Several tests were run where the only thing changed was the polarization of the laser beam from horizontal to vertical, on thick 40:60 wafers are only stressed at 190MPa. The Raman suggests that the wafers are stressed nearly twice as much over a well as they are in a non-well area. Further study is needed to determine why.

Conclusions:
Testing with the laser set on horizontal polarization generally works best. The relative intensity of a peak and the thickness of the sample are not directly proportional. The fourth peak (about 610 cm⁻¹) is the largest proportionally on the 40:60 graphs and has a sharper peak that is shifted to the right. Samples of the same composition (or even the same sample) will have dramatically different spectra near wells versus on a non-well area. Further study is needed to determine why.

References:

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