**List of acronyms**

List of all acronyms, abbreviations, symbols, units, and sample codes used in these proceedings.

| **Term** | **Definition** |
| --- | --- |
| 2D | Two-dimensional |
| 3D | Three-dimensional |
| 4HE | 4He residence times discrete sample |
| χ | Mass-normalized magnetic susceptibility |
| χfd | Frequency dependence of magnetic susceptibility |
| *K* | Effective Stress Ratio |
| κ | Volume-normalized magnetic susceptibility |
| μA | microamps |
| μL | microliter |
| μm | micrometer |
| σ*v* | Overburden Stress |
| σ*hmin* | Least Principal Stress |
| *uh* | Hydrostatic Pore Pressure |
| φ | Porosity |
| ρb | Gamma density |
| ρf | Fluid density |
| ρgr | Grain density |
| ρh | Density of methane hydrate |
| Ωm or ohm m | ohm meter |
| AOM | Anaerobic Oxidation of Methane |
| APCT-3 | Advanced Piston Coring Tool Temperature Sensor |
| API | American Petroleum Institute |
| ARM | Anomaly of Magnetic Susceptibility discrete split core sample |
| ASTM | American Society for Testing and Materials |
| B | Static shift applied during calculations to project stratigraphic surfaces between holes |
| bbl or bbls | Barrels, US oilfield |
| BHA | Bottom Hole Assembly |
| BHSZ | Base of Hydrate-Stability Zone |
| BOEM | U.S. Bureau of Ocean Energy Management |
| BPM | Barrels per minute |
| BSI | Biogenic Silica discrete split core sample |
| BSF | Below the seafloor |
| BSEE | U.S. Bureau of Safety and Environmental Enforcement |
| BSL | Below sea level |
| BSR | Bottom Simulating Reflection |
| C | Depth-dependent correction used during calculations to project stratigraphic surfaces between holes |
| CAR | Authigenic Carbonate discrete split core sample |
| CC | Core Catcher whole-round sample |
| cc or cm3 | cubic centimeter, 1 mL |
| CCD | Charge-Coupled Device |
| ccSTP | cubic centimeter at standard temperature and pressure |
| CD | Compressed Depth |
| CDcore | Compressed depth in core |
| CEL | Cell Counts |
| CF | Compression Factor or Coarse Fraction discrete spit core sample, depending on the context |
| CFR | United States Code of Federal Regulation |
| CL | Computed Laminography |
| CMT | Cement |
| CNS | Total Carbon, Total Nitrogen, and Total Sulfur discrete split core sample |
| CRDS | Cavity Ring-Down Spectrometer |
| CRS | Constant Rate of Strain |
| CRYO | Cryogenically frozen and depressurized whole-round samples |
| CT | Computed tomography |
| D | Depth or diameter, depending on the context |
| d | Penetration depth of the fall cone (mm) |
| Dcore | Depth in core |
| DIC | Dissolved Inorganic Carbon |
| Dmbsf | Depth below the seafloor in meters |
| DMR | Discharge Monitoring Report |
| DNA | Deoxyribonucleic acid |
| DOE | U.S. Department of Energy |
| DP | Dynamic Positioning |
| DPS | Dynamic Positioning System |
| DRpen | Pocket penetrometer dial reading |
| DSIM | Discrete Sample Introduction Module |
| DST | Data Storage Tag |
| DWOP | Drill-Well-on-Paper |
| E | East |
| FAD | First Appearance Datum (evolution) |
| fbsf | feet below seafloor |
| fbsl | feet below the sea level or sea surface |
| FID | Flame Ionization Detector |
| ft | foot or feet |
| ft RKB | feet below kelly bushing (rig floor) |
| g | acceleration due to gravity (m/s2), gallons, or grams, depending on the context |
| g/cc or g/cm3 | grams per cubic centimeter |
| g/kg | grams per kilogram |
| G-APC | Advanced Piston Corer |
| GC | Gas Chromatography or Green Canyon, depending on context |
| gDNA | Genomic DNA |
| GEOM | Geomechanics whole-round sample |
| GOM2 | Nickname for the DOE project Deepwater Methane Hydrate Characterization & Scientific Assessment, DE-FE0023919 |
| gpm | gallons per minute |
| GR | Gamma Ray |
| GSL | Grain Size by Laser Particle Analysis discrete split core sample |
| Gulf | Gulf of America (Gulf of Mexico) |
| G-XCB | Extended Core Barrel |
| H | Height |
| H001, H002, H003 | Boreholes at Walker Ridge Block 313 Location H |
| HDPE | High-density polyethylene |
| hr or HH | hour |
| Hrs | hours |
| Hrz | Horizon |
| HS | Headspace Gas Sample |
| IAPSO | International Association for Physical Sciences of the Oceans |
| IC | Inorganic Carbon |
| ID | Inner diameter |
| IN | inch |
| IODP | Integrated Ocean Drilling Program or International Ocean Discovery Program, depending on the context |
| IR | Infrared |
| ISO | Isotopes of Carbon and Oxygen discrete split core sample |
| IW | Interstitial Water |
| IWALK | Interstitial Water Alkalinity sample |
| IWCLISO | Interstitial Water Chlorine & Boron Isotopes sample |
| IWDIC | Interstitial Water Dissolved Inorganic Carbon sample |
| IW13DIC | Interstitial Water δ13C Dissolved Inorganic Carbon sample |
| IWDOC | Interstitial Water Dissolved Organic Carbon sample |
| IWHAL | Interstitial Water Halogens sample |
| IWH2S | Interstitial Water Hydrogen Sulfide sample |
| IWLIG | Interstitial Water Ligands sample |
| IWMAJ | Interstitial Water Major and minor elements sample |
| IWO | Interstitial Water Organics whole-round sample |
| IWOH | Interstitial Water Oxygen/Hydrogen isotope ratio sample |
| IWR | Interstitial Water Regular (or Routine) whole-round sample |
| IWREE | Interstitial Water Rare Earth Element sample |
| IWS | Interstitial Water Shipboard analyses sample |
| IWSO4 | Interstitial Water Sulfate sample |
| IWTRACE | Interstitial Water Trace metals and isotopes sample |
| JAMSTEC | Japan Agency for Marine-Earth Science and Technology |
| JIP | Joint Industry Project |
| JPG | .jpeg image file |
| K | One Thousand (e.g. 30K = 30,000), Kelvin, or Potassium, depending on context |
| *Kc* | Fall Cone Factor |
| KeV | Kiloelectron volts |
| klbs | Thousand pounds |
| Km | Kilometer |
| kPa | kilo pascals |
| ksc or kg/cm2 | kilograms per square centimeter |
| K*v* | Vane constant |
| L | Length |
| L\* | Sediment lightness in spectrophotometry |
| LAD | Last Appearance Datum (extinction) |
| lb, lbs | pound, pounds |
| lb-ft or LB-FT | foot-pounds |
| Lcored | Length of the cored interval |
| LDNR | Louisiana Department of Natural Resources |
| LDPE | Low-Density Polyethylene |
| LFH | Laminar flow hood |
| LPA | Linear Polyacrylamide |
| Lrecovered | Length of the recovered core |
| LWD | Logging While Drilling |
| m | meters |
| *m* | Archie tortuosity exponent (Archie, 1942) |
| M | Molar |
| *M* | Total mass of the fall cone plus any additional masses (see text) |
| MΩ·cm | Megaohm centimeter |
| MAD | Moisture and Density |
| MB or MBC | Microbiology whole-round sample |
| MBq | megabecquerel unit of radioactivity |
| mbrf | meters below rig floor |
| mbsf | meters below seafloor |
| mCi | millicurie unit of radioactivity |
| MD | Measured Depth |
| mD | milli-Darcy |
| MDW | Moisture and Density whole-round sample |
| MDX | Moisture and Density, X-ray Powered Diffraction, and X-ray Fluorescence discrete spit core sample |
| MDT | Mass Transport Deposits |
| mh | Molecular weight of methane hydrate, 124 g mol-1 |
| MICP | Microbially Induced Carbonate Precipitation |
| MM | minutes |
| mM | millimolar |
| mol | moles |
| MPa | Megapascal |
| m/s | meters/second |
| MSCL | Multi-Sensor Core Logger |
| N | North |
| NAD | North American Datum |
| Ndiss | Dissolved methane component |
| NE | Northeast |
| NETL | National Energy Technology Laboratory |
| NGHP | Indian National Gas Hydrate Program |
| nh | Amount of hydrate methane |
| nm | Nanometer |
| nm | Total moles of methane |
| nmi | Nautical Mile |
| ns | nanoseconds |
| OD | Outer diameter |
| ODP | Ocean Drilling Program |
| OSR | Organoclastic Sulfate Reduction |
| P | Pressure or primary wave, depending on the context |
| P & A | Plug and Abandonment |
| PAL | Biostratigraphy discrete core catcher or split core sample |
| Patm | Atmospheric pressure |
| PCATS | Pressure Core Analysis and Transfer System |
| PCR | Polymerase Chain Reaction |
| PCTB | Pressure Coring Tool with Ball Valve |
| PCTB-CS | Pressure Coring Tool with Ball Valve in the Cutting Shoe Configuration |
| PCTB-FB | Pressure Coring Tool with Ball Valve in the Face Bit Configuration |
| PEN | Handheld or Pocket Penetrometer |
| plug DST | Data storage tag with sensors measuring temperature and pressure of the autoclave during and after pressure coring |
| p-mag | Paleomagnetic |
| POOH | Pull Out of Hole |
| ppb | parts per billion |
| PPE | Personal Protective Equipment |
| ppf | pounds per foot |
| ppg | pounds per gallon |
| ppm | parts per million |
| psi, psig | pounds per square inch, pounds per square inch by gauge |
| P-T | pressure and temperature |
| PYR | Sulfide nodule discrete split core sample |
| *Q4000* | Helix *Q4000* deepwater well intervention vessel |
| QD | Quantitative degassing |
| rabbit DST | Data storage tag with sensors measuring temperature and pressure of core during and after pressure coring |
| rc | Average radius of the recovered core |
| RES | Resistivity |
| RFQ | Request for Qualifications |
| RIH | Run in Hole |
| RKB | Rotary Kelly Bushing or Rig Floor when no bushing is present |
| RMG | Paleomagnetic discrete split core sample |
| Ro | Formation Resistivity assuming 100% water saturation |
| RO | Reverse Osmosis |
| ROP | Rate of Penetration |
| ROV | Remotely Operated Underwater Vehicle |
| RRING | Ring Resistivity |
| rRNA | Ribosomal RNA |
| RW | Reworked |
| Rw | Water resistivity |
| S | South or Standard, depending on the context |
| s | seconds |
| S*u* | Undrained Shear Strength |
| SAG | Single-cell Amplified Genomics |
| SCI | Specular Components Included |
| SCE | Specular Components Excluded |
| SED | Particle size settling velocity data |
| sf | seafloor |
| *Sh* | Hydrate saturation (% of pore space) |
| SI | International System of Units |
| sl | sea level |
| SMTZ or SMT | Sulfate-Methane Transition Zone |
| spud | Initial drilling of a new borehole at the seafloor/mudline |
| spm | strokes per minute |
| SS | second |
| STP | Standard Temperature and Pressure |
| SUB or Sub | Sub assembly |
| SW | Southwest |
| T | Temperature or torque, depending on the context |
| T2P | Temperature Dual Pressure Penetrometer |
| TC | Total Carbon |
| TCD | Thermal Conductivity Detector |
| TD | Total Depth |
| TDS | Top Drive System |
| TIC | Total Inorganic Carbon |
| TIFF | Tag Image File Format |
| TN | Total Nitrogen |
| TOC | Total Organic Carbon |
| TS | Total Sulfur |
| TVD | Total Vertical Depth |
| UHP | Ultra-High Purity |
| USGS | United States Geological Survey |
| UT | The University of Texas at Austin |
| UTM | Universal Transverse Mercator |
| UT-GOM2-01 | UT GOM2 Hydrate Pressure Coring Expedition 1 in Green Canyon 955 |
| UT-GOM2-02 | UT GOM2 Deepwater Hydrate Pressure Coring Expedition 2 in Walker Ridge 313 |
| UV | Ultraviolet |
| VANE | Hand-held vane or table vane shear strength measurement |
| Vc | Core volume |
| VCD | Visual Core Description |
| VF | Vane Factor |
| Vg | Volume of gas released |
| Vp | P-wave velocity |
| Vpw | Pore volume |
| VPDB | Vienna Pee Dee Belemnite |
| W | West |
| WBM | Water-Based Mud |
| WGS84 | World Geodetic System 1984 |
| wireline sinker bar DST | Data storage tag with sensors measuring temperature and pressure of the fluids in the pipe at the wireline tool depth |
| W/m | Watts per meter |
| WOB | Weight on Bit |
| WR | Walker Ridge |
| WR313 | Walker Ridge Block 313 |
| wt.% | percent by weight |
| Xm | Fraction of methane in sample |
| XML | Extensible Markup Language file |
| XRF | X-ray Fluorescence |
| XRPD | X-ray Powder Diffraction |
| XT-57 | Drill pipe connection specification |
| XY | X-Y plane through a core or cross-section of a core |
| XZ | X-Z plane through a core where Z is the direction along the length of the core |
| YZ | Y-Z plane through a core where Z is the direction along the length of the core |