Die Gültigkeit der im Modell beschriebenden Kontrollfaktoren beschränkt sich auf alle Träger, die im grundwasserkontrollierten Milieu eines flexurell absinkenden Beckens abgelagert wurden. Dies gilt für alle Sandsteine der Hannover-Wechselfolge und für einen Großteil der Dethlingen-Formation im nördlichen Beckenbereich.

2. Das **‚Framework Cementation Modell'**: Bei diesem Modell wird die Reservoirqualität im wesentlichen durch bestimmte texturelle Merkmale (z. B. Korngröße, Sortierung etc.) innerhalb trocken äolischer Lithofaziestypen kontrolliert. Es existieren direkte Beziehungen zwischen Fazies, Diagenese, Petrophysik und seismischem Abbild. Diese Beziehung wird über frühdiagenetische Zementation des Porenraums durch gerüststabilisierende Zemente (z. B. Karbonat) realisiert. Die Gerüstzemente schützen den intergranularen Porenraum gegen Kompaktion und Tonmineralneubildung und können durch CO_2-saure Wässer im Vorfeld junger Chargephasen gelöst werden.
Hauptbestandteil der RQ-Vorhersagestrategie im beschriebenen Play ist eine möglichst hochauflösende Kartierung der Reservoirfolgen im Impedanzvolumen einer seismischen Inversion. Dabei ist eine exakte Kalibrierung mit den Abschnitten optimaler Reservoirausbildung in Referenzbohrungen unumgänglich.
Die Anwendung des Modells bezieht sich auf alle oberhalb des Palāo-Grundwasserspiegels abgelagerten Reservoirfolgen mit lateral wechselnder Geometrie. Dies gilt für alle Hauptreservoirs der südlichen Grabenränder sowie die Sandsteine der Mirow-Formation und die tiefsten Teile der Dethlingen-Formation in den Grabenzentren. Die markante Faziesbindung petrophysikalischer Eigenschaften sowie eine häufig sehr einfache Lithofaziesvergesellschaftung erlauben in diesem Play eine Faziesvorhersage über seismische Klassifikation.

Synorogenic deposition of turbidite fans in the Central-Carpathian Paleogene Basin: evidence for and against seal-level and climatic changes

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The Central-Carpathian Paleogene Basin (CCPB) was formed as a marginal sea of Peri-Tethyan basins. It shows a fore-arc basin position developed on the destructive plate-margin and in the rear of the Outer Carpathian accretionary prism.
The CCPB has undergone two third-order cycles of initial transgression (TA 3.5 - 3.6 sensu Exxonęs cycles), that was followed by two second-order cycles of deposition (TA4 and TB1 sensu Exxonęs cycles). The initial transgression was preceded by deposition of alluvial-fan and delta-fan sediments. Upper Lutetian transgression in the CCPB led to shallow-marine deposition of nummulitic banks developed in two 3rd order cycles. The nummulitic cycles of the CCPB disappeared due to the inversion of the Middle Eocene warm climate in the beginning of the TA4 supercycle. Climatic changes culminated in the "Terminal Eocene Event", which corresponds to the global cooling and glacio-eustatic regression. Consequently, the extensive carbonate deposition on broad, warm shallow shelves was replaced by terrigenous sedimentation on bypassed shelf areas. The sediments from above the nummulitic limestones are depleted in $CaCO_3$ and enriched in organic matter. They contain an abundance of cool-water cocoliths (e.g. Isthmolithus recurvus, Zigrablithus bijugatus), diatom oozes (Menilites) and Globigerina-rich fauna (Globigerina Marls). The small-scale intercalation of non-calcareous black shales and Menilites with Globigerina Marls indicates a short pulse of the high carbonate productivity during the terminal Eocene fertility crisis (precessional cycles).
Climatic control of depositional changes in the CCPB became less significant in time of forced regression, even when the Globigerina Marls still recorded the sea-level and CCD fluctuations in the Sambron Beds (e.g. the CCD drop in the Eocene/Oligocene boundary). The falling stage of forced regression is recorded by a Type-1 sequence boundary on shelves (between carbonate platform deposits and overlying formation), which were eroded by fluvial channels entering the basin through marginal delta-fed fans. During this time, the basinal slopes were actively tilted and incised by submarine valleys, which fed the basin-floor and slope fans. The Sambron Fan (like as Tokaren, Szaflary and Pucov Fans) represents a lowstand system tracts consisting of canyon-fill, spillover and mass-failure deposits.
The TA4 supercycle tended toward the gradual rise of relative sea level during the Early Oligocene. Successive formation of the CCPB (Huty Fm.) corresponds to transgressive and highstand system tracts. The transgression is marked by ravinement surfaces detecting between Eocene Nummulitic banks and Middle Rupelian sediments of NP 23 Biozone. Basal sediments of the transgressive formation still show the cool-water influence, salinity decrease and semi-isolation, as indicated by wetzeliellacean dinoflagellates, inprints of diatoms, brackish nectonic fish and ostracods. Higher in the section, the carbonate-free sequence reveals the first pulses of nannofossil blooms, characterized by reticulofenestrids of NP 23 Biozone, which became flourished due to sea-level rising and renewed circulation. The Lower Oligocene transgression rose up to highest sea-level in time of 32 Ma, which restored the Paratethyan circulation. Consequently, the CCPB became reoxygenated increasing in carbonate precipitation, productivity, fertility, etc. (calcareous claystones, abundance of cyclicargoliths, oxygen-related ichnocoenosis). Maximum flooding of this sequence falls into the condensed horizons of manganese layers. Late highstand of this formation is evidenced by small-scale progradational events and megaturbidite beds.

The TB1 supercycle was introduced by the Intra-Oligocene regression in time of about 30 Ma (distinctive drop in sea level related to the Antarctic glaciation and cooling of the Northern Hemisphere). The falling stage of the Late Oligocene regression in the CCPB is expressed by an offlap break of prior highstand sediments in the upper fan zones (e.g. eroded Mn blocks in conglomerate-slope accumulations) and related correlative conformity between mud-rich fans (Huty Fm.) and sandy-rich fans (Zuberec and Biely Potok Fm.). The sandy-rich deposition of the CCPB lasted till to the Early Miocene, as has been already indicated by some nannoplankton and foraminiferal species (e.g. Helicosphaera scissura, H. kamptneri, H. cf. ampliaperta, Triquetrorhabdulus cf. carinatus?). The regression in the CCPB reached the maximum lowstand on the base of the NN2 zone, when the brackish fauna became to appear in the Paratethyan basins (shallow-water brackish dinoflagellates, small gastropods). According to this evidence, the deposition of the Biely Potok Fm. should terminated till to the Early Eggenburgian, i.e. to the lowstand phase at the beginning of the NN2 zone, which preceded the next transgressive cycle TB 1.5 in the Presov Fm.

Fission track dating on clastic sediments of the foreland basin: Implications for the thermotectonic evolution of the Swiss Alps

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The clastic sediments of a foreland basin record the exhumation