EvoCrete®

Soil solidifier & ConCrete modifier

Construction site report

Construction of an industrial area for Cenovus Energy at Cold Lake and Foster Creek, Alberta - Canada with EvoCrete®



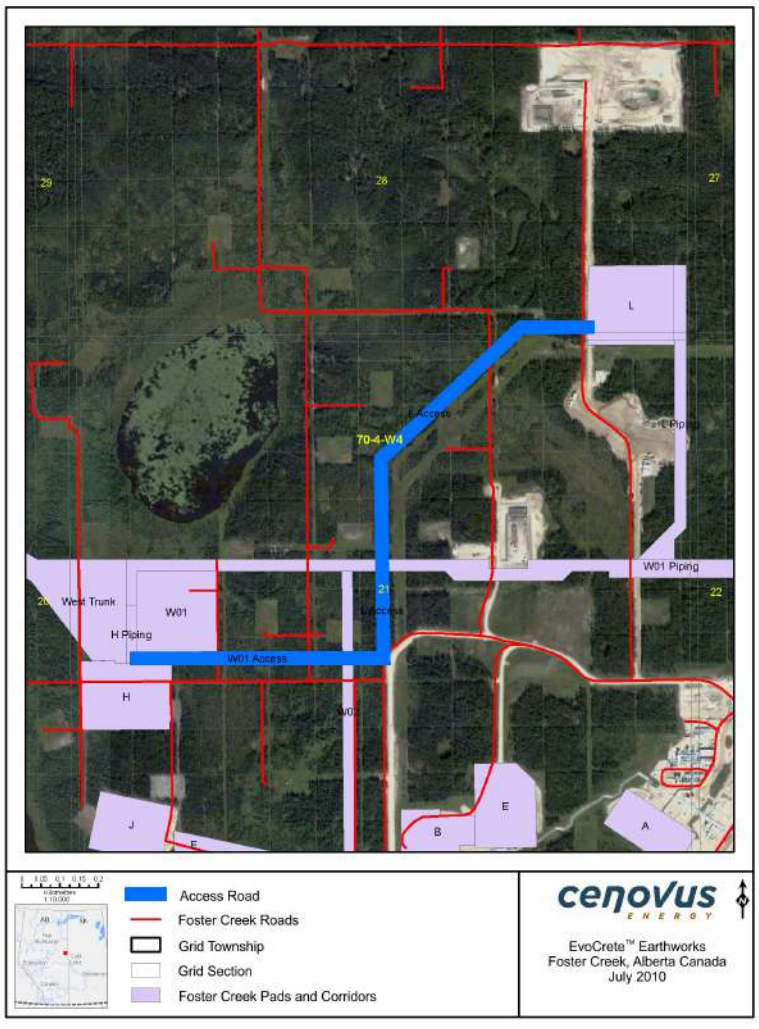
1. History

In 2002, the merger of the two companies "PanCanadian Energy Corp." and "Alberta Energy Company" founded the company "Encana". "Encana" was divided into two companies in 2009, each of which specialized in oil and gas production. Gas production remained at "Encana", while "Cenovus" took over the oil business.
The active Canadian military base "Cold Lake Air Weapons Range" is located in northeastern Alberta. In the middle of the military base is "Foster Creek", one of two oil sands projects. The oil sand deposits are located at a depth of 450 m and are extracted using the so-called "steam-assisted gravity drainage (SAGD)" technology.

2. Construction

For "Cenovus", access roads and drilling pads have been constructed with EvoCrete® Technology over the years. The advantages of EvoCrete® application are:

- Reduction of construction time
- Reduction of construction site logistics
- Reduction of natural resource consumption
- Reduction of construction costs
- Reduction of maintenance effort
- Increasing the load-bearing capacity, so that an EvoCrete® base course can also cope with future developments in load-bearing capacity and durability



3. Cenovus Pad Construction



Fig. 1: Pad construction for Cenovus Energy at Foster Creek, Alberta - Canada.



Fig. 2: Supply of the construction site with cement. Bulk cement was temporarily stored in silo trailers and is pumped from there into the spreading vehicles.



Fig. 3: EvoCrete® ST and cement were disseminate on the sub-soil at the same time. The higher ground level was created using a grader approx. 2 to 3 cm below the final height of the later fine formation. Because the mixing process of EvoCrete® ST, cement and soil increased the volume. This increase in volume can´t be compensated by the later compression process.



Fig. 4: EvoCrete® cement spreader sunk into the softened earth level. The spreading vehicle is a special construction that can spread cement and EvoCrete® at the same time. EvoCrete® and cement are stored on the spreading vehicle in two separate containers. During the spreading process, EvoCrete® and cement are mixed and spread on the surface.



Fig. 5: A smooth-jacketed road roller compacted the soil that was been consolidated with EvoCrete® and cement. The difference between unconsolidated soil (see Fig. 4) and solidified soil in terms of increasing the load capacity is significant.



Fig. 6: EvoCrete® ST promotes the cement hydration process, which means that higher compressive and flexural strengths are generated in a shorter time than with a pure cement improvement. After 12 hours of setting time, EvoCrete® ST consolidations can be loaded with heavy goods vehicles.

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Construction of an access road and a drilling pad for Alberta Clipper Energy Inc., Alberta - Canada with EvoCrete®













Fig. 1 - 5: Access road and drilling pad for Alberta Clipper Energy Inc., Canada. The EvoCrete® base layer is covered with loose dust. The loose dust and soil particles are applied and distributed by the tires of the trucks and cars on the solid EvoCrete® base layer.

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Thank you for your interest!

This EvoCrete® brochure has been presented to you by:

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