Avoiding the Pitfalls in Interpretation Efforts Caused by Legacy Well Databases—Basics for Every Interpreter and Manager

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ABSTRACT

Collection of digital well information in the United States has been underway now for 50+ years. Interpretation teams rely heavily on these digital well data volumes obtained from both vendor and internal, proprietary data. The different datasets however often do not get fully or adequately evaluated, with necessary metadata as to their usability, reliability, or 'goodness'—tools that could assist interpreters. The data problem issues described are common, they affects each and every interpretation generated in the onshore U.S. basins. More importantly, they can be the source or significant financial losses if not properly recognized and handled. Since the inception of digital well data collection, the reasons, rules, and guidelines for what wells/wellbores were to be identified and captured has slowly evolved. As a result, the simple fact is today in all our regulatory, internal proprietary, and/or vendor well header inventories, approximately 15-20% of the drilled historic wellbores are not recognized—they are missing or lumped with another wellbore. Thus, they are not only missing in the inventory of drilled wellbores, but missing as a result is the spatially defined wellpaths. Missing wellbores makes it nearly impossible to achieve a proper one-to-one linking of the myriad of well data types (logs, cores, paleo, tops, perfs, etc.) to the correct wellbore. Interpreters need to know—how good and how reliable is the data. In this presentation, there will be suggested means and efforts to overcome much of the uncertainty regarding missing wellbores for the interpreter. Second, validation ideas will be reviewed on critical and key spatial data fields of location, elevation, depth control, and wellpath definition as tools to help data managers and interpreters assess and evaluate how 'interpretation-ready' is their well data.

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