ELECTROMAGNETIC HEATING OF OIL SHALE

Introduction

Electric heating is achieving the most effective, relevant, efficient, and economically favorable conversion processes for the process conversion processes that must follow low thermal permeability. This process technology is the most effective, relevant, efficient, and economical conversion processes that must follow low thermal permeability. This process technology is.

R. Windisches, Jr., radio frequency, and microwave have been utilized in various applications and methods of using radio frequency electric energy to convert.

Halliburton Company

Shell Oil Co.

Formations Including An Impedance Matching

kerogen

et al.

removing the treated hydrocarbons from the underground canal or well.

F.

et al.

Poster Author Comments:

retorting of oil shale using radio frequency electrical energy, an...radio frequency dielectric heating to a formation: 1) two or more emitters that...this distance increases to 150...of oil shale, more than any other category of electromagnetic heating. Radio...technology has been researched, patented, and field converted processes that must...certain hydrocarbons to a predetermined...to fossil fuels to a predetermined...from well.

Dielectric Properties of Dry and Saturated Green River Oil Shale. Energy...in situ...obtaining, converting, and processing CO2...Symington

Dwight E. Kinzer

Quasar Energy LLC

RF

In Situ Microwave Heating

Claim Summary: Applying directional radiation patterns at a frequency between 100 KHZ to 1000 MHZ to a formation from a radiation system comprising a plurality of radiators spaced...Claim Summary: Automatically adjusting the effective load impedance to match the output impedance of a signal generating unit by a.) adjusting the frequency at which the radio...Claim Summary: Determine, by operation of computer, a relationship between the most...the formation, may be matched in unambiguously defined Smith chart regions by varying...Claim Summary: Heating oil shale in the presence of a gas selected from the group...Claim Summary: Automatically adjusting the effective load impedance to match the output impedance of a signal generating unit by a.) adjusting the frequency at which the radio...Claim Summary: A conductive electrode located in the hydrocarbon bearing layer having a...Claim Summary: A plant producing hydrocarbons...Claim Summary: Developing a strategy for the application of electromagnetic energy to the reservoir...excavating at least one canal or well in the reservoir for draining water from the material and the heating rate of the...Claim Summary: Determining...Conditioning...Claim Summary: Automatically adjusting the dielectric properties of an electric field in an oil shale formation based on the temperature and impedance relationship.

Resistive Heating

Responsive Heating

Resistive Heating

Responsive Heating

 Microwave Heating

Microwave heating is similar to radio frequency heating in that they both subject...the microwave technologies are used in many different applications, such as...At least eleven patents have been granted for its in situ microwave heating of oil shales.

Microwave Heating

Responsive Heating

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