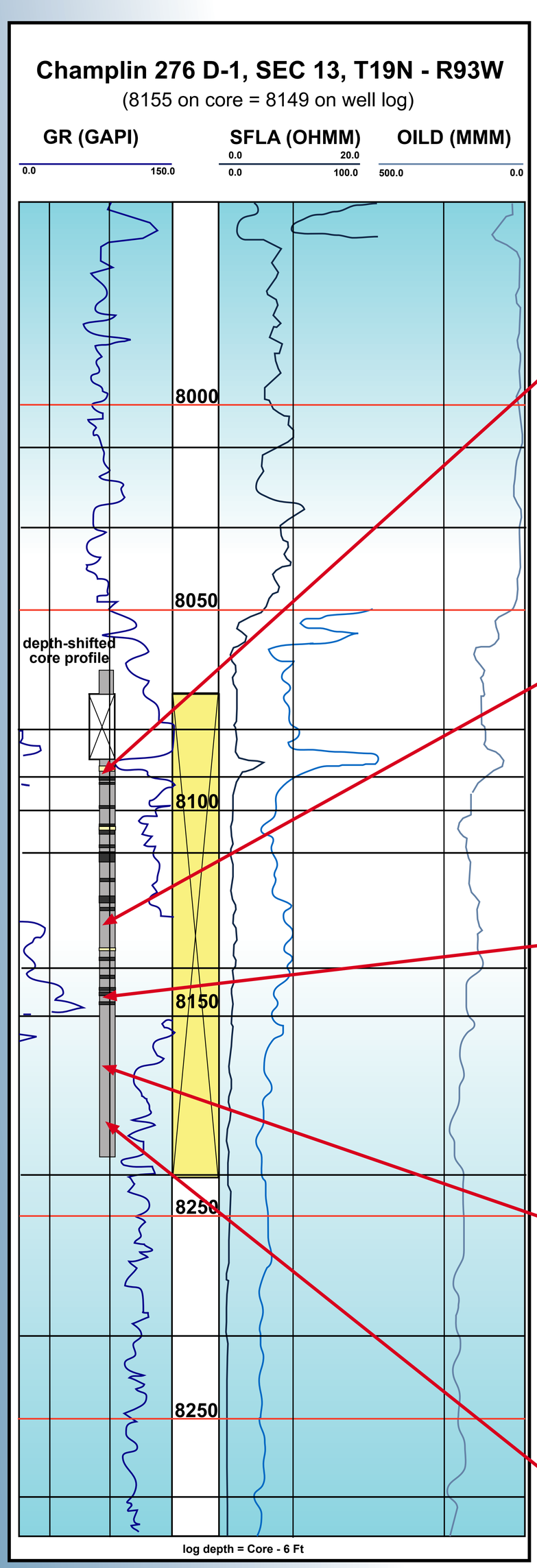
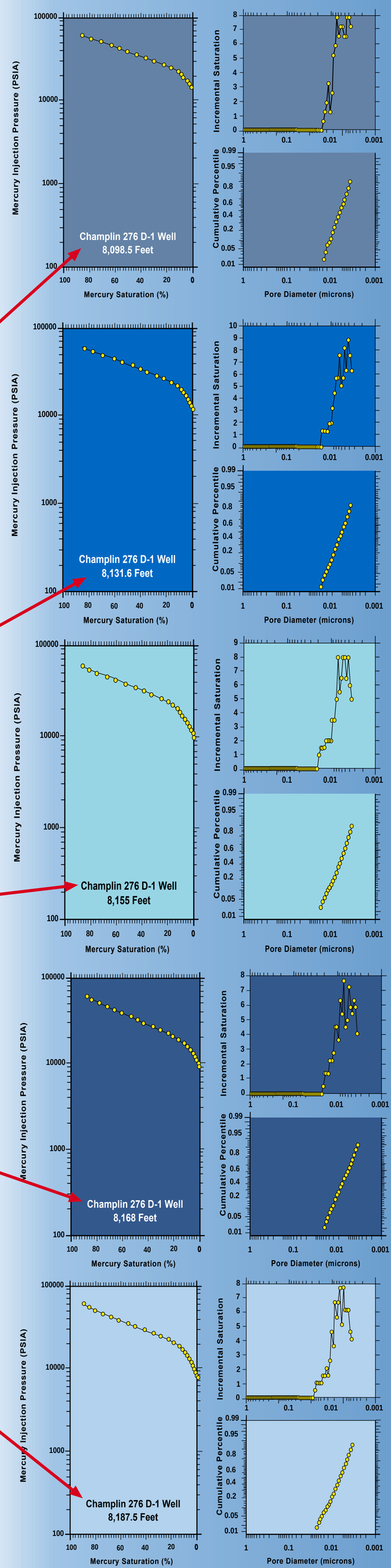
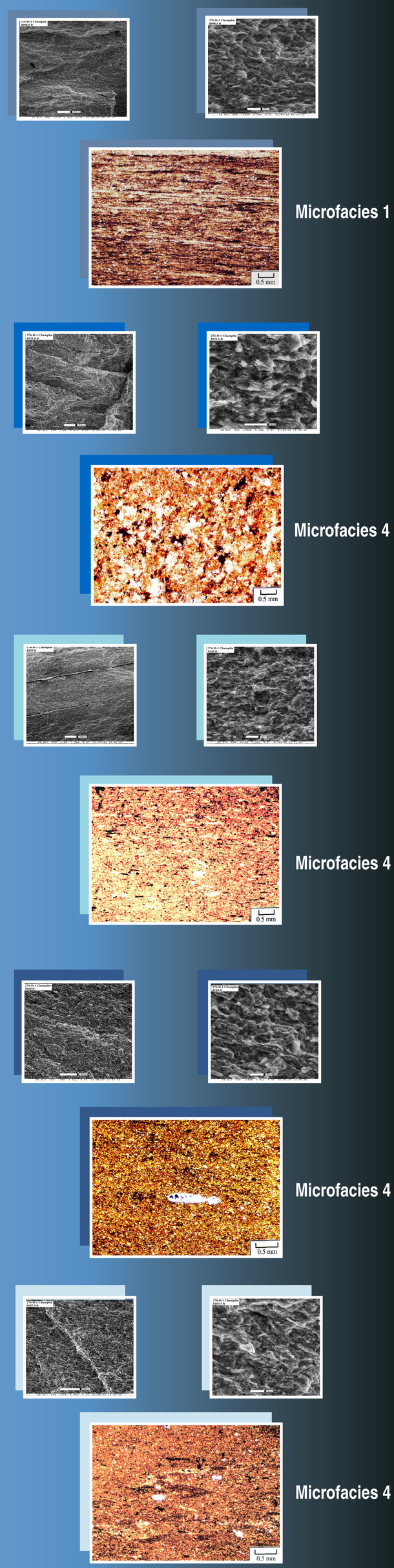
Subsurface Data

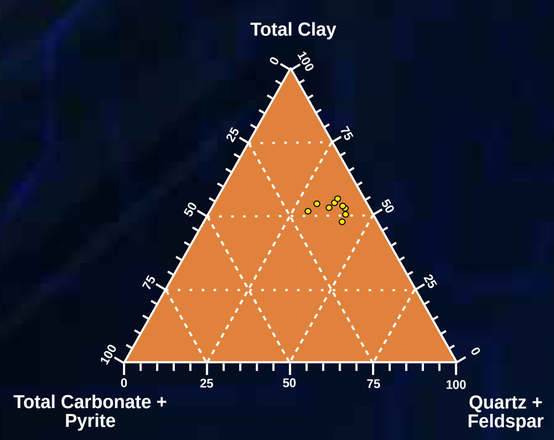
Champlin 276 D-1, SEC13, T19N - R93W
Carbon, Co. Wyoming

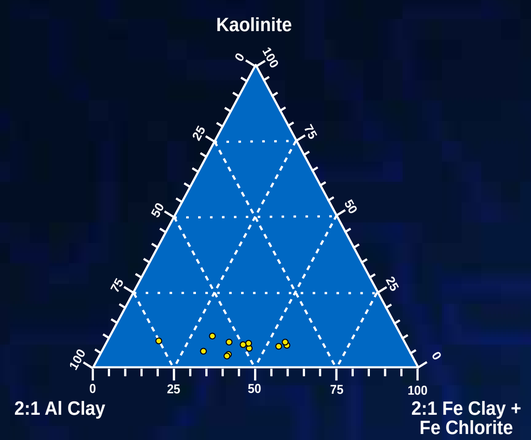






Total clay content varies from 54 to 64 percent with a mean of 51 percent (std dev = 2.5 %). Quartz content ranges from 23 to 34 percent. The mean is 28 percent (std dev = 3.9 %). Detrital feldspars, pyrite and carbonate are common accessory (18 to 26 percent; mean 20) minerals. The dominant clay type is the 2:1 aluminum family. Abundance ranges from 17 to 32 percent with a mean of 25 (std dev = 5.1 %). The 2:1 iron-bearing clays are also major components. Their abundance ranges from 15 to 27 percent with a mean of 21 percent (std dev = 4.6 %). Kaolinite (mean 4 %) and iron-bearing chlorite (mean = 1%) are minor components.





The Champlin 276 D-1 core represents the transgressive (TST) part of the Lewis Shale. These samples have significantly higher MICP values (mean 18,000 psia) relative to other Lewis Shale samples. Shales exhibiting well-developed laminar fabrics and enrichment in iron-bearing clay minerals, TOC, and authigenic pyrite have excellent to exceptional seal character.