

**EAST VACUUM GRAYBURG SAN ANDRES UNIT
ATTACHMENT VII TO FORM C-108
APPLICATION FOR AUTHORIZATION TO INJECT SOLVENT**

DATA ON THE PROPOSED OPERATION OF THE INJECTION WELLS

Proposed average and maximum daily water injection rate is:

Average daily rate	1,200 BWPD per well
Maximum daily rate	2,200 BWPD per well

Proposed average and maximum daily solvent rate is:

Average daily rate	3,000 MCFD per well
Maximum daily rate	5,000 MCFD per well

Both the water and solvent systems are closed.

The proposed average and maximum surface injection pressures are:

Average water injection pressure	1,100 psig
Maximum water injection pressure*	1,350 psig
Average solvent injection pressure	1,700 psig
Maximum solvent injection pressure*	1,850 psig

*Maximum injection pressures are based on pre-existing Unit injection pressure allowable which are based on actual San Andres fracture gradients.

There are two sources of injection water makeup, San Andres produced water from Phillips operated East Vacuum Grayburg San Andres Unit and Ogallala fresh water from the EVGSAU water supply wells. Both waters have been injected into the San Andres formation since 1979, and are compatible with each other and the San Andres formation.

The solvent injected is recycle gas from the East Vacuum Liquid Recovery Plant plus purchased carbon dioxide from the Cortez pipeline.

Composition of the injected solvent is approximately

CARBON DIOXIDE	92%
NITROGEN	2%
METHANE	4%
ETHANE	2%

Solvent has been injected into the San Andres formation since 1985 under the authority on NMOCD Order No. R6856 dated 12/16/81.