Evaluation of an ISC patent

ISC process is an extremely complex process; in-depth knowledge an extensive experience are highly required.

In this section, the most recent patents are analyzed and an opinion is provided. It has been noticed that some ideas contained in certain patents just cannot be applied as some simple phenomena might have been ignored. However, this section is not intended to promote or discourage consideration of specific patents. This is just an opinion and the reader should take it critically.

In parallel, I am offering my services in case a company/individual is working on her/his new idea towards a patent or any **i**ntellectual **p**roperty (IP). My help may be in the area of evaluating the technical merit of the proposal and in brushing the formulation, up to the IP legal status.

These services are offered not only in the ISC area but also in other thermal methods of oil recovery, such as steam drive, cyclic steam stimulation, SAGD, etc. More generally I can provide basic advice on any EOR novel process to be proposed. In all these cases, generally the authorship may remain with the company and it does not assume my authorship.

The patent briefly discussed now is: US Patent Application Publication 2009/ 0321 073A1, entitled "Method for In-Situ combustion of In-Place Oils". Publication date: December 31, 2009. It was proposed by W. Pfefferle, who was a very appreciated specialist in the combustion at surface; furnaces, ovens, etc.

The patent proposes a kind of "reverse THAI process" in the sense that the vertical injector (VI) is located close to the heel of the horizontal producer (HP), instead of being located close to the toe of HP. Also, it is proposed to produce some of the combustion gases (flue gases) via the annulus of the vertical injector.

This is a clear example of a patent, which simply does not work; it has a series of major technical glitches which makes it un-applicable. The most important are:

- The injected air will short-circuit via the heel of the HP
- Some air will short-circuit via the annulus of the VI
- Finally the ISC front will not advance towards the toe, as perceived in the proposal.
- There will be just some initial/temporary burning around the heel of the HP