Because of insufficient reservoir pressure, a suitable artificial lift is to be selected for an offshore wellbore having casing size of 7.5".

Given data:

Production rate: 200 BOPD

Oil viscosity: 100cP

Reservoir temperature: 400F

Reservoir pressure; 100psi

TVD: 1000ft

MD: 1200ft

Relative roughness of the pipe: 0.001.

Wellhead pressure requirement: 100 psi.

Select an artificial lifting technique and design it. Find its dimensions. Include any specific criteria/assumption you made.

Include as many details as possible. For example, if it SRP, include details of surface unit, subsurface unit, plunger size, SPM, stroke length, allowed clearance, gas lock solution, prime mover type, gear box, gear ration, dynamometer, type of SRP, ball size, seat size, cage size etc.