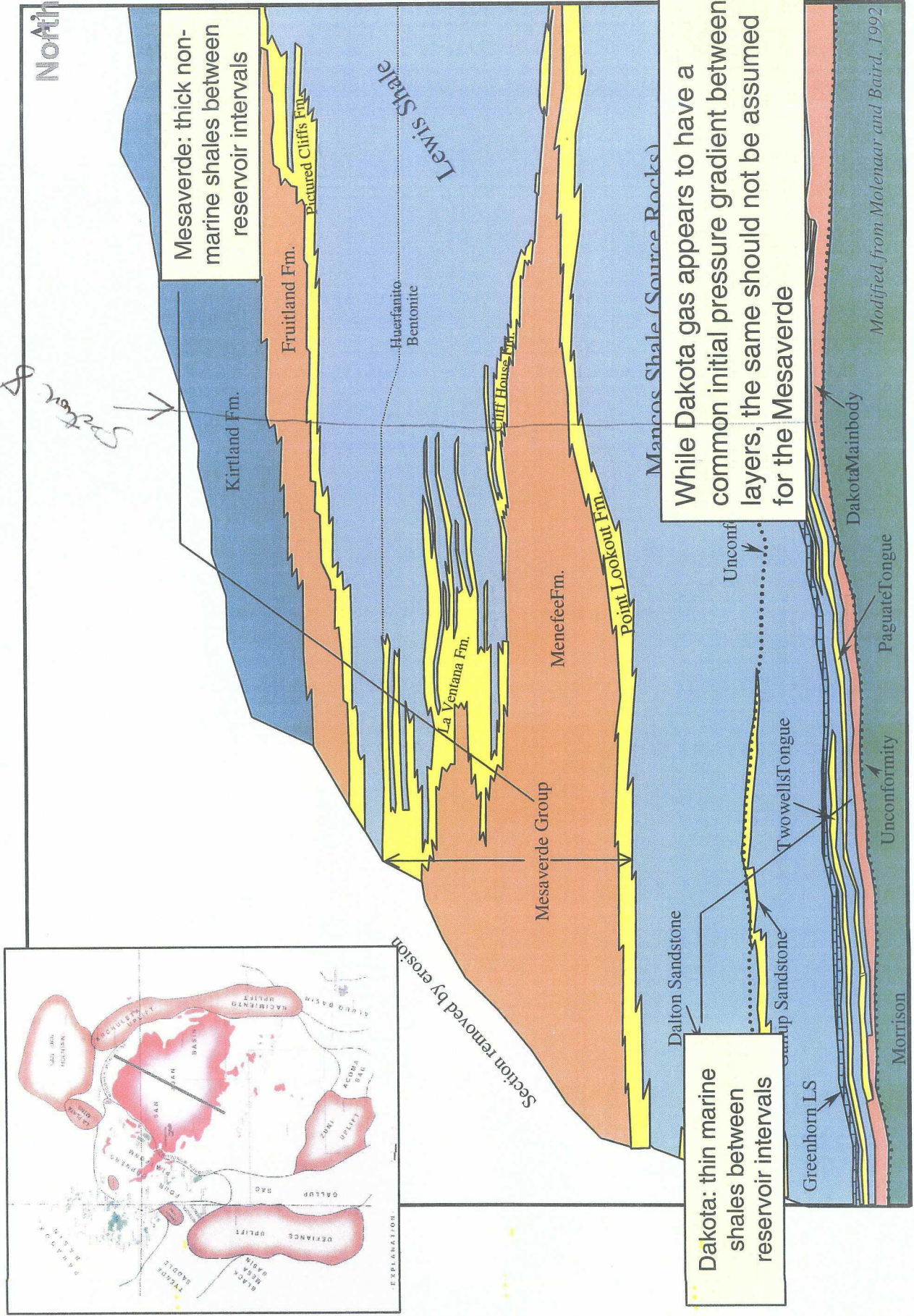
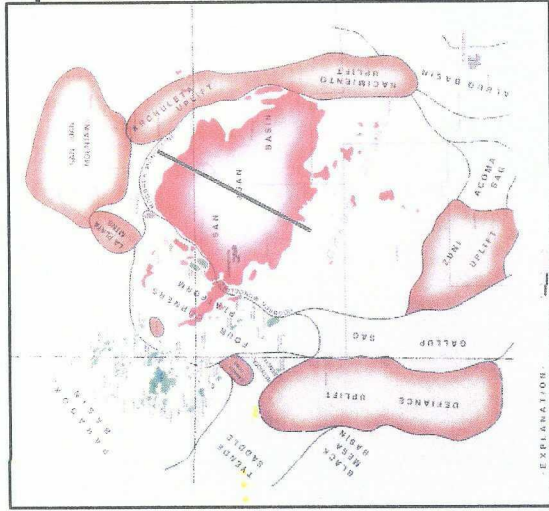


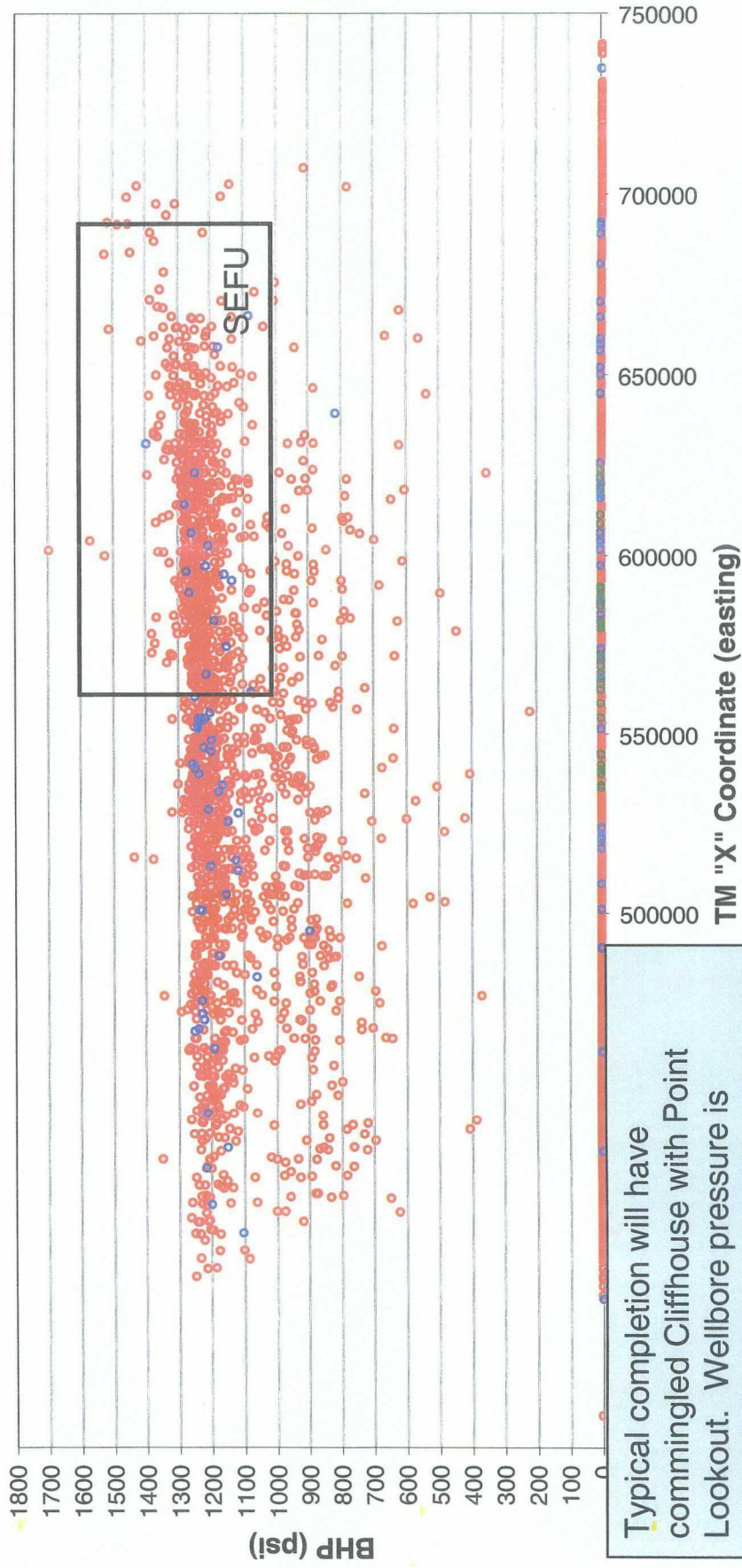
Mesaverde Volumetrics

- Mesaverde volumetrics are complicated by two issues:
 - Multiple pressure gradients
 - Discontinuous Menefee sands

Mesaverde Initial Pressure



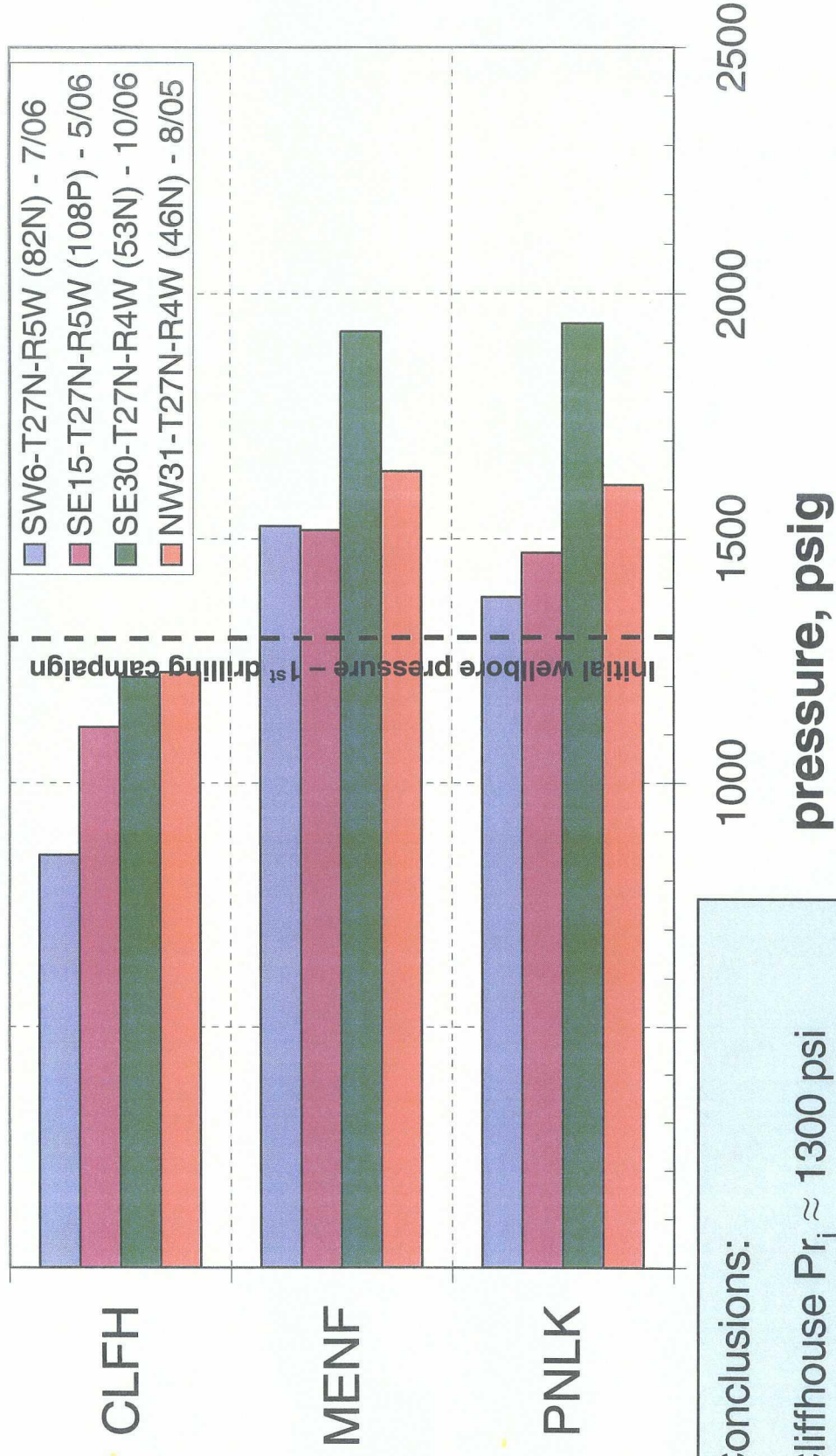
1st Delivery Pressures from Initial Mesaverde Drilling Campaign (1949-1959)



Typical completion will have commingled Cliffhouse with Point Lookout. Wellbore pressure is controlled by perm contrast and limited by lowest pressured layer

CD SIP • PI/Dwights SIP • First Delivery SIP

Mesaverde Layer Pressures (SEFU)

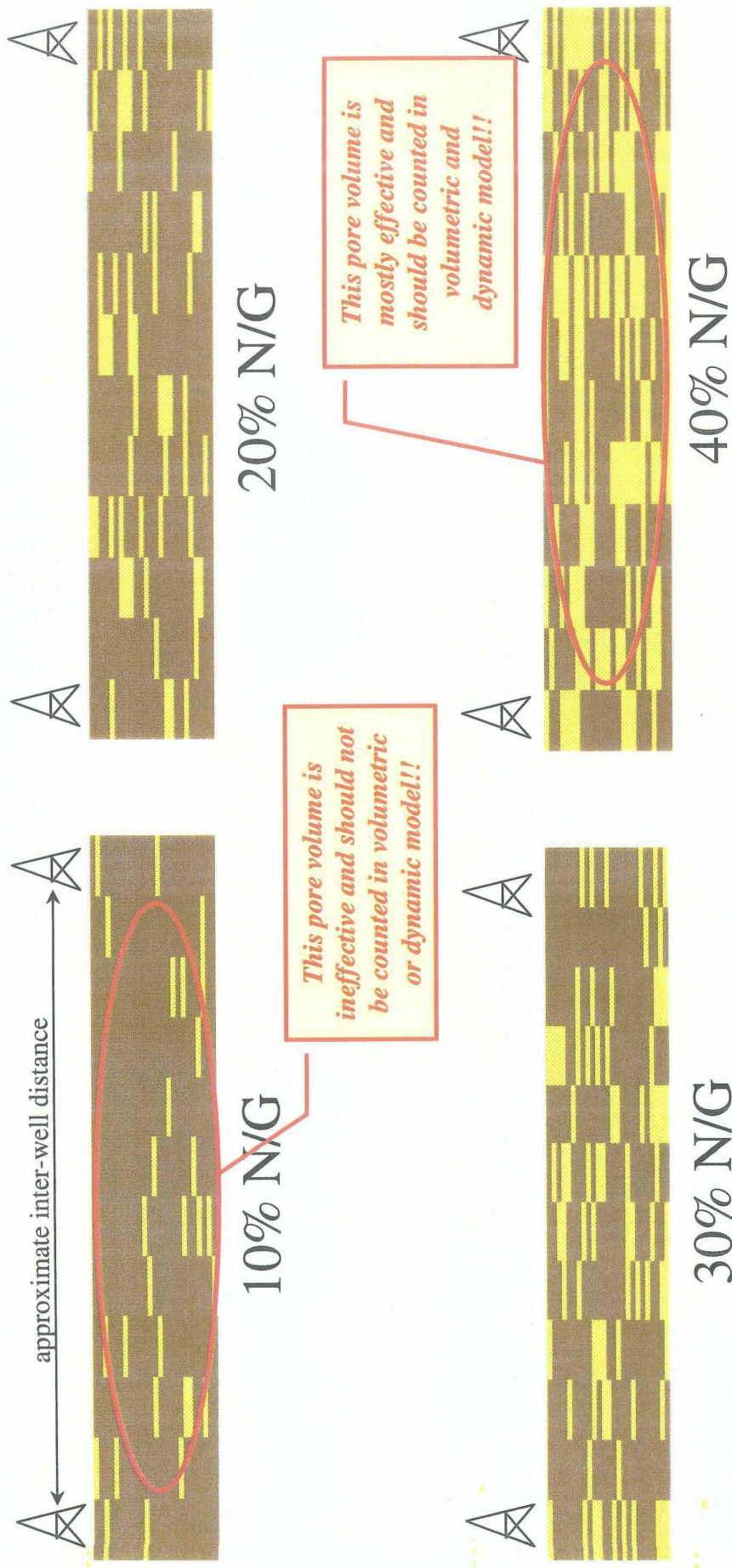


Conclusions:

Cliffhouse $Pr_i \approx 1300$ psi

Point Lookout $Pr_i \geq 1950$ psi

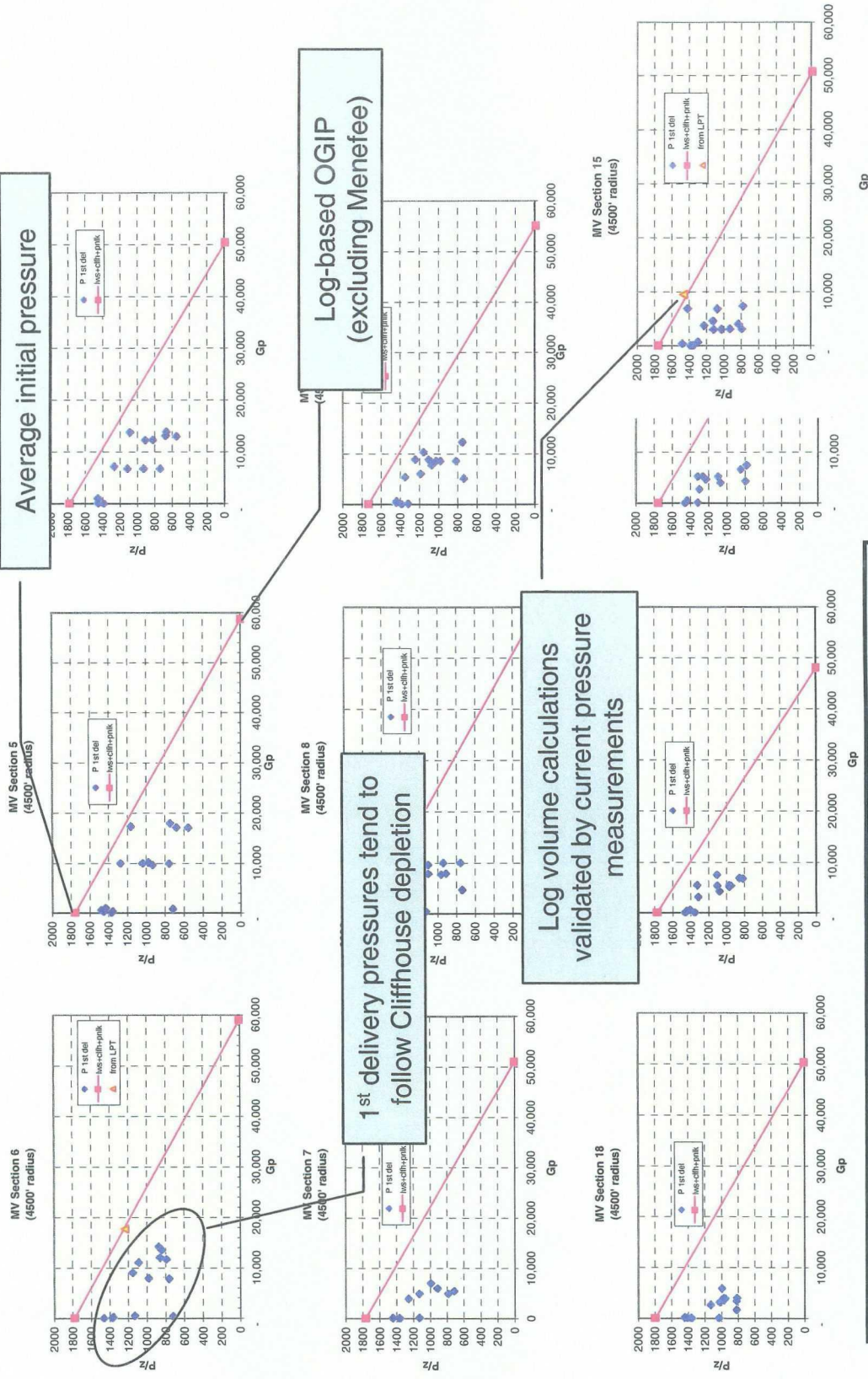
Channel Belt Point Bar Model



Displays 20:1 diameter:thickness geobodies with 10X vertical exaggeration
(ex: 200' wide by 10' thick sand lenses over 1/2 mile distance, 250' gross interval)

San Juan 27-5 Unit Mesaverde

Logs v Material Balance – NW/4



Log model agrees w/ LPT's, assuming negligible active pv in Menefee (small point bar sands, low N/G)