

PETROLEUM ENGINEER I/IIKind of Work

Professional work in the field of Petroleum Engineering.

Distinguishing Features of Work

An employee in this class assists a professional superior in the exercise of controls over the operations of private companies engaged in the development of the National Oil Fields and in the winning of petroleum in order to ensure the conservation of the country's reserves. Work involves the making of studies, circulations and evaluations relating to oil winning operations and to reserves as well as to refining and other processing of petroleum. Work entails the making of field and plant inspections. Assignments are received from a superior officer to whom unusual problems are referred. Work is performed with considerable independence within the framework of established policies and procedures and is reviewed by a superior through discussions and the analysis of periodic reports.

Examples of Work

Examines and appraises proposals by oil companies undertaking drilling, repair or other work on wells purporting to improve or maintain their economic producing life.

Examines and appraises proposals for abandonment of wells.

Makes inspections of drilling and work-over rigs in operation and of other field facilities and installations; and investigates accidents and equipment failure and pollution complaints.

Inspects equipment and examines production methods in order to ascertain whether proper production practices are employed consistent with good conservation principles.

Supervises and participates in establishing and maintaining proper standards for sampling, gauging, testing and metering of oil and gas with particular reference to volume and quality and determination for fiscalisation and royalty assessment.

Supervises offloading of production barges.

Supervises and participates in the compiling of drilling and production statistics and assists in studies of production pattern and behaviour of wells, reservoirs, fields and areas with a view to establishing optimum production methods, to applying appropriate reservoir control, to forecasting future production rates for crude oil and natural gas.

Makes special studies and calculations in connection with estimation of reserves of oil and gas and assists in investigations concerning the feasibility of improving reserves through the application of new additional recovery techniques.

Assists in examination and appraisal of requests by companies to construct or alter refining plants and to introduce new separation and conversion processes and techniques.

Participates in special studies into the physicochemical nature of indigenous and imported petroleum and of finished and unfinished petroleum products with a view to establishing the optimum utilisation possible.

Supervises and participates in the compilation of statistics relative to refining and petrochemical manufacture and movement of products.

Inspects refinery installations and keeps track of changes.

Performs related work as required.

Required Knowledges, Skills and Abilities

Knowledge of principles and practices of petroleum engineering and/or processing of petroleum.

Knowledge of the methods and techniques of oilfield drilling and production and/or petroleum refining operations.

Knowledge of the physiochemical reaction potential of petroleum and petroleum products.

Knowledge of the geological formations and strata from which gas and oil are obtained.

Ability to develop, evaluate and summarise technical engineering data and to prepare clear and concise reports.

Ability to determine the effectiveness of production conservation and/or processing operations.

Ability to establish and maintain effective working relationship with other employees and the public.

Minimum Experience and Training

Training as evidenced by the B.Sc degree in oil technology or in Petroleum Engineering from a recognised college or University or the B.Sc degree in one of the Physical Sciences supplemented by postgraduate training in Petroleum Technology; or their equivalent.