.
- Reference material available includes manuals, guidelines, policies, procedures, Acts and Regulations, advisors, etc.

RESPONSIBILITY

Accountability and Decision-Making

- Works tasks and activities are generally prescribed or controlled.
- Review drilling applications and annual inspections for completeness and on a technical basis. Results and deficiencies found during the assessment are relayed directly to the particular stakeholder or stakeholder representative.
- Travel, specialized training and purchase of specialized software require supervisory approval.
- Provides petroleum engineering expertise including independently performing studies related to drilling, reservoir, production and project engineering.
- Participates in the development and administration of legislation, regulations and guidelines governing the practices necessary for ensuring safety, protection of the environment and

conservation of resources in the exploration, development and production of oil and gas.
Must exercise a high degree of discretion and judgement in the overview of petroleum activities, stakeholder issues and in providing advice to executive.

Impact

- Impacts are felt internally within the immediate work area and department as well as externally with clients and stakeholders and/or stakeholder representatives.
- Resources affected include equipment, processes and systems, information, finances, facilities, material resources, human resources, health and safety and corporate image.
- The consequences of a mistake or error can have an extreme impact on health and safety and corporate image and a significant impact on information, finances and material resources. For example, improperly designed casing strings can result in premature failure leading to catastrophic events. Proper assessment of an "Application to Drill a Well" ensures casing can withstand loading conditions placed on it under normal and unforeseen events. A lesser impact is felt on equipment, processes and systems facilities and human resources.
- Improper assessments of applications could result in unnecessary delays for stakeholders and departmental officials.

Development and Leadership of Others

- Not responsible for direct supervision of staff.
- Development and leadership activities include providing on-the-job advice/guidance, direction and acting as a technical mentor to junior technologists and new employees.

WORKING CONDITIONS

Environmental Working Conditions

- Occasionally safety equipment such as glasses, coveralls, steel-toe boots, gloves, hardhat, etc., are required when travelling to an oil rig and well site to perform inspections and routine checkups. As a result, this mitigates the likelihood for injuries or illnesses resulting from hazards.
- Occasional exposure to unusual/distracting noise, hazardous chemicals, toxic or poisonous substances and wet or slippery surfaces when travelling to an oil rig and well site.