Study of Fault-Sealing Problems in the Structure of TCS

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ABSTRACT

To maintain a stable gas supply to domestic market, TCS gas field has been converted into an underground natural gas storage. There are 17 faults crossing TCS field to separate the field into 11 blocks. To monitor and design an underground gas storage, several studies need to be completed such as original gas in place, the design of new well locations and reservoir simulation. The results of these studies are strongly depending on the possibility of connection among these faults.

To understand the connection between different blocks, pressure decline trend in each block were first obtained. Then, we compare the trends among different blocks. Also, results of interference tests and geology facts are used to help us make the judgments on fault connection. Our results shows that the thrust parallels the anticlinal axis of TCS structure is a sealing fault. The fault between block 9 and block 10 shows that the fault allowed fluid transport in the south section and this fault behave as sealing fault in the north.

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