

Petr 424
Production Problem
11/11/11

The Trying Hard Production Company has the following wells.

Dusty Puma #3

Location 660FNL and 1320FEL of sec 36 23E 15S, elev 3458 ft

Production formation is Penn, perms 10,610-55 ft

Initial Reservoir Pressure of 3800 psi

Oil 36 API with a gas gravity of .64

GOR 1000 cf/bbl

The well was tested for 3 hours producing 25.375 bbls of oil and 3.9 bbls of water at a bottom hole pressure of 3337 psi. Water has a gravity of 1.05

The production allowable for the well is 650 bopd.

Dusty Puma #2

Location 660FSL and 660FEL of sec 36 23E 15S, elev 3460 ft

Production formation is San Andres, perms 2310-2328 ft

Initial Reservoir Pressure of 800 psi

Oil 22 API with a gas gravity of .67 with 20% N₂ and 10% CO₂

GOR 250 cf/bbl

WOR 1.5, γ_w of 1.1

Dusty Puma #1

Location 1980 FSL and 1980FWL of sec 36 23E 15S, elev 3470 ft

Production formation Penn, perms 8575-78, 8582-89, 8599-8601

Initial reservoir pressure 3257 psi

Oil 36 API with a gas gravity of .64

GOR 1050 cf/bbl

Initial J of .25 bbl/day

The estimated reservoir pressure at present 2800 psi after producing 25,000 bbls of oil.

Really Deep #15

Location 1980FWL and 1980 FNL of sec 35 23E 15S elev 3460 ft

Production formation Strawn, perms 12532-45

Oil 59 API, gas .62

Initial reservoir pressure of 6952 psi

CAOF of 8952 mscfpd

GOR 100000 cf/bbl

Tubing 2 3/8"

Select a location for the gathering facilities which will include 3 phase low pressure separator and tanks. The low pressure gas line runs along the north line of section 25, the high pressure gas line is on the west line of sec 36. The low pressure line has a pressure of 35 psi and the high pressure line has a pressure of 600 psi. There are four wells in section 34 which produce 2000 bopd and 3000 bwpd which is collected in the center of the section. It has been decided that this production will be piped to this battery.

The company warehouse has 100,000 ft of used 2 3/8" tubing and 10,000 feet of 3" line pipe available for this project. They will charge \$2.00/ft for the tubing and \$5.00 a foot for the 3"

For the system that is selected which wells will flow and at what rate. Which wells will need to be put on artificial lift. What is the estimated rate for these wells?

Is there any other equipment need?

Note: The land owner will only allow surface equipment on well locations in sec 35.