# Disposal Interval Permeability

- Using Darcy's Law, Injectivity Index for Diamond 34 State #1 is:

$$I.I. = Q_i / (P_i - P_r)$$

**I.I.** = (1,011 bwipd) / (3,599 psi – 2,894 psi) = **1.43 bwipd/psi**

- Based on the calculated Injectivity Index from injection data the estimated injection zone permeability is calculated:

$$k = (I.I.)*(141.2\mu\beta_w(\ln(r_e/r_w) + s))/(h)$$

  - Inputs:
    - Injectivity Index: 1.43 bwipd/psi
    - Pay: 413 ft
    - Viscosity: 0.60 cP
    - Water Formation Volume Factor: 1.00 RB/STB
    - Injection Radius: 1,348 ft
    - Wellbore Radius: 0.33 ft
    - Skin: 0

**BEFORE THE OIL CONVERSATION DIVISION**
Santa Fe, New Mexico
**Exhibit No. 21**
Submitted by: **OXY USA Inc.**
Hearing Date: March 29, 2016

- The estimated injection interval permeability for the Diamond 34 State #1 SWD is **2.44 mD**, which is representative of matrix permeability.