

Company: Elk Oil Company
Project: Vacuum ABO re-completion Horizontal
Well Name: Powerpro "20" #1
API #: 30-025-34059
Location: Sec 20, T-17-S, R-35-E: Lea County New Mexico
Rig:
Key Well: Powerpro "20" #1
Elevation: 3,978'
GL: 3,978'
Proposed TD: 9,800' MD

Elk Oil Company has proposed to re-enter a producing Abo well in Lea County, New Mexico for the purpose of converting the well to a horizontal completion. The well is the Powerpro 20 #1. This project can be divided into three phases. The first will be the preparation of the well bore for re-entry and exiting the well bore. The second is the drilling of the horizontal section of the well, stimulation of the well, and the installation of the production liner. The third is the installation of the production equipment well.

The first phase of the operation involves the preparation of the well. This should be performed with a conventional daylight work-over rig. The well is currently producing from the Abo interval that will be targeted from 8756' to 8778'. This interval will need to be squeezed below a retainer. The retainer will also be used as the depth marker for the whipstock that will be set during the drilling phase. During phase one, a Multi-shot Gyro survey will need to be run to locate the bottom hole location of the well bore. The 5 1/2" casing will be pressure tested to 2000#. If problems are encountered during this phase the well can easily be returned to the pre-workover configuration.

The second phase of the project will involve moving in a large work-over rig set up for drilling. A string of 2 7/8" AO drill pipe will be picked up and a whipstock set on bottom. The casing will be exited with a 4 3/4" bit, a 100' curve drilled, and a 1100' lateral drilled. The lateral will be cleaned up, stimulation performed, and a pre-perforated liner run.

The final phase of the project will be the installation of production equipment. A conventional daylight work-over rig will be used for this phase.

The following is a procedure for accomplishing the work to re-complete the Powerpro 20 #1 into a producing horizontal Abo Lime well:

Preparation Phase

- 1) Move in and rig up a well service rig capable of handling 10,000' of 2 7/8" tubing.
- 2) Pull the rods and pump out of the hole laying down. Release the tubing anchor and tally out of the hole with the production tubing. Pick up a casing scraper and GIH to PBTB, approximately 9000'.
- 3) POH. Rig up Gyrodata and run a multi-shot gyro survey from surface to bottom at \approx 9000'.