Quick Guide: Editing DLIS Well Header Parameters Using HexEdit 4.0

This article is respectfully dedicated to all logging field engineers, field operators, and data specialists in the energy industry, in recognition of their unwavering dedication and hard work, to support clients in acquiring high-quality well log data.

Introduction

The Digital Log Interchange Standard (DLIS) is an industry-standard format introduced as API RP 66 on May 1, 1991. It is primarily used to store and exchange digital well log data. Unlike LAS files, DLIS files are binary and require specialized petrophysical software to read, modify, or process.

However, there are times when such software isn't available — for example, during quick QC checks in the field, or when license-based applications are temporarily inaccessible. In these cases, a simple but powerful alternative is to use a hexadecimal editor like HexEdit 4.0. This lightweight utility allows users to directly view and adjust DLIS header parameters without needing a full petrophysical platform.

Why HexEdit Can Be Useful

HexEdit provides a practical workaround when specialized petrophysical DLIS editing tools are unavailable. It enables quick adjustments to well header information — such as Well Name, Field, or Company — without altering the data structure. When used carefully, it can help field engineers and data specialists ensure file consistency, correct naming, and smooth handovers.

Step-by-Step Procedure

1. Download HexEdit 4.0 (free) from CNET: https://download.cnet.com/HexEdit/3000-2352_4-10208432.html
2. Extract the HexEdit4_0.zip file to your working folder and run HexEd4_0.msi to install the app.
3. Launch HexEdit and open a DLIS file (File > Open or Ctrl+O). Always back up your DLIS file before editing.
4. The left column displays hexadecimal values; the right shows ASCII (text) representation.
5. To change the Well Name, go to Edit > Find (Ctrl+F), select the Text tab, and search for 'WN%'. This is the mnemonic code for Well Name.
6. After locating 'WN%', you'll see the current Well Name (e.g., AAA-1) in the text column. Its corresponding hex values (e.g., 41 41 41 2D 31) will be highlighted on the left.

7. If you want to append 'ST' (for a sidetrack borehole), identify the next hex value (usually 20), right-click, select 'Allow Changes', then type 53 54 (the hex for 'ST'). You'll see 'ST' appear immediately in the text column.
8. Click Save (Ctrl+S) to apply the modification.
9. Finally, open the updated DLIS file in any DLIS viewer (e.g., SLB DLIS InfoView) to confirm the Well Name update.

Tips and Cautions

⚠Do NOT use the 'Insert' or 'Alt+I' command when editing hexadecimal values — this will corrupt your DLIS file. Always modify within the existing byte allocation.

Always validate the modified file in a DLIS viewer before final delivery or further processing.

Closing Note

Editing DLIS headers using HexEdit is a simple yet effective technique, especially in environments where specialized tools are unavailable. It helps maintain data quality and consistency during time-critical operations.

With careful attention, this approach ensures well log data remains intact, reliable, and ready for further analysis.