



## Unpaved access road over saturated soil

# Crescent Point Energy

## Rig Access Road, near Swan Hills AB

The existing gravel access road to a four-well drilling pad located in the Whitecourt/Swan Hills area became saturated after an extreme amount of snow melt occurred in the spring of 2017. The conventionally built road became extremely soft and muddy, to the point that services to the rigs had to be done using a cat-track vehicle.

Paradox Access Solutions approached Crescent Point, who had exclusively used only matting solutions in the past, to propose a Tough Cell® structure to reinforce the road and restore critical service to rigs that were sinking in the soft soil and forced to shut down due to adverse conditions.

The 1.44km x 6m access road was rebuilt using Tough Cell® and a non-woven geotextile layer in just six days. Conditions were such that even a 1-ton truck from the Paradox fleet became stuck during the placement; but installation proceeded and the newly created road supported its first load within hours of its completion.

# CASE STUDY



LOAD SUPPORT

## PROJECT AT A GLANCE

**APPLICATION:**  
Unpaved Access Road

**LOCATION**  
Swan Hills, Canada

**DATE OF INSTALL:**  
May - June 2017

**PROJECT OWNER:**  
Crescent Point Energy



One of Canada's largest light and medium oil producers, based in Calgary, Alberta.

**CONSTRUCTION:**  
Paradox Access Solutions



Specializing in the supply and installation of high quality access solutions and soil reinforcement services to project owners in pipeline, oil & gas, mining, industry, utilities, general construction and sustainable public roadways. Paradox is the North American Master Distributor for Tough Cell®.

**ENGINEERING DESIGN**  
Stratum Logics Inc.



Civil and Geotechnical Engineering Design Consultants specializing in the application of high-performance geosynthetics for civil engineering infrastructure across North America in all types of challenging soils and climates.

# Project Highlights

## Unpaved access road over extremely saturated soil, north of Whitecourt, AB

### THE CHALLENGE

The project owner needed access to a drilling rig that was sinking in the soft soil conditions that necessitated complete shutdown of operations. Each day a rig is out of service represents significant dollars per day in production losses.

### THE SOLUTION

The structure, designed to support frequent and high ESALs (Equivalent Single Axle Loads) on a subgrade of extremely low CBR, included 330-150-D Tough Cell<sup>®</sup> along with nonwoven geotextile as a separation layer. Construction of the 1.44 km long by 6 m wide access road was completed in 6 days, including one day loss due to rainout. Installation began on a Saturday, and the rehabilitated road went into service the following Friday.

**Total area:** 8640 m<sup>2</sup>

**Product(s):** 330-150 type D Tough Cell<sup>®</sup> Geocell; non-woven geotextile

**Infill:** 40mm gravel

**Completion:** Riding course using 3/4 in. road crush

### THE BENEFITS

Site access was restored in less than a week, preventing substantial production losses for the project owner each day that the rig did not operate.

The Tough Cell<sup>®</sup> solution proved superior to any matting installation that had previously been used by the project owner.

The new access road was driveable immediately after completion, and has supported well over 1000 loads to date.



Conditions prior to installation



Site preparation



ToughCell<sup>®</sup> layer installed



ToughCell<sup>®</sup> being infilled



Infilled section supports heavy load during construction



Road condition after more than 1000 loads



An industry leader in innovative access solutions, Paradox Access Solutions has provided industrial access and ground reinforcement for the oil and gas, pipeline, utility, municipal and construction industries since 2004. We are COR, CQN, PICS, ISN, ACSA, ARHCA, AVETTA and ComplyWorks qualified, and employ the highest safety standards.

11246- 261 St., Acheson, AB T7X 6C7 | 587-461-1500 | toll free 877.MUD.UGLY (683.8459)

[paradoxaccess.com](http://paradoxaccess.com) | [info@paradoxaccess.com](mailto:info@paradoxaccess.com)

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