

# LATIN AMERICAN ENERGY COMPANY RELIES ON SINCLAIR TO SOLVE CRITICAL COVERAGE ISSUES IN THE ANDEAN REGION



## Background

The topography of the Andes poses one of the greatest challenges for operators. The Andean Mountains (Cordillera de los Andes) are the longest continental mountain range in the world, forming a continuous highland along the western edge of South America. The Andes extend from north to south through seven South American countries: Venezuela, Colombia, Ecuador, Peru, Bolivia, Chile, and Argentina.

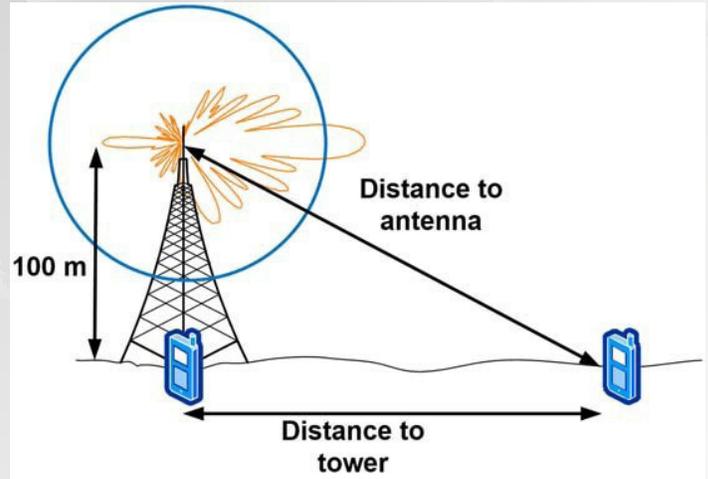
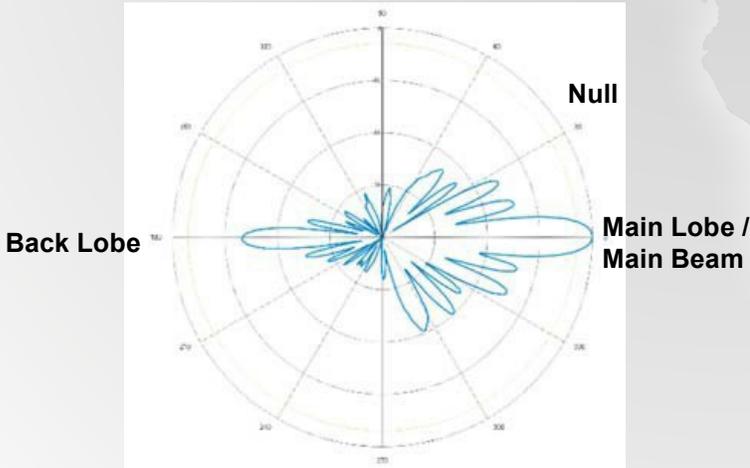
When an integrator approached Sinclair seeking a solution to improve coverage in this part of the world, Sinclair's experienced engineering team was on familiar grounds, having solved similar problems in the past in both urban and remote settings. As such, Sinclair was able to help the energy company overcome their coverage challenges through its unique ability to modify antenna patterns and increase radio coverage based on a specific pattern modification that resulted in a substantial coverage enhancement.

## Problem

In the RF world, dead zones are not uncommon. A dead zone is an area that isn't receiving a radio signal, either because it is too far from the nearest tower, or because the antenna overshoots the coverage area. Each situation is unique and requires a tailored solution. In this circumstance, the end-user needed to maintain his coverage in the far-field but also to increase signal at the foot of the mountain/tower where coverage was sporadic.

# SINCLAIR TECHNOLOGIES OFFERED A CUSTOM SOLUTION

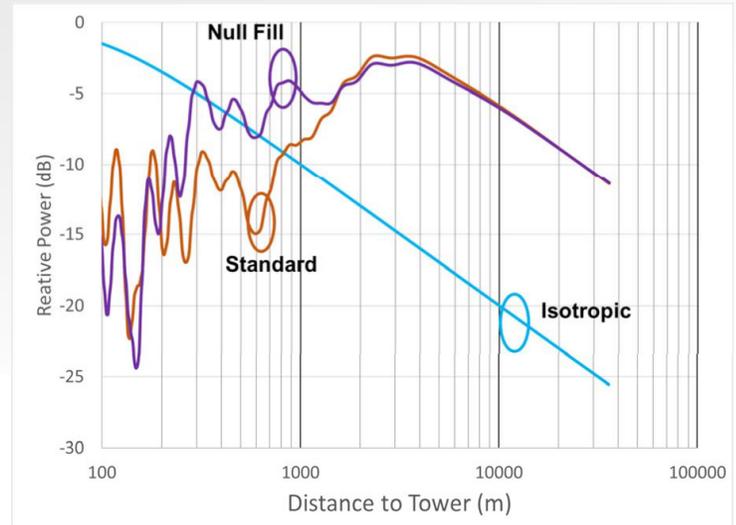
## Effect on Coverage



## Solution

After reviewing the coverage issues faced by the customer, Sinclair recommended the use of a unique Null-Filled antenna (i.e. NUF) option. The “NUF” option is used to enhance the near-field coverage of the intended coverage area, e.g. in the vicinity of an antenna tower. This option is generally available on multi-element antennas which are to be located on mountains or tall towers. This feature is optimal as it does not reduce the fringe coverage area as a downtilted antenna would.

With several SD3352-HF2PASNF(DXX-NUF) null-filled antennas deployed, the customer was able to get a more consistent coverage in many areas where a lack of signal had caused communication and operational problems. Null-Filled (NUF) is an option available upon request on all Sinclair’s cooperate Fed antennas with gain.



## Company Overview: Sinclair Technologies

With nearly 70 years of industry- leading expertise in all aspects of antenna and RF signal conditioning design and manufacturing, Sinclair has a strong focus on R&D and continues to expand its product offering to meet the needs of an ever-evolving market. Our products have a reputation for high performance, reliability, durability, and value. At Sinclair, we strive to exceed customer expectations. Sinclair’s engineering team helps customers design solutions tailored to their specific needs, including custom antennas and RF conditioning products to ensure critical communications availability.