



Society of Petroleum Engineers



Field Test of the ET-DSP™ Process for Recovery of Bitumen From the Athabasa Oil Sands

Bruce C. W. McGee
E-T Energy

Abstract

Like SAGD, Electrical heating of the Alberta oil sands for the recovery of bitumen has been studied since the early 1970's. The technology has evolved into a process referred to as ET-DSP™ (Electro-Thermal Dynamic Stripping Process). This technology is uniquely befitted to the exploitation of bitumen that is stranded in resources that are too deep to mine and too shallow for SAGD. The Alberta Energy and Utilities Boards estimates that 1,670 billion barrels of bitumen lie dormant within such deposits.

E-T Energy is in the construction phase of a Field Test to demonstrate the technical and economic feasibility of the technology for the recovery of bitumen from the Athabasca Oil Sands. This presentation will describe the ET-DSP™ process, engineering of the field test, and specific technical and economic objectives established to create a real assessment of the commercial viability of the technology.

The Field Test consists of two test areas. The first test area (T-I) is half scale relative to the second test area (T-II). T-I will provide performance metric data such as recovery factors, energy to produced volume of oil ratio, water to bitumen ratio, and to a lesser degree, artificial lift performance data. T-I will also provide electrical data for the design of the much larger power systems needed for T-II. T-II will provide data to access the commercial feasibility of the technology, such as heating time, production profiles, full scale recovery factor, operational parameters and so forth.