IODP sample identifiers

A full sample identifier for an IODP sample includes the following, in order:

Expedition - Site+Hole - Core+CoreType - Section, interval top–interval bottom cm.

Hard rock identifiers may also include Piece number and offset interval on the piece. Section half type (A or W) is generally included in a sample identifier only if needed to highlight if the analyses was done on a non-standard half.

- Sample 319-C0009A-9R-1, 5–7 cm.
- Sample 335-U1256A-119R-1 (Piece 1A)
- Sample 324-U1356A-5R-3 (Piece 2, 2–4 cm)
- Section 366-U1491B-5H-CC

Parts of the sample identifier

- **Expedition**: official expedition number; for IODP a 300-series number
- **Site**: numbered in the order drilled: JOIDES Resolution site numbers are prefaced with “U”: Site U1362
- **Hole**: each hole spudded, drilled, or cored at a site is given a new letter, starting with “A”
- **Core**: each core or half-core barrel deployment is given a number, starting with “1” at the top of the hole.
- **Core type**: indicates coring tool used to deploy the core barrel:
  - H: advanced piston corer
  - F: half-length advanced piston corer
  - X: extended core barrel
  - R: rotary core barrel
  - G: ghost (material from unknown depth recovered during drilling or advance without coring)
  - Numeral(1, 2, 3, etc.): drilled interval; no core retrieved
- **Section**: each core is cut into 1.5 m long sections, numbered starting with “1” at the top of each core. A 9.5 m core with good recovery generally has six 150-cm-long sections plus the core catcher section (CC).
- **Section half**: each section is split lengthwise into two halves:
  - A: archive half (used for core description, SHMSL and SHIL measurements, photographs, and archiving)
  - W: working half (used when samples are taken from the core for most laboratory tests)
  - WR: whole-round sample (taken from the section before core splitting; generally for pore water and microbiology).
- **Piece**: for some hard rock cores, broken but consolidated pieces of the core are numbered sequentially from the top of the core. Subpieces that can be fit together may be lettered and curated (Piece 1A, 1B, etc.).
- **Interval** (offset from top of section): a length of material that was collected from the section; the interval top and bottom are given in centimeters measured from the top of the section.

Sample identifier usage

**Reporting data**

- In text or tables, use the full sample identifier including interval measured from the top of section or offset from top of section (for single point measurement).
  - Sample 313-M0028A-16R-1, 15–20 cm
  - Sample 313-M0028A-16R-1, 100 cm

**Images**

Images are taken on the archive half. The identifier can be given with our without the section half type (A or W).

- **Line-scan section images**: full section identifier: Section 330-U1375A-15X-6 or 330-U1375A-15X-6A
- **Close-up images**: full sample identifier including interval photographed: interval 330-U1375A-15X-6, 25–105 cm
- **Photomicrographs**: full identifier including interval taken to make the thin section: Sample 329-U1368B-4R-2, 0–2 cm

**Text**

- Discussions of cores, sections, and samples must include Expedition, Site, and Hole: Core 325-M0051A-5R
- Sites and holes can be referenced without an accompanying expedition number: Site U1353; Hole C0004A
- Add “Site,” “Hole,” “Core,” “Section,” “Sample,” or “interval” before an identifier in text for clarity. The first time a core, section, interval, or sample is mentioned in a paragraph, include the complete identifier.
- Subsequent references in the same paragraph can be shortened: Core, Section, interval (Core 5H; Section 6X-2).
Depths

- The science party should use consistent depth terminology throughout the volume, including text, tables, and figures.
- Define the correlation of each unit to IODP depth scale terminology in the methods chapter. Common depth terminology options include the following:
  - Depth units defined in the IODP Depth Scales document: CSF, CSF, CCSF, DSF, WSF, WMSF, DRF, etc.
  - Standard depth units: mbsf, mcd, mbfr, mbsl, etc., with correlation to IODP Depth Scales in methods chapter.
- Using “m” for depth measurements is not recommended, as measurements other than length need to be expressed relative to a starting point (seafloor, sea level, rig floor, etc.) in order to be meaningful.

Capitalization

Capitalize the following:
- “Expedition,” “Site,” Hole,” “Core,” “Section,” “Sample,” and “Piece” when referencing IODP material.
- Designations that precede a letter or numeral: Figure F5, Line XL2052, Seismic Reflector C, Lithologic Unit IV.
- Formally named water masses, currents, and underwater features: Ridge, Trough, Plateau, Basin.
- Formally defined geological events: Last Glacial Maximum, Laschamp Event, Marshall Paraconformity.
- Formally defined geological features and geologic/geographic names: Equator, Northern Hemisphere, North Pole.
- Formally defined magnetostratigraphic divisions: Chron C2n, Brunhes Chron, Jaramillo Subchron.
- Official titles of persons with or without personal names: Co-Chief Scientist, Operations Superintendent.
- First word of all bulleted or numbered list elements in vertical lists.

Do NOT capitalize the following:
- Structural features preceded by a proper name (plate, arc, shelf, margin): Pacific plate, Mariana arc, Cascadia margin
- Genus names used as common nouns: discoasters, heterohelids
- Proper names used as measurement units: faraday, newton, pascal, tesla, watt

Geologic strata/Geologic time

- According to GTS2020:
  - Neogene (Miocene, Pliocene): informal substages (early/lower, middle, late/upper) are not capitalized.
  - Quaternary (Pleistocene, Holocene): formal stages (Early/Lower, Middle, Late/Upper) are capitalized.
- “Recent/recent” as an alternative to Holocene should not be used.
- Early, middle, and late refer to geologic time or age: sediments were dated to the early Miocene
- Upper, middle, and lower describe location in the stratigraphic column: Upper Pleistocene sediment contained Late Pleistocene nannofossils.
- Biozones are positional: lower Zone NN12 assemblage.
- Express geologic ages using units giga-annum (Ga: 10⁹ y), mega-annum (Ma: 10⁶ y), or kiloannum (ka: 10³ y)
- Express duration of time in years (Gy, My, or ky): the Cretaceous lasted 80 My, from 144 to 65 Ma.

Biostratigraphy

- Use planktonic rather than planktic.
- Use benthic rather than benthonic.
- Use Foraminifera (capitalized) and Radiolaria to represent the formal phylum names.
- Use foraminifers or foraminifera informally.
- Use radiolarians rather than radiolaria.
**Units and numbers**

- Use singular forms with units: lb not lbs (for pounds).
- Do not use periods within or after units except at the end of a sentence: my, ky.
- Leave a space between a numeral and a letter unit: 16 km.
- Close up the space between a numeral and a symbol unit: 34.5%, 36°C, 3.2‰, 2σ, 0.2°2.
  - Drill pipe and BHA measurements are by industry custom in US API units. **Do not** convert BHA/pipe measurements to metric: 9% inches not 9.875 inches.
- Follow a decimal with a zero only to represent precision: 27°C and 27.0°C are not interchangeable.
- Numerical ranges: use “from...to,” “between...and,” or use a dash in a range: K values range 9–12 mM; are between 9 and 12 mM; are from 9 to 12 mM.
- Use molarity (M) rather than normality (N) to express solution concentrations: 6 M HNO3 not 6 N HNO3.

**Grammar**

**Verb tenses**

- Activities that took place during the expedition—past tense: We preserved microbiology samples for shore analysis.
- Observations and results—present tense: Ba reaches a maximum at 57.25 mbsf.
- Discussion/conclusions—present or past, consistently: We place(d) the Zone NN11/NN12 boundary in Core 52X.
- Results obtained at a specific time in the past—past tense: Howe et al. analyzed samples from Site 1134.
- Actions from an indefinite time in the past—present perfect: Several investigators have observed the same result.

**Collective nouns**

- A singular verb emphasizes the group: For LOI, 3–5 g of sediment was weighed into a crucible; VSP testing was suspended while a pod of whales was in the area.
- A plural verb emphasizes individual members of the group: Fifteen samples were analyzed.
- “Data” is always used in a plural sense in IODP publications: NGR data were uniformly lower than background.

**Tables**

- Break Microsoft Excel workbooks into separate worksheet table files; convert calculated fields to text/numerical.
- Define blank spaces in data tables or designate meaning using a dash or abbreviation: —, ND (not determined), NA (not applicable or not analyzed), NM (not measured), or BDL (below detection limit).
- Check the number of significant digits reported for reasonable precision with analysis method.
- All volume tables will be presented in CSV for compatibility with databases and text reader accessibility.
- Do not use spanned headings, as these cannot be read by text readers and do not translate well to csv.
- Use symbols (*, †) to indicate meaning in tables rather than bold, italics, or color (special formatting cannot be read by text readers and will drop out of csv).

**Figures**

- The standard width of figures in the chapter will be 12.5 cm (29p) or 19 cm (45p), portrait orientation.
- Oversized figures will be linked from a page-sized version in the text.
- Lettering/labels: sans serif (Helvetica) and large enough to be legible after reduction (~6–7 pt at final size).
- Avoid wide variation in type size within a single figure.
- Maximize space given to presentation of data; avoid wasted white space and clutter.
- Keep symbol keys simple and position so they do not enlarge the figure. Details can be included in the captions.
- Use solid symbols if possible and size symbols so that they will be visible when the figure is reduced (6 pt at final size).
- Set panels close to each other, and do not repeat common axis labels.
- Do not include figure part letters on plots that have unique heading names.
- Avoid using bold, underlining, or italic text in figures (exception: age model figures in Methods chapter).
- Core numbers should be accompanied by a core letter; add “U” before IODP hole and site numbers.
- Identify unit columns as Lith., Log, Basalt, Igneous, Seismic, Physical Properties (PP), etc.
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IODP style conventions

Word choice:
- Avoid using with when you mean and, but, having, or using.
- Avoid using above if you mean greater than or shallower than.
- Avoid using under when you mean less than, better than, or deeper than.
- Avoid using since, as, or due to when you mean because.

NO hyphenation with these prefixes:
- re: reexamine
- pre: preexpedition
- post: postcruise
- over: overriding
- under: underthrust
- semi: semiopaque
- non: nonmagnetic
- co: coexist
- multi: multichambered
- bio: biozone
- paleo: paleomagnetism
- micro: microfossil
- macro: macroscopic
- sub: subbasin
- mid: midslope
- high: highstand
- along: alongslope
- down: downhole
- up: uphole

Preposition use:
- compare with
- different, differ from
- correlate with
- correspond to
- overlain by
- filled with
- replaced by
- independent of
- accompanied by

Preferred spelling (US):
- analyze vs. analyse
- labeled vs. labelled
- center vs. centre
- color vs. colour
- analog vs. analogue

Plural forms:
- index, indexes
- appendix, appendices
- hiatus, hiatuses
- datum, datums