The E - FLOC® / 800 Reactor (foreground right) followed by ancillary tankage and clarifier (white structure to the right) provides up to 8.0 bbl/min of treatment capacity within a footprint measuring approximately 55' (L) x 9' (W) x 9' (H). The major contaminants include: Total Suspended Solids ("TSS"); Bacteria; Volatile Organic Compounds (benzene, toluene, ethyl benzene, and xylene); Total Petroleum Hydrocarbons ("TPH"); Metals; and Chlorides.

E-Floc® electrocoagulation technology is successful at reducing TSS, TPH, Calcium and Iron by > 90% and SRB, Sulfite, Silica, Strontium and Barium by > 80%. These contaminate must be removed to allow these waters to be reused in future E & P applications. These same contaminates may also foul or scale Reverse Osmosis membranes and their removal is therefore essential before proceeding to tertiary polishing systems and environmental discharge.

Results indicate that E-Floc® technology with subsequent membrane polishing is effective for removal of Chloride to <1500 mg/l making it acceptable for discharge to the environment. Chloride concentration in the raw flow-back was reduced from ~18,800 mg/l to 96.3 mg/l, >99% removal.

E-Floc® electrocoagulation technology provides an efficient / effective means to "clean" flow-back and produced waters to acceptable levels to be reused as make-up water for drilling, completion and other production activities. E - FLOC® technology with membrane polishing produces a desalinated effluent that is safe for land irrigation or discharge with minimal impact to the environment and existing water supplies.

All information in this document may be considered confidential and subject to the terms and conditions of existing nondisclosure agreements. E - FLOC® electrocoagulation processes and equipment are covered by US and foreign patents.