

Surface location Problems:

ARCO attempted to obtain an orthodox location for #12 at 2310' FN& EL, but was prevented access by a buried east-west flowline under the location (see engineer's sketch plat). We had to shift the location 122' south (to 2432 FNL, 2270 FEL) to allow adequate and safe setback from the pipeline for the small United rig we will use. Any location on the north side of the pipeline would be too close to #11 to effectively drain in-place oil. The location is unorthodox because of the north measurement. As shown on the attached plat, this unorthodox location is completely surrounded by other ARCO tracts in the same lease, so there will be no impact on any other party.

Engineering Justification for Revised NSL Request:

ARCO has already shown the need for 2 strategically spaced wells in each 40-acre tract to recover reserves in the Artesia (Q-G-SA) Field, with 550-600' of gross pay interval. The new Artesia (Glorieta-Yeso) Field, with similar pay type and 220-250' of gross pay, is expected to perform like the San Andres, with low-rate, long-life reserves. Analog San Andres fields indicate we should expect 50 MBO per completion on 20-acre spacing, while other Yeso fields suggest 35 MBO on 20-acre spacing from this deeper pay. Based on other Yeso fields in Eddy County, we expect high variability in pay count and oil rate from one 20-acre Yeso location to the next, and need to retain maximum flexibility to make economic completions. ARCO cannot justify drilling any new well for Yeso reserves alone, nor could we consider directional drilling. ARCO and the State of New Mexico would be best served if all wells were cased to enable Yeso completions.

Production Planning:

In most cases, we expect to complete first in the San Andres dolomite, unless logs or neighboring well performance indicates the Yeso is more prolific. We plan to soon apply to vertically expand the Artesia- Q-G-SA field to include the Yeso, and thus enable co-mingling Yeso with San Andres to keep the wells economic, as was done at Grayburg-Jackson Field by Marbob.