

**TITLE:**                   **PETROLEUM ENGINEER I-II**

**DEFINITION:**       Performs licensed professional petroleum engineering work pertaining to oil field development, oil and gas production operations, waterflood management, development project evaluation, voidage/subsidence management, enhanced recovery methods, subsidence control, and idle well management.

**DISTINGUISHING CHARACTERISTICS:**

Grade Level I -     Under general supervision, performs the journey-level duties of the classification, including managing small to medium and less complex petroleum engineering projects.

Grade Level II -    Under minimal supervision, performs the most complex and responsible petroleum engineering work, including independently managing large projects across multiple areas of the petroleum engineering discipline. May direct field contractors. Requires two additional years of experience equivalent to a Petroleum Engineer I.

**EXAMPLES OF DUTIES:**

- Coordinates or participates in multi-organizational teams involving the key stakeholders that include the contract field operator and the State of California;
- Participates in well/reservoir and development project reviews with the contractor Subsurface Engineering Team;
- Conducts field life forecasts and City cash flow predictions from oil funds based on various oil price and operating condition scenarios;
- Observes and reviews formation evaluation work such as well testing, coring, and logging operations;
- Reviews and analyzes electric logs and makes well completion recommendations;
- Prepares and presents formal written and oral presentations to City, Department, contractor, and regulatory personnel;
- Ensures compliance with environmental and safety regulations;
- Provides mentoring to new and less experienced staff members;
- May participate in and/or observe field work such as drilling, workover, and production operations; and,
- Performs other related duties as required.

**MINIMUM QUALIFICATIONS:**

- Graduation from an accredited college or university with a Bachelor's Degree in Petroleum Engineering, Geology, or a closely related field.
- Three (3) years of recent experience in petroleum engineering, petroleum geology, and oil and gas field operations.
- A Master's Degree in Petroleum Engineering may be substituted for one (1) year of required experience.
- A Doctoral Degree in Petroleum Engineering may be substituted for two (2) years of required experience.
- Registration as a Petroleum Engineer in the State of California or out of state registration as a Petroleum Engineer (required to obtain a State of California Petroleum Engineering License prior to the completion of probation).
- A valid California Class C motor vehicle operator's license.

**KNOWLEDGE, SKILLS, AND ABILITIES:**

- Knowledge of:
  - Technical principles, theories, and concepts of petroleum engineering, including economic concepts.
  - Engineering practices related to waterflood management, reservoir surveillance, development project evaluation, and reserve assessments.
  - Drilling, workover, production operations, formation evaluation, and well completion work to support petroleum engineering duties.
- Skill in:
  - Effectively interacting with City, field contractor, State, and regulatory personnel.
- Ability to:
  - Analyze problems and propose effective solutions.
  - Integrate multiple sources of information to derive solutions for complex issues and problems.
  - Perform project justification analysis through net present value determination.
  - Prepare written and oral presentations to fulfill both internal and external stakeholder requirements.
  - Operate computers using spreadsheets, word processing, and other business and technical software pertaining to petroleum engineering.

**HISTORY:**

Addition of Grade Levels I-II and consolidation of Senior Petroleum Engineer into

Petroleum Engineer II: 05/24/2000

Revised: 04/01/1965; 05/04/1982; 08/21/2025