



A Rockwell Automation Company

## Pathfinder Network Services Inc. Transportable Satellite Earth Station

### The Client:

Pathfinder Network Services Inc. is a telecommunications service provider. The company offers Satellite communications service via Anik E1,

throughout Western Canada. The clients served by Pathfinder are in the resource development industry.

### The Requirement:

Pathfinder required a transportable Satellite earth station for applications in the remote areas of North Western Canada. The system is used on drilling projects and is therefore designed so that mobilization and demobilization can be accomplished in a very short time frame. The systems required the following capabilities:

1. Telephone connected to the public switched network or customers PABX.

2. The telephone circuit had to support Group III Fax transmissions.
3. Low speed data transmission 4800 bps to 9600 bps to accommodate interconnection of PCs the HQ computer networks.

### The Design Solution:

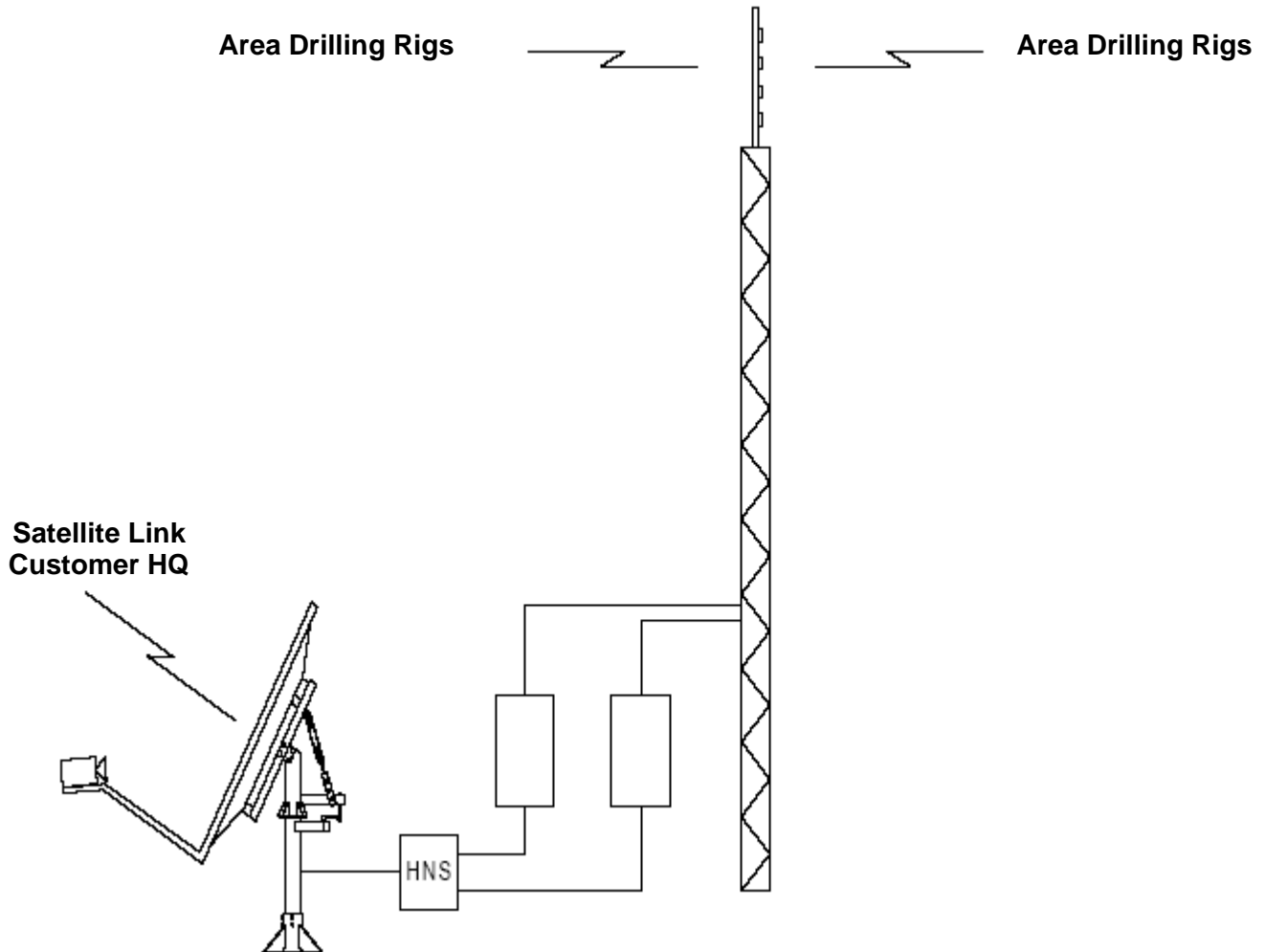
A Hughes Network Systems TES (Telephony Earth Station) was selected. The system operated through the Anik E1 Geostationary Satellite in KU band. The system utilized a small aperture antenna interfaced to a SSPA transceiver and Hughes modems. All components of the system were packaged in easily transportable containers. Set up required less than one hour. Demob one half hour. The system would support up to 4 voice or data circuits. In some applications the HNS system was connected directly to telephone or computer. In the depicted system the telephone/data

lines were extended using Spread Spectrum radios. This configuration was used when 2 to 4 drilling rigs were operating in close proximity.



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### System Specifications:

- 1 Proclin Antenna 1.2 meter
- 1 Feedhorn Assembly , Transmit Reject Filter, wave guide assembly
- 1 LNA, ST Microwave
- 1 RF Outdoor Unit , SSPA
- 1 Indoor Unit, SSPA
- 1 TES Chassis, Hughes Network Systems
- 2 TES Modems
- 2 Cylink Spread Spectrum Radios 900 MHz
- band
- 1 Omni antenna.