Recommended Practice for Care and Use of Subsurface Pumps

API RECOMMENDED PRACTICE 11AR
FOURTH EDITION, JUNE 2000

ERRATA, DECEMBER 2013

REAFFIRMED, FEBRUARY 2020

AMERICAN PETROLEUM INSTITUTE

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Upstream Segment

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FOREWORD

Jurisdiction. This recommended practice (RP) is under the jurisdiction of the American Petroleum Institute (API) Committee on Standardization of Production Equipment.

Purpose. This document presents recommended practices for the care and use of subsurface pumps.

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Note: This is the third edition of this API Recommended Practice. It was authorized by the Committee on Standardization of Production Equipment at the 1988 Standardization Conference as reported in Circ PS-1858, and subsequently approved by letter ballot.

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1 Scope

1.1 The intent of this recommended practice is to give information on the proper selection, operation and maintenance of subsurface pumps so the best economical life can be obtained.

1.2 The basic walking-beam sucker rod combination for producing fluids from the ground had its beginning in very early history. In more recent times, many advances in design and metallurgy have evolved. The method is so popular that today approximately 90 percent of all artificially lifted wells are produced by a sucker rod pump.

1.3 The downhole sucker rod pump is only one portion of the pumping system (see Figure 1). The other major components are the sucker rod string, the surface pumping unit and the prime mover. For proper pumping operation and long maintenance-free runs, all components of the system must be designed and sized properly, taking into account well depth, the amount and viscosity of fluids (oil, water or gas) to be produced, and abrasiveness and corrosiveness of fluids. A failure of any one of the pumping components will result in a shut down of the system, resulting in a costly repair, downtime and possible loss of production.

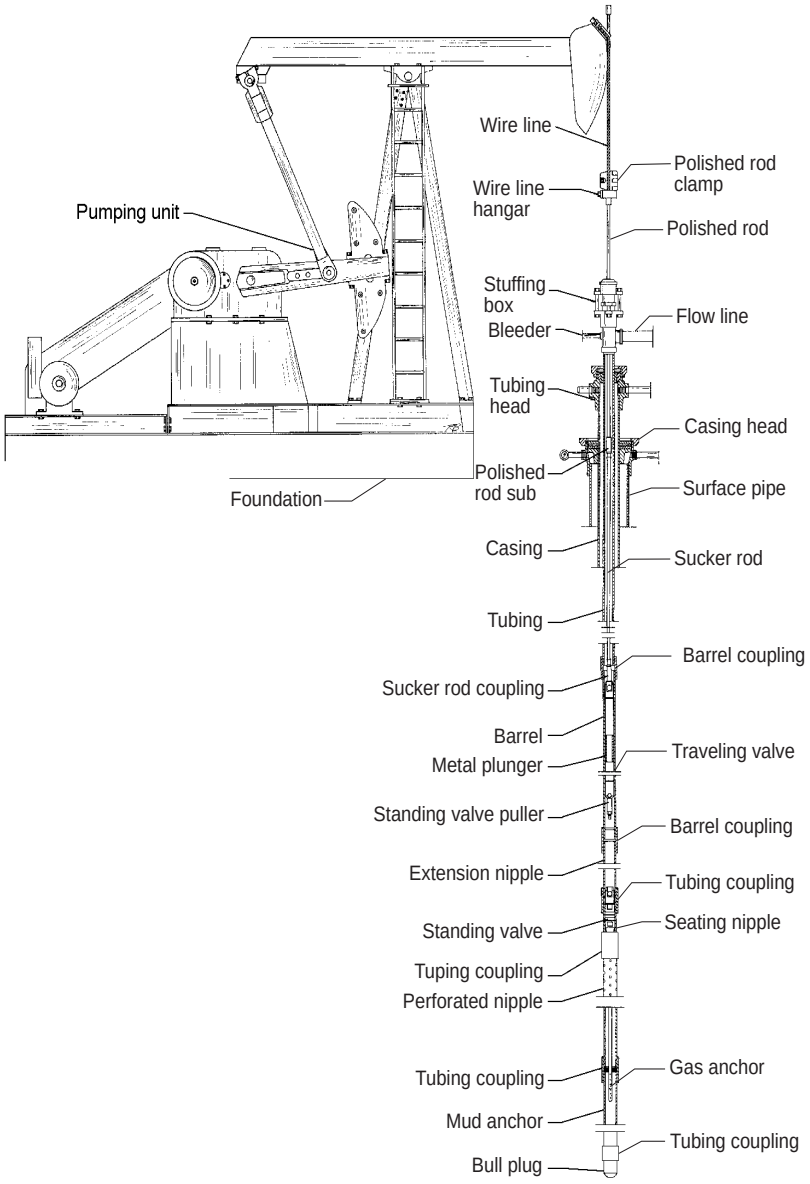

Figure 1—Pumping System