

Where The Hell Is That Well?

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ABSTRACT

This paper focuses on NAD83: industry, government, and regulatory status. Mixing of data referenced to NAD83 with data referenced to NAD27 will result in positional errors of up to 250 metres that could result in dry holes. NAD27 has served the oil and gas industry very well for the last 80 years and it is still the survey reference system used by virtually all oil and gas companies in Alberta. We live in times of change and one change that many may or may not be aware of is the movement from our reference system of the past to a reference system of the future. This is not an easy, comfortable or necessarily welcome change to geo-scientists. There is flux in industry practice, government directions and legislation, and regulatory demands. Over the next two to three years, industry must come to grips with these changes and become aware of what is happening, what the issues are, the potential for damage and the costs involved. The Alberta Energy and Utilities Board (AEUB) is moving its reference frame to NAD83 resulting in this initiative to start an awareness program through the Canadian Association of Petroleum Producers (CAPP), of which this paper is part. This paper addresses the current situation and plans for dealing with NAD83 issues.

The definitions and background of North American Datum 1927 (NAD27) and North American Datum 1983 (NAD83) will be discussed. The differences between the two datums and the advantages of each will be analysed. Governments at the federal, provincial and territorial levels are transitioning to NAD83. Many other industries such as telecommunications, mining and transportation are choosing NAD83 as their reference frame. Regulatory agencies such as the Alberta Energy Utilities Board (AEUB) are converting to NAD83 and will be disseminating data to the public and to industry referenced to NAD83. Virtually all North American oil and gas companies use NAD27 as their reference frame. There is a great deal of concern over data integrity issues due to mixing the two datums, especially considering the amount of data interchange among companies. The difference between the two datums for the same point on the ground is about 250 metres, enough for a dry hole or an incorrect interpretation. The cost to the oil and gas industry in Canada to convert its data from NAD27 to NAD83 is in the millions if not tens of millions of dollars. The technical and budgetary issues regarding converting to NAD83 will be discussed. Strategies for coordinate management will be explored. Examples of how other countries and their oil and gas industries have dealt with this issue will be examined. It is hoped the audience is better informed regarding the issues involved regarding NAD83 and NAD27.