

PHILLIPS PETROLEUM COMPANY
State R #1 Downhole Commingling Application
May 30, 2001

Additional Comments

- The Morrow formation was producing 768 Mscfd prior to being isolated by a plug. The State R #1 produces into a high pressure pipeline (average 670 Psig during 2001) and the estimated critical lift to lift water is around 900 Mscfd. The downhole commingling of the Morrow and Atoka will therefore extend the life of the Morrow reserves by delaying the onset of liquid loading and delay the installation of compression.
- Enclosed in the attachments are graphs of decline curve forecasts for the Atoka and Morrow formations. Phillips recommends a changing annual production allocation formula to account for the predicted changes in volume from each formation. The proposed 2001 production allocation is based on current gas rates while the allocation in subsequent years is based on the annual forecasts. The Morrow no longer produces any liquid hydrocarbons therefore 100% of any condensate production should be allocated to the Atoka.