



Trap Hydrocarbon Detection – Structural Trap, Africa

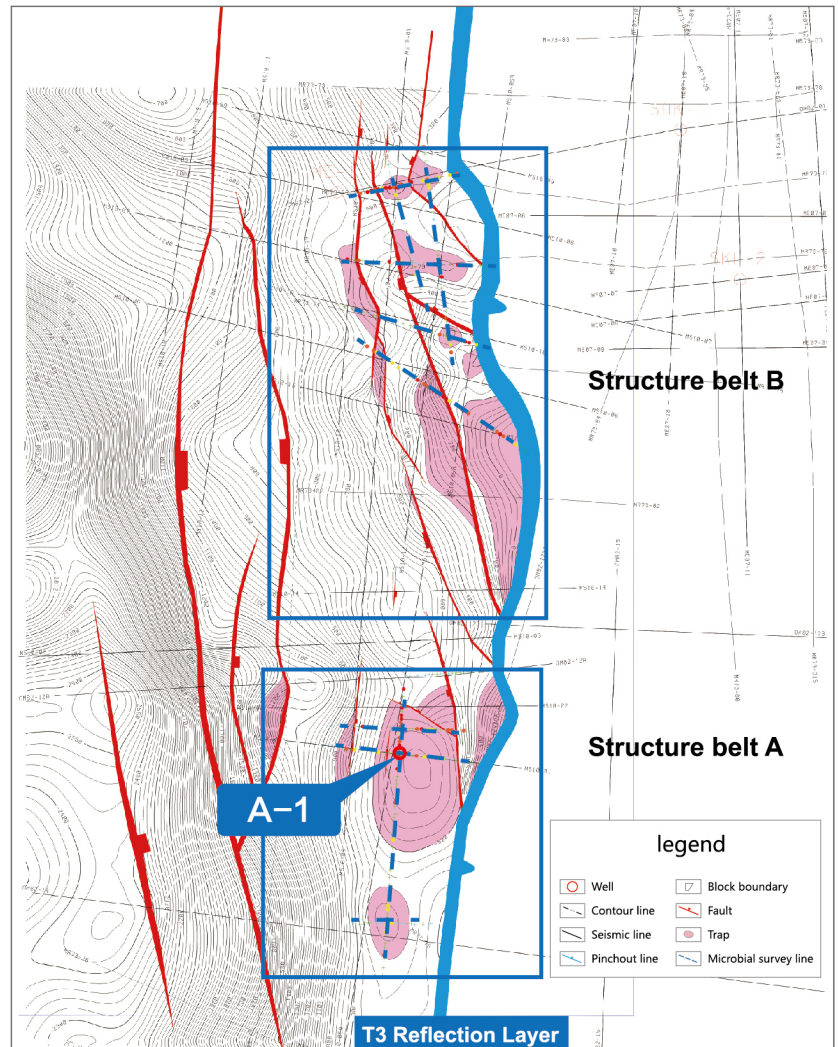
▼ Survey Design Map

Introduction

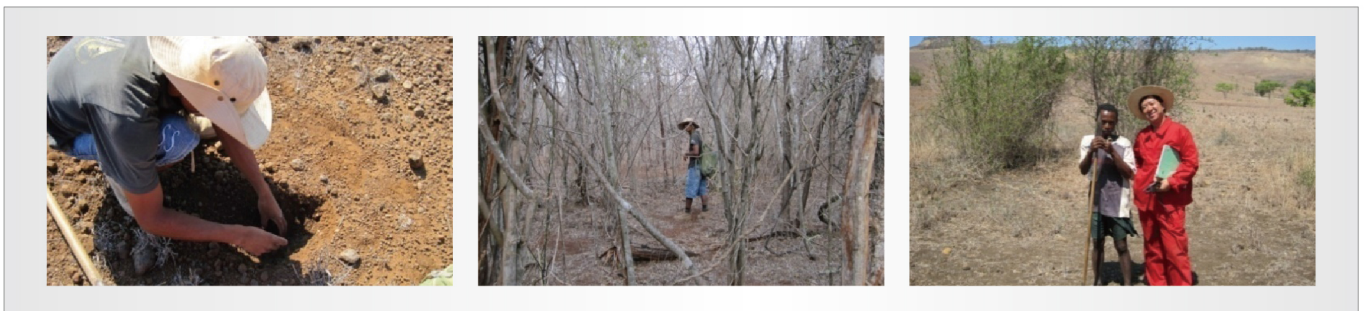
- ◆ Exploration in this area is at its early stage, no wells have been drilled
- ◆ Source rock: Early Jurassic mudstones
- ◆ Primary reservoirs: Early to late Jurassic shallow marine or deltaic sandstone
- ◆ 2D seismic survey identified 15 traps in different series of strata in Structure Belt A and B in the survey area, but difficult to identify traps with potential hydrocarbon charge

Objectives

- ◆ Predict the drilling result of Well A-1, the 1st exploration well in the survey area
- ◆ High grade traps on the basis of likely hydrocarbon charge and provide reliable microseepage information for the selection of the drilling site for the 2nd well



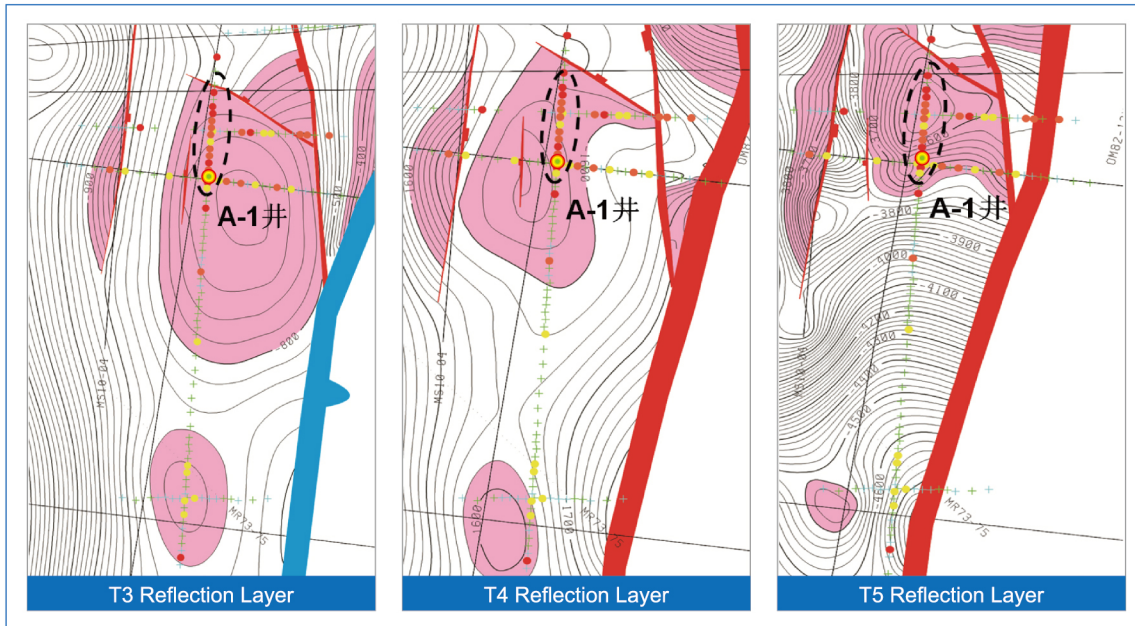
▼ Field Sampling



Survey Result

1 Accurately predict the drilling result of Well A-1, the 1st exploration well in the survey area

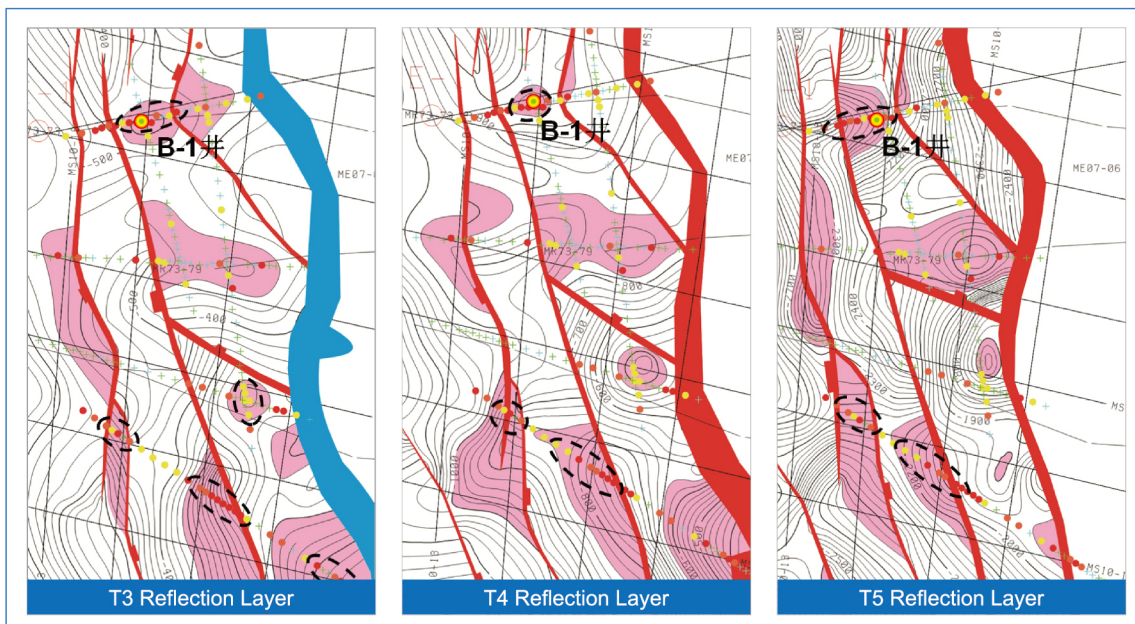
- ◆ Well A-1 was designed to drill to seismic reflector T3 and T4. A-1 was finally drilled to 3200m, only find oil-gas shows at T4.
- ◆ Microbial anomalies correlated best with the structural trap of T5, indicating likely hydrocarbon charge.



Microbial Distribution – Geological Structure Map

2 High graded favorable prospects resulting in commercial discovery

- ◆ By integrating GMHD result with 2D data, Well B-1 was selected as the drilling target.
- ◆ T5 reflection layer was suggested as the target for Well B-1.
- ◆ Well B-1 was drilled post-GMHD survey and resulted in commercial discovery in targeted layer.



Microbial Distribution – Geological Structure Map