**Paper No: PU-SOE- PET - 04**

# Real-time data analysis: An IoT-Based LoRAWAN-Enabled proposed method to reduce Non-Productive Time while Oil well fishing job in deviated wells

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## Abstract

The oil and gas industry has been growing so fast due to modernization of new benchmark of technologies which plays a vital part for the economy of a country starting from day to day life of an individual to establishments like Industries, Corporations, Institutions etc. Reduction of Non Productive time in the oil industry has also a tremendous impact on the economy of a country. Whenever drilling operation is ceased or put into a halt for different reasons which cause unintentional delay, can be termed as Non-Productive Time (NPT) event. These NPT not only cause a delay in the completion of drilling operation but also it leads to spending extra money. The fishing operation, differential sticking, bad weather conditions, these are the few reasonsleading to NPT. Drilling in a deviated well is a complicated operation and maybe because of human or mechanical errors sometime we may encounter several problems. Managing such problems and reducing NPT should be one priority of a drilling operator. Whenever a junk falls into the wellbore, drill pipe got stuck or fall off, such objects are termed as Fish. It is important to retrieve such objects from the wellbore or else we can't continue the drilling operation. Removal ofbroken or unnecessary equipment from the wellbore is called Fishing operation. In this paper, we are proposing a methodology which can be implemented in the field to reduce the NPT during a fishing job. Throughout this paper, we will be discussing gathering Real-time data about a fish using LoRaWAN® technology which will help us to plan a proper fishing job in a deviated well.

**Keywords:**
Non-Productive Time, Fishing, LoRaWAN®, IoT, Deviated well

**Publication Details:**

| Journal Name | Vol. | Month & Year | Page No. | Publisher | Scimago Ranking |
|---|---|---|---|---|---|
| Journal of Huazhong University of Science and Technology | 50 (4) | 2021 | NA | Huazhong University of Science and Technology | Q4 |