Project Data Clarity

The overall goal of this online project is to support and aid groups across the oil and gas industry working towards improving the quality of drilling data;

* By creating an awareness of the overall state of drilling data quality.
* By understanding and developing clarity on how derived drilling is often calculated.
* By understanding the meta-data required to re-calculate / validate derived data.
* By creating a repository of code that anyone can access to further their understanding.
* By promoting methods to clean up raw data before being used to generate derived data.

This project is based on work initiated by the Society of Petroleum Engineers (SPE) Drilling Systems Automation Technical Section (DSATS) Data Quality Assurance (DQA) Committee and is open to anyone willing to contribute personal time and effort. Initially this project will be focused on surface derived data such as rate of penetration, bit depth, hole depth, flow in, weight on bit, stick slip index, etc. and its associated meta-data. Eventually, the project could potentially encompass high frequency surface and downhole data.

The open repository is maintained at <https://github.com/ProjectDataClarity/SurfaceDerivedData>.

This repository can also be reached by going to GitHub and searching for “Surface Derived Data”.

Ultimately, we expect this effort to lead to improved data quality, and better and more advanced technology.

Some FAQ:

1. Does the repository have a license?

Yes. Apache License, Version 2.0: <http://www.apache.org/licenses/LICENSE-2.0> (From Wikipedia). The Apache License (ASL) is a permissive free software license written by the Apache Software Foundation (ASF).The Apache License requires preservation of the copyright notice and disclaimer. Like other free software licenses, the license allows the user of the software the freedom to use the software for any purpose, to distribute it, to modify it, and to distribute modified versions of the software, under the terms of the license, without concern for royalties. The ASF and its projects release the software they produce under the Apache License and many non-ASF projects are also using the ASL.

1. Who owns the code?

(From Apache Website) All software developed within the Foundation belongs to the ASF, and therefore the members. The members own the code and the direction of it and the Foundation. Committers get a shot at working on the code; good committers become members and thus get a piece of the ownership of the software and the direction.

Commit access is a privilege, not a right, and is based on trust.

For more information, visit <http://www.apache.org/foundation/faq.html>

1. Why use Octave? <https://www.gnu.org/software/octave/index.html>

Octave is **free**, easy to use, and has high-level math functionality to do complex computations without going into low level coding.

(From the Octave website): GNU Octave is a high-level interpreted language, primarily intended for numerical computations. It provides capabilities for the numerical solution of linear and nonlinear problems, and for performing other numerical experiments. It also provides extensive graphics capabilities for data visualization and manipulation. Octave is normally used through its interactive command line interface, but it can also be used to write non-interactive programs. The Octave language is quite similar to Matlab so that most programs are easily portable.

Octave is distributed under the terms of the [GNU General Public License](https://www.gnu.org/software/octave/license.html).

1. Will Java, .net APIs be written in the future?

That depends on how this project progresses. This project depends on volunteers, and their dedication will dictate what gets done.

1. How can one contribute?

There are many ways in which you can contribute:

* If you are a programmer, you can code some of the derived data modules. Volunteers can help get you started.
* If you are a subject matter expert, you can refer the team to non-patent-protected material, for the programming team to code.
* If you are good at writing, then you can help write supporting documents.
* If have access to raw data, you can help by requesting the data owner to donate such data to this repository.
* Spread the word, about this project.

1. How to get started on using the repository?

Follow the steps below, and it will not take more than 15 minutes before you are able to start exploring the code in the repository.

* The repository is at <https://github.com/ProjectDataClarity/SurfaceDerivedData> Click on this link to go to the repository page. Click on the **Download ZIP** button and save the file to your desktop, and extract it. On the same page, you can directly explore the code by clicking on the links.
* If you have Matlab skip to the next step. Otherwise download and install Octave from this website. <https://www.gnu.org/software/octave/index.html>
* Open Octave GUI or Matlab. Make the Current directory, the directory where the files are. Then type one of the following statements into the command window.
  + output = computeROPApproach1;
  + output = computeBitDepthApproach1;
* This is your starting point. To delve deeper, please refer the “Getting Started” document in the HelpDocuments folder.

