

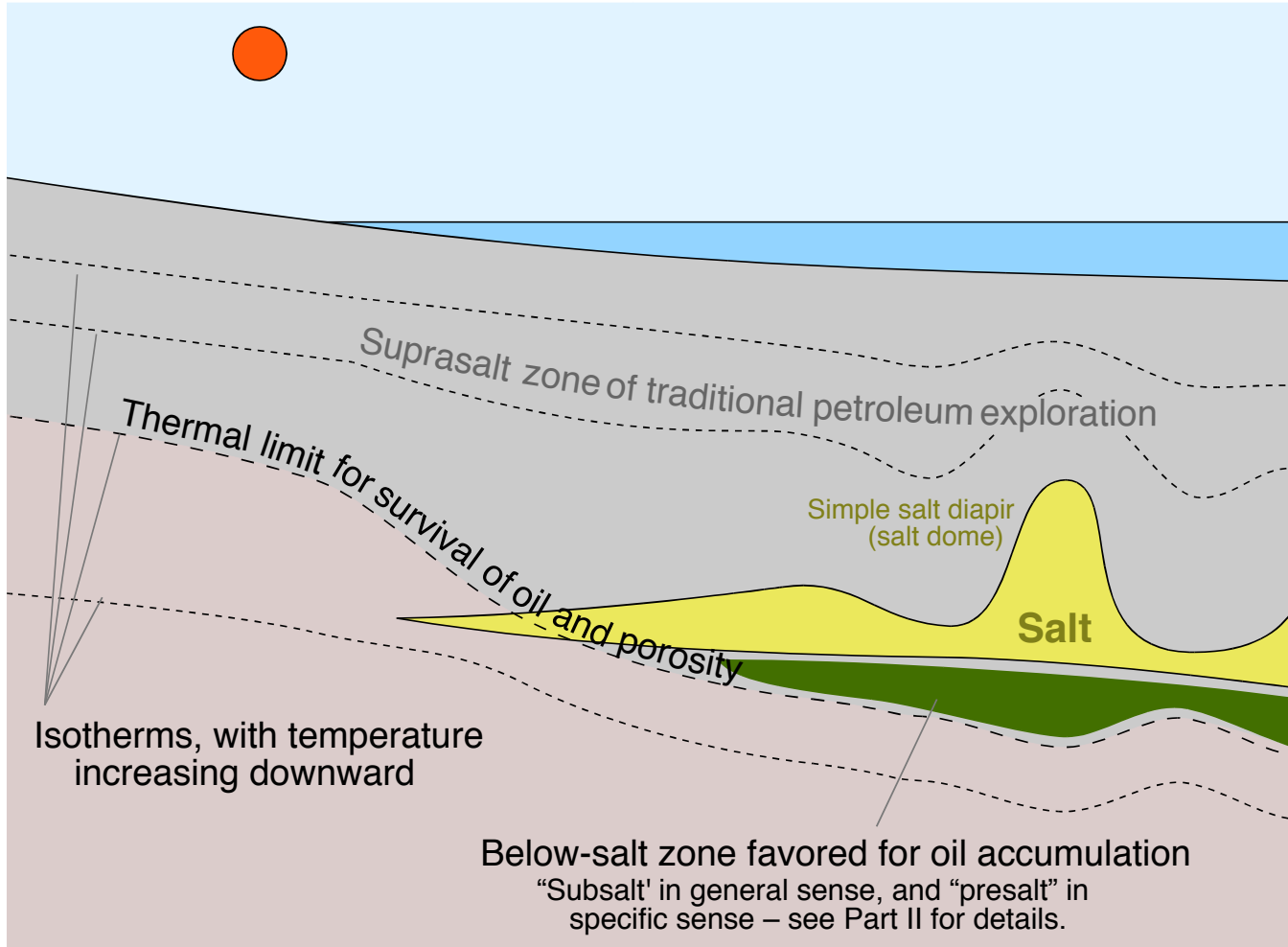
Subsalt plays I: basic pros and cons

Until the 1990s, layers or zones of salt in the subsurface were effectively the lower limit of petroleum exploration, because of the difficulties of seismic imaging of zones below salt and the difficulties of drilling through salt. Recent

advances in both technologies have led to more recent subsalt exploration.

The cartoon below is a very crude explanation of why exploration below salt can be rewarding, largely as a result of salt's

ductility (which allows it to form good seals) and its thermal conductivity (which drains heat upwards to preserve underlying oil). A second *PGSG* page better takes into account both the potential complexities of salt deformation and the distinction between "presalt" and "subsalt" that is ignored here.



Salt:

The good side:

- Excellent seal contains petroleum.
- Thermal conductivity creates cooler subsalt zone in which petroleum and porosity are preserved.

The (traditionally) bad side:

- Seismic velocity makes subsalt interpretation challenging.
- Deformation of salt makes drilling challenging.
- Water depth and well depth make drilling challenging