



Source Rock Analyses

TOC, Rock-Eval and Maturity Testing

GHK

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SOURCE ROCK ANALYSES

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| Sample ID | Project / Sample ID | Rock ID | Well Name | Sampling Date | Sampling Time | Formation Name | Upper Depth (ft) | Lower Depth (ft) | Median Depth (ft) | Sample Type | Source Rock Analyses | | | | | | | | | | Experimental Notations | | | |
|-----------------|---------------------|-------------------|-----------------------|---------------|---------------|----------------|------------------|------------------|-------------------|-------------|-------------------------|-------------------|------------------------|------------------------|-------------------------|-----------|--------------------------------|--------------------------|-----------------------------|---------------------------|------------------------|----------------------------|--------------------------|-------------------------------|
| | | | | | | | | | | | Percent Carbonate (wt%) | Leco TOC (wt% HC) | Rock-Eval S1 (mg HC/g) | Rock-Eval S2 (mg HC/g) | Rock-Eval S3 (mg CO2/g) | Tmax (°C) | Measured %Ro (Vitrinite Refl.) | Calculated %Ro (RE TMAX) | Hydrogen Index (S2x100/TOC) | Oxygen Index (S3x100/TOC) | | S2/S3 Conc. (mg HC/mg CO2) | S1/TOC Norm. Oil Content | Production Index (S1/(S1+S2)) |
| RGHK-100601-001 | 15-195-20736 | Lloyd Nilhas D #1 | 29 11S 22W Trego Co | | | | 4,010.00 | 4,060.00 | 4,035.00 | Cuttings | 14.76 | 1.18 | 0.12 | 0.51 | 0.44 | 429 | | 0.56 | 43 | 37 | 1 | 10 | 0.19 | |
| RGHK-100602-001 | 15-195-20554 | Berens-Ries #2 | 28 11S 22W Trego Co | | | | 3,960.00 | 3,985.00 | 3,972.50 | Cuttings | 17.54 | 0.69 | 0.14 | 0.57 | 0.35 | 431 | | 0.60 | 83 | 51 | 2 | 20 | 0.20 | Low temp Shoulder |
| RGHK-100603-001 | 15-023-20172 | Fisher #5 | 35 5S 37W Cheyenne Co | | | | 4,620.00 | 4,650.00 | 4,635.00 | Cuttings | 25.79 | 0.62 | 0.03 | 0.24 | 0.45 | 432 | | 0.62 | 39 | 73 | 1 | 5 | 0.11 | |
| RGHK-100604-001 | 15-023-20104 | Mckee #1 | 36 5S 37W Cheyenne Co | | | | 4,665.00 | 4,740.00 | 4,702.50 | Cuttings | 33.63 | 2.30 | 0.34 | 6.75 | 0.46 | 433 | | 0.63 | 293 | 20 | 15 | 15 | 0.05 | |
| RGHK-100605-001 | 15-135-00480 | Burrell #1 | 27 16S 25W Ness Co | | | | 4,370.00 | 4,420.00 | 4,395.00 | Cuttings | 33.89 | 5.19 | 1.01 | 23.57 | 0.92 | 429 | | 0.56 | 454 | 18 | 26 | 19 | 0.04 | |

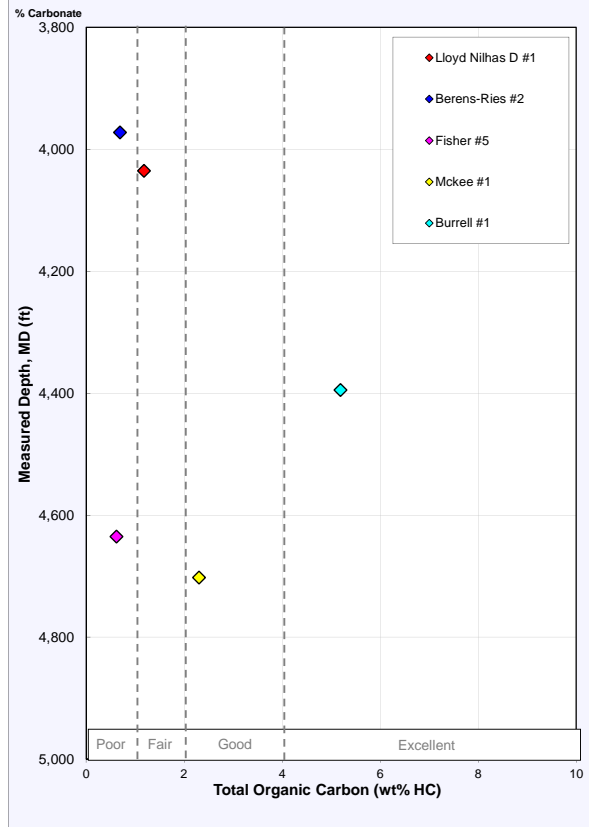


SOURCE ROCK ANALYSES

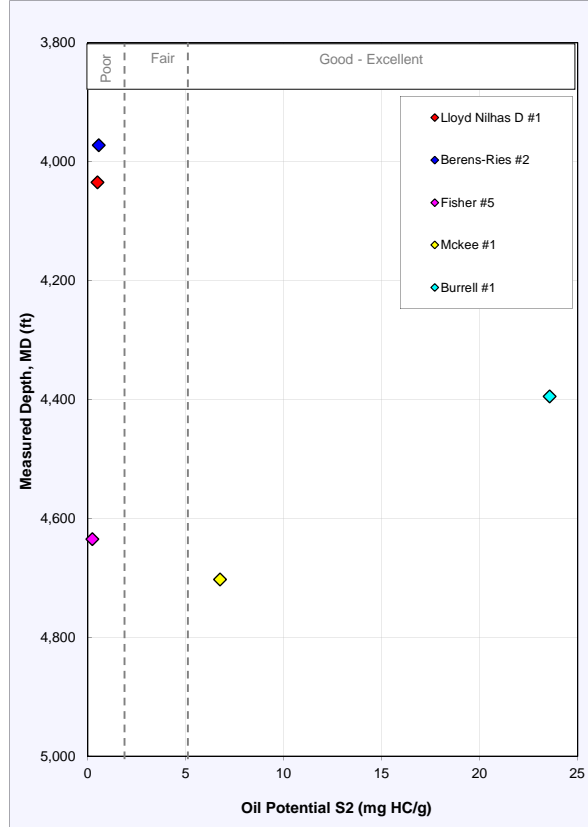
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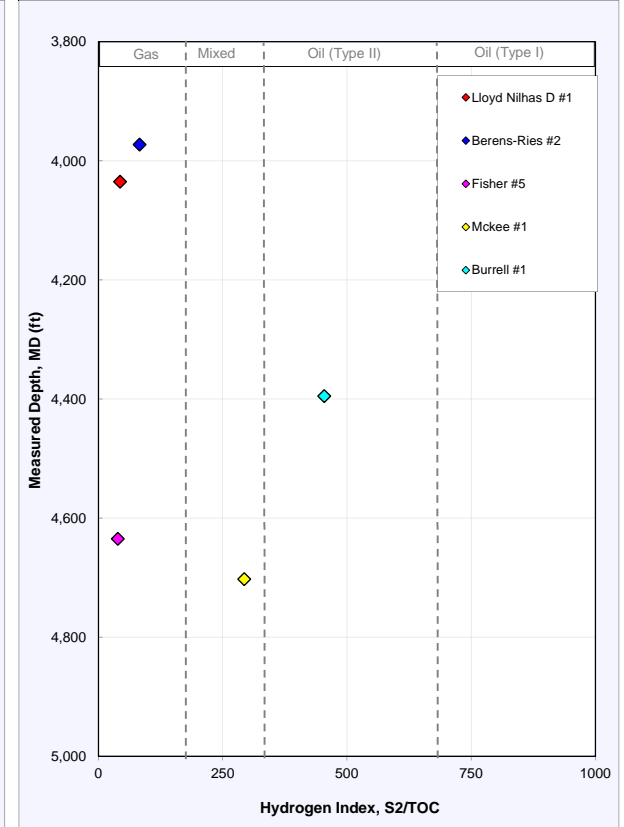
Total Organic Carbon



Oil Potential, S2



Hydrogen Index, S2/TOC



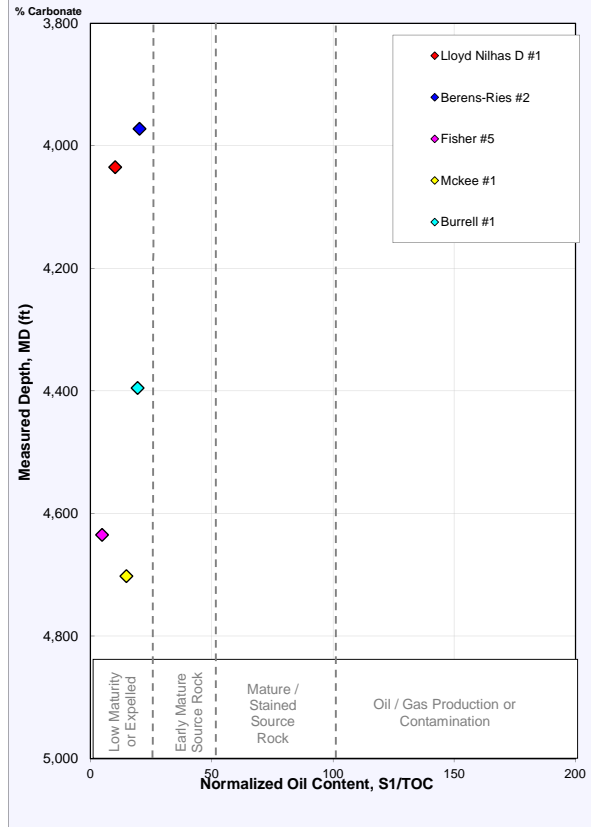


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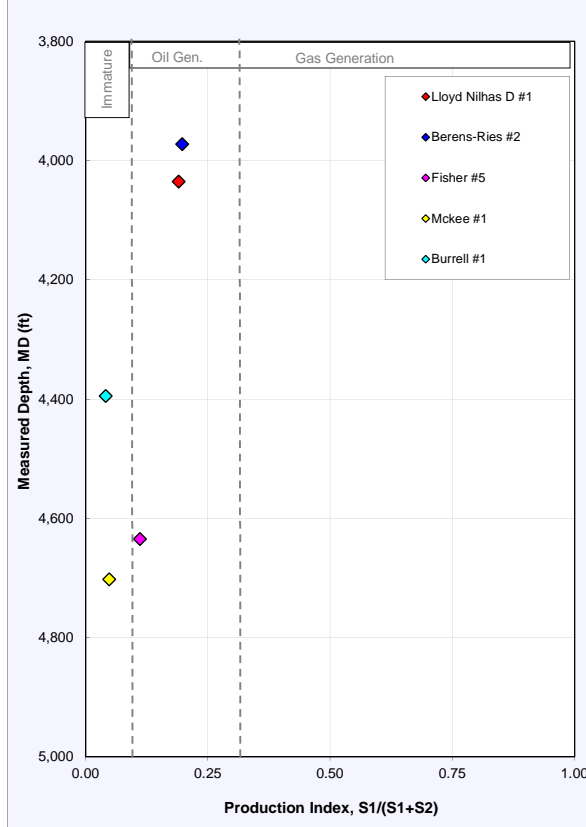
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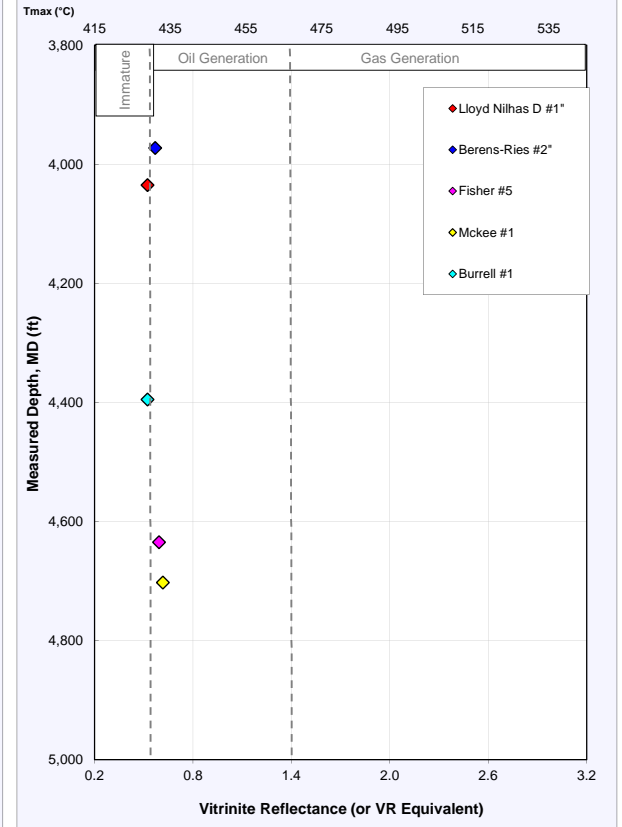
Norm. Oil Content, S1/TOC



Production Index, S1/(S1+S2)



Maturity Indicators



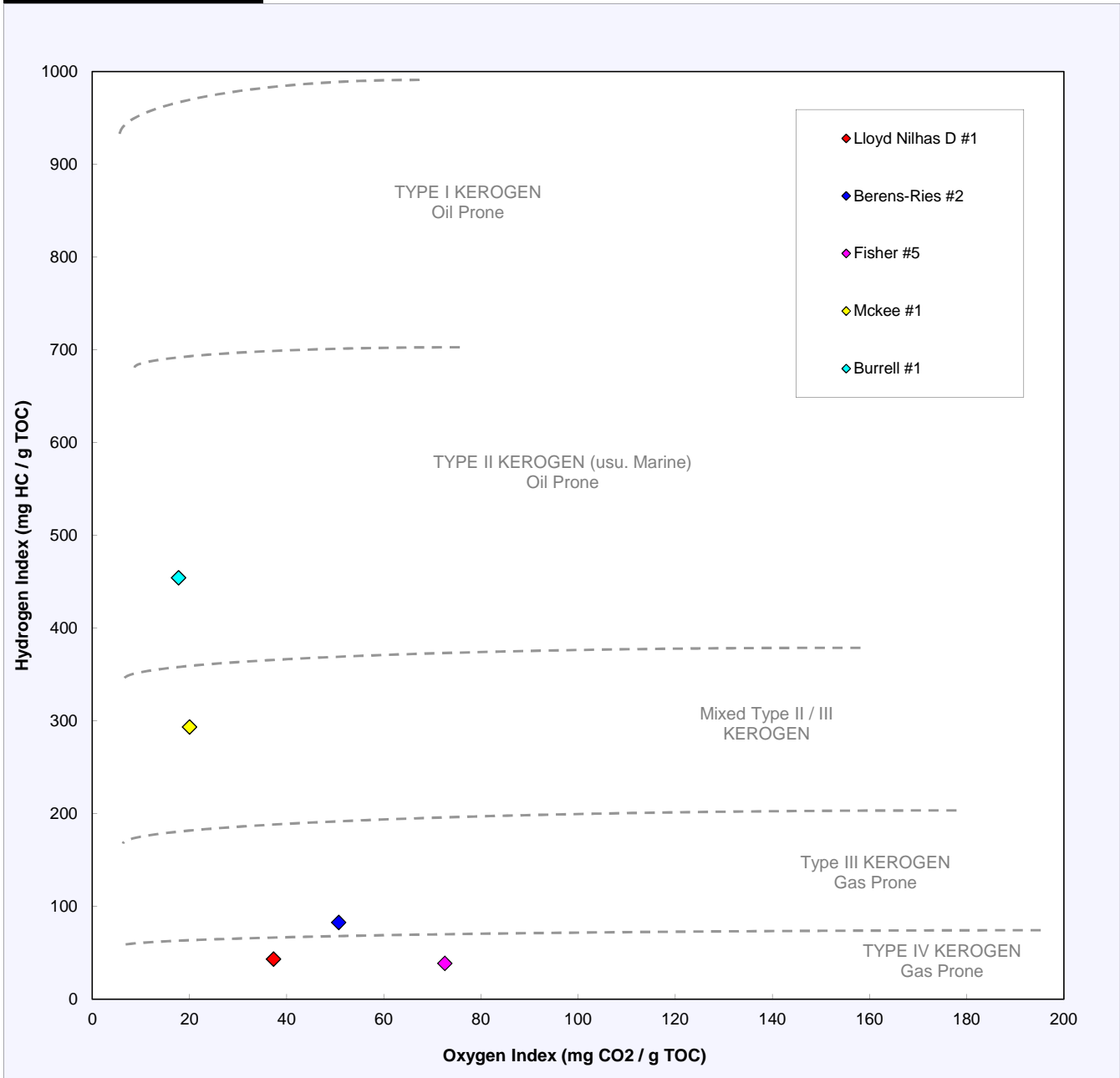


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Pseudo Van Krevelen Plot



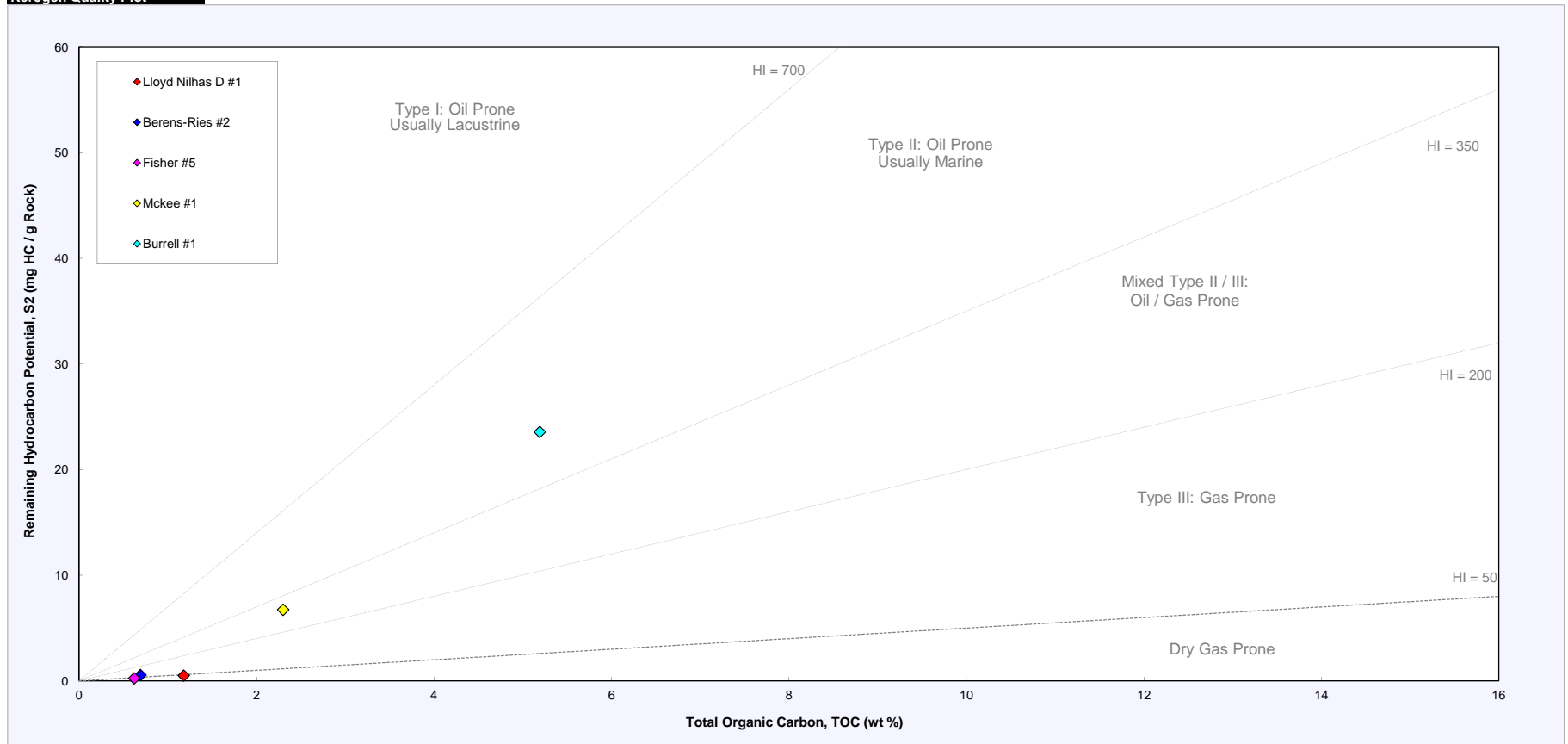


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Kerogen Quality Plot



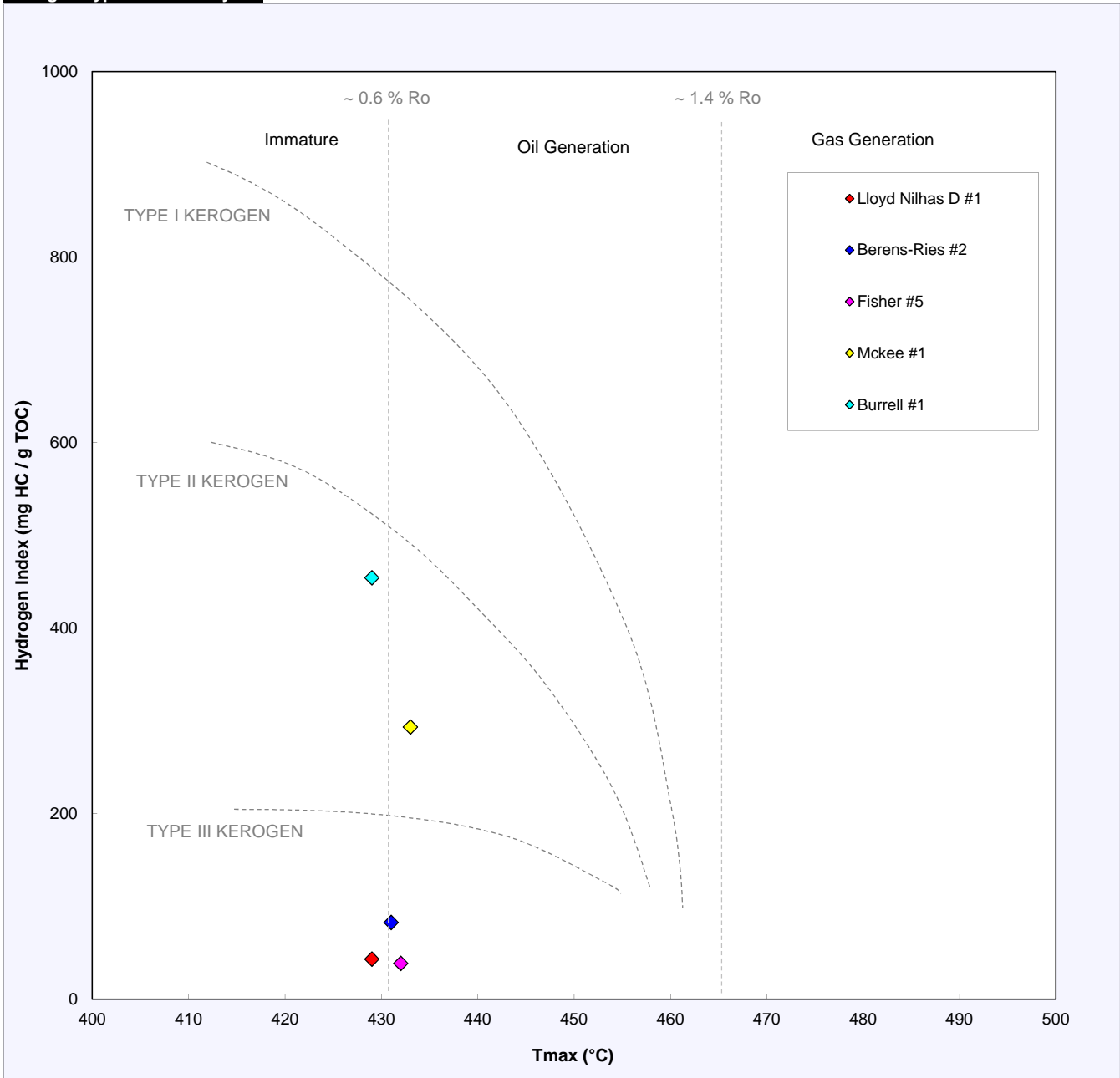


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Kerogen Type and Maturity





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Kerogen Quality Plot

