

# **SPE Edmonton & CWB Association Edmonton Chapter Technical Luncheon Meeting**

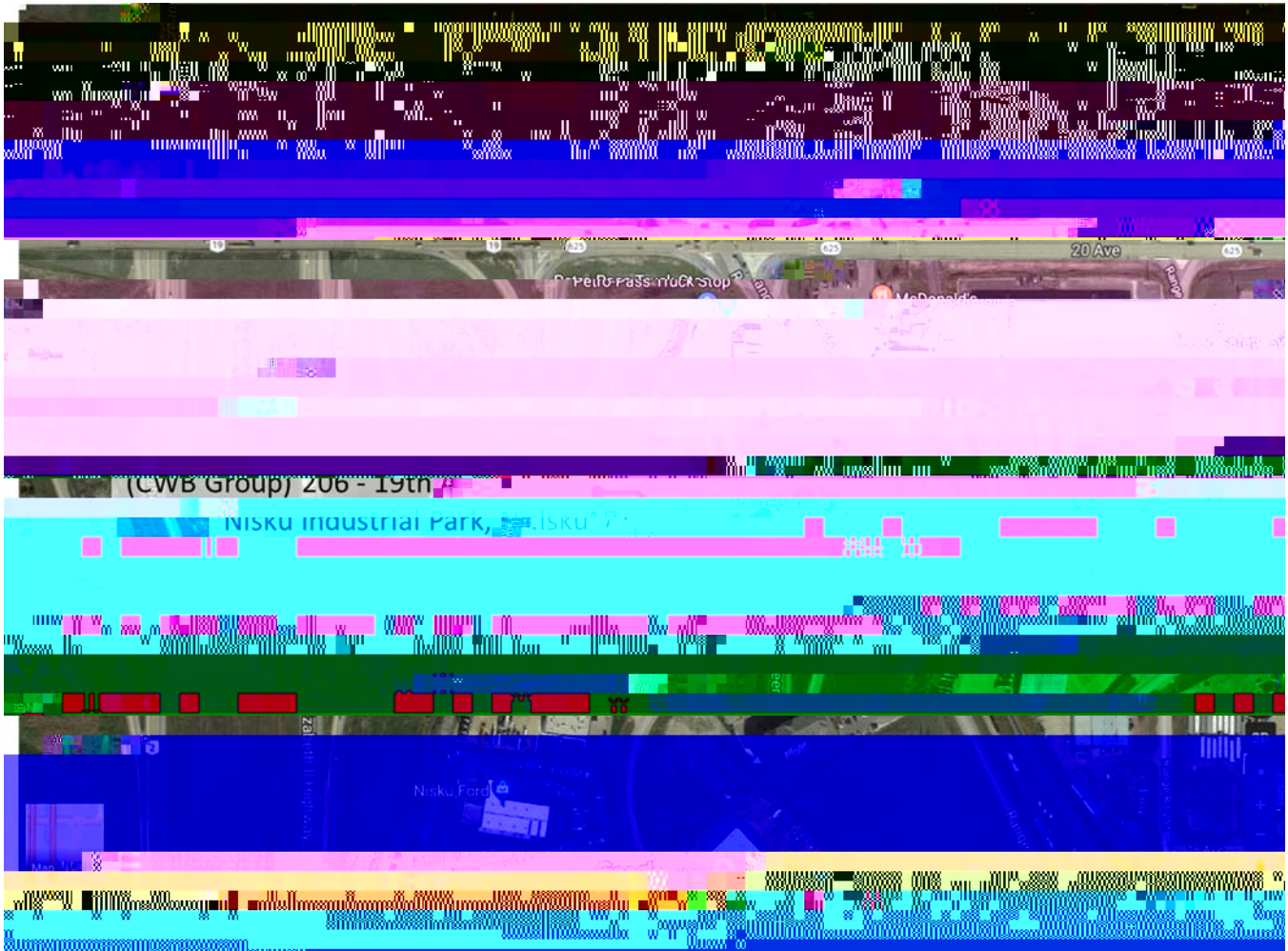
## ***From Laser Cladding to Additive Manufacturing: Value Added Coatings and Features on Engineered Components***

### **ABSTRACT**

Laser cladding is a robust production weld overlay technique that provides a unique combination of benefits for wear resistant hardfacing, corrosion resistant overlays and dimensional repairs. Laser cladding provides all the benefits of a metallurgical bond that is characteristic of conventional weld techniques, but with a substantially lower heat input. This reduced heat input is a key advantage and allows for a minimized heat affected zone (HAZ) and reduced risk of distortion. Due to the nature of the process, dissimilar metal welding is not only possible, but commonplace.

Although the process of laser cladding is typically used for coatings, the only difference between cladding and additive manufacturing (or 3D printing) is the thickness of the deposit. The ability to build up features on engineered components is currently controlled by cost rather than

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Map showing location of Canadian Welding Bureau (CWB Group) in Nisku