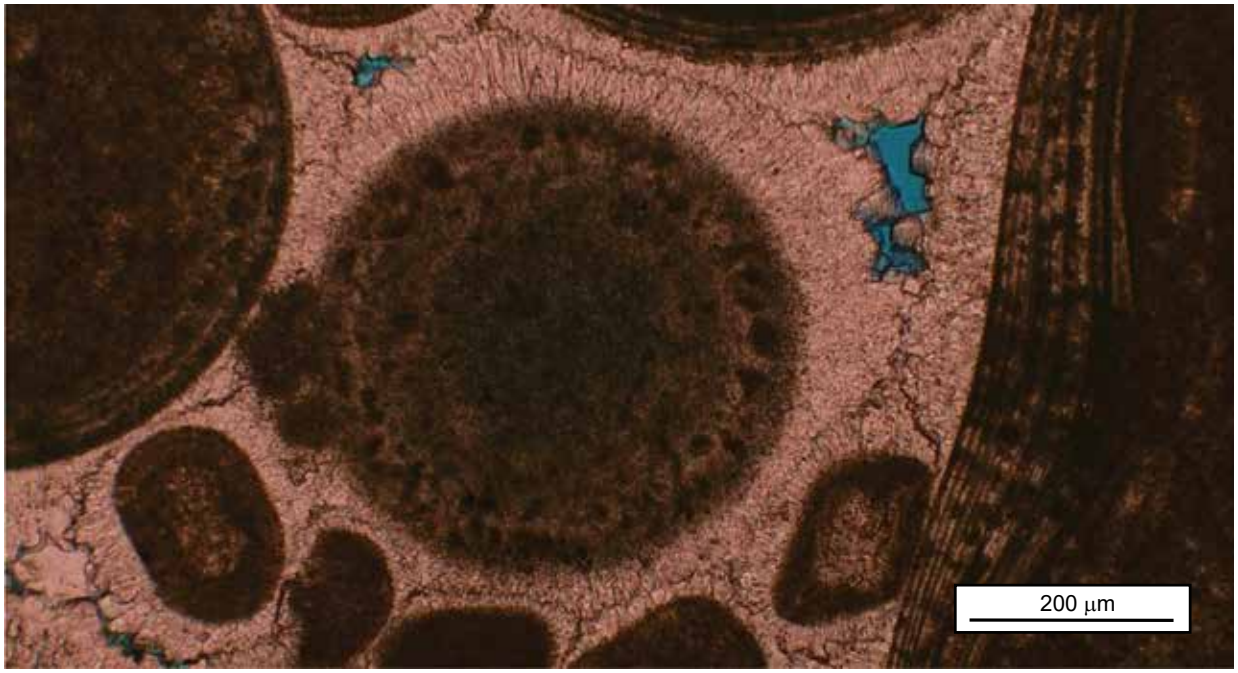
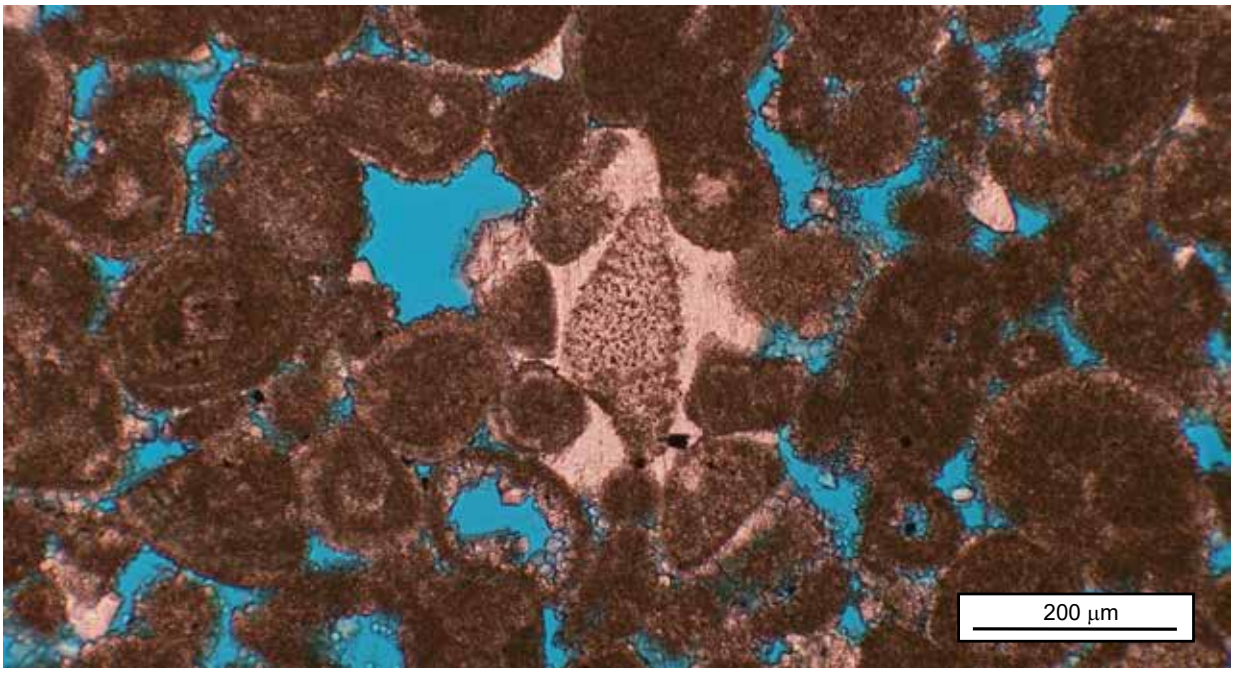
Appendix 1. Thin section images taken by the Office of the State Geologist

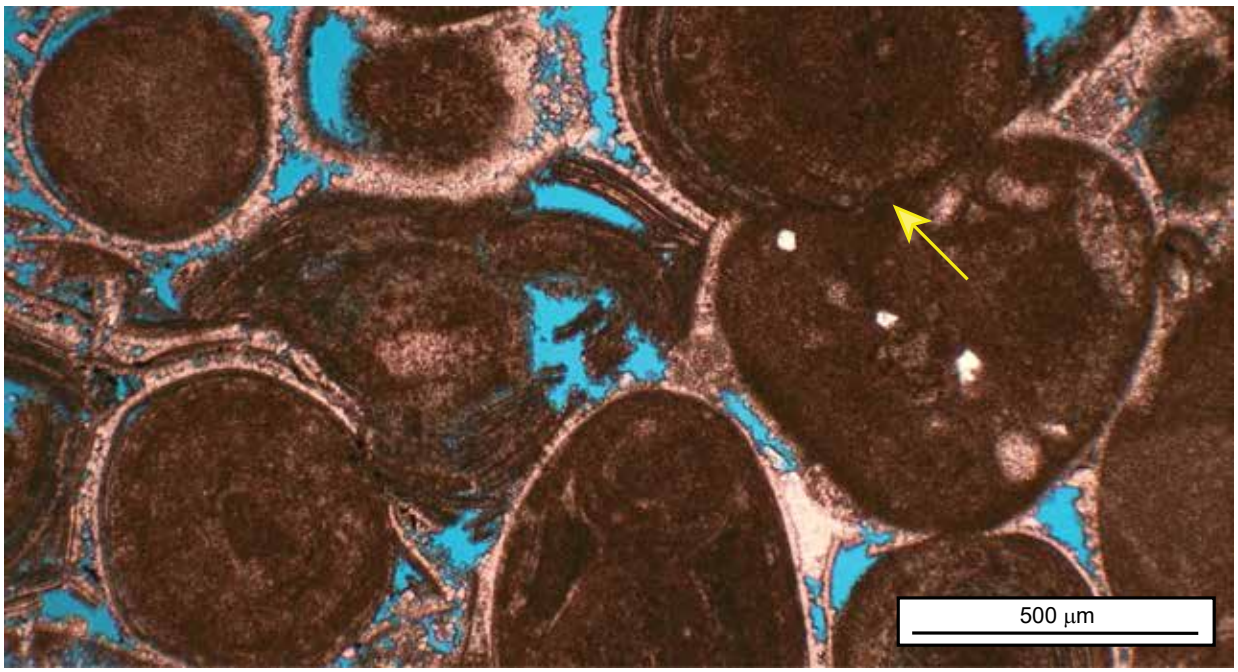
Atlanta Field
Permit #26629



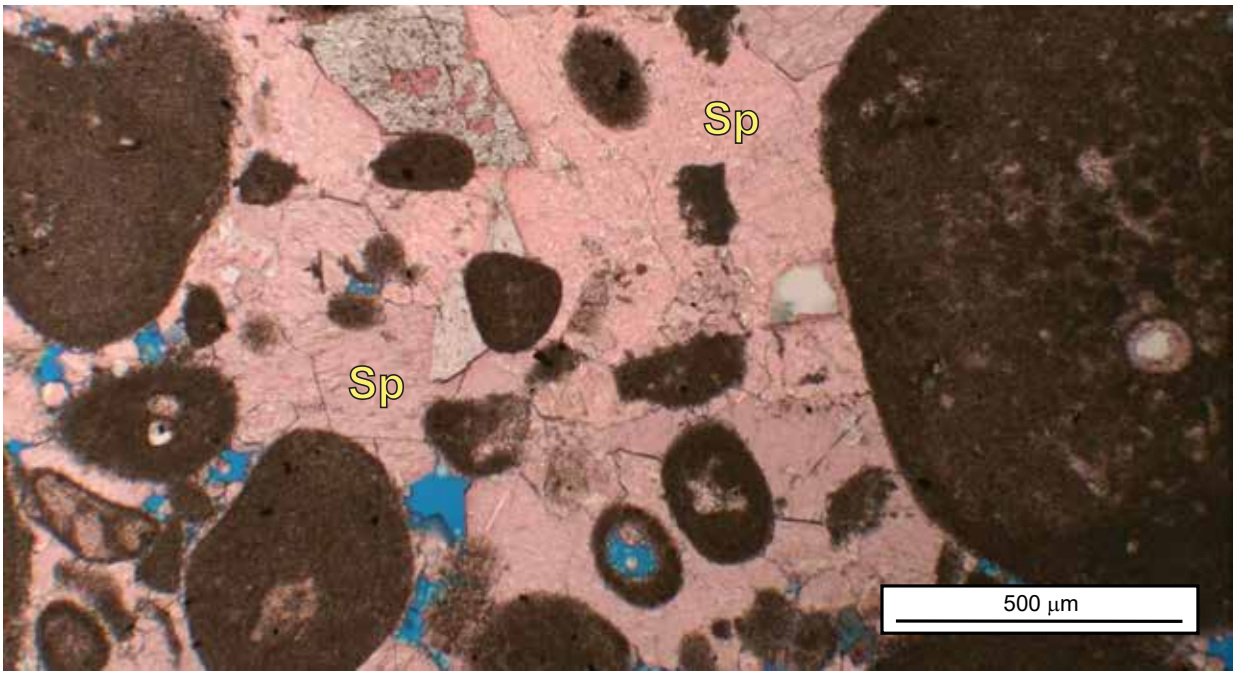
A.1: 8294', Fibrous cement rims around allochems, likely early marine cement.



A.2: 8303', Very fine incomplete crusts on allochems. Syntaxial cement surrounding echinoderm fragment.

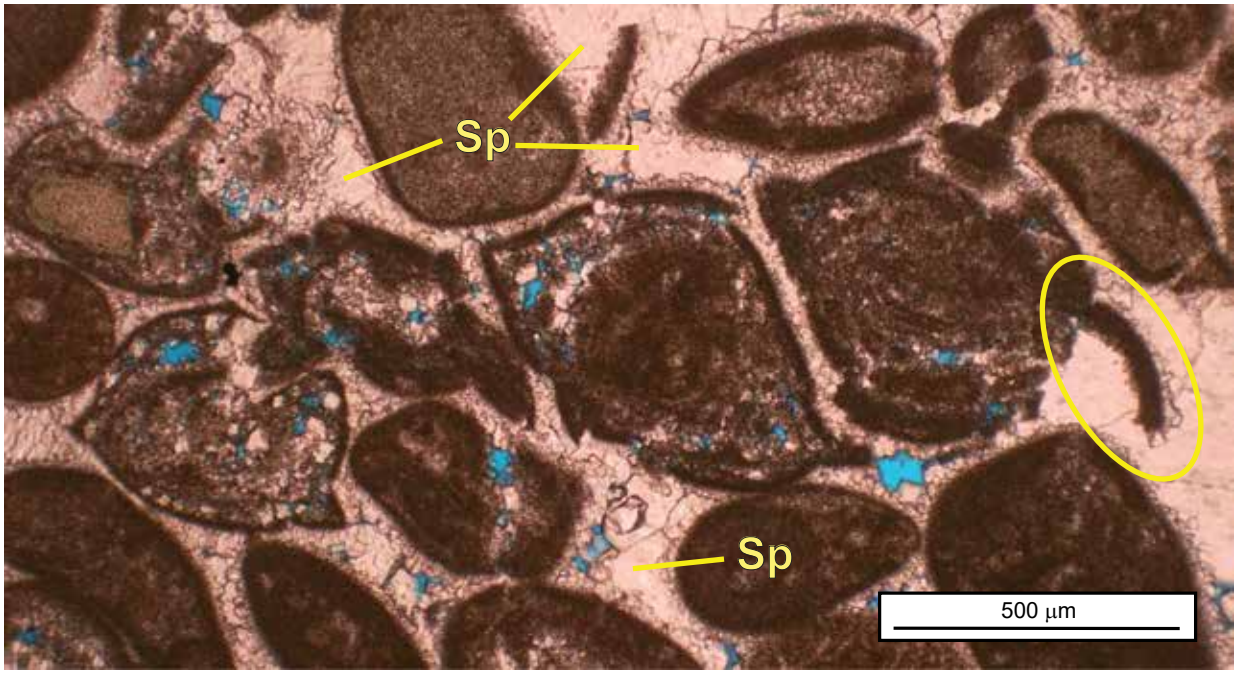


A.3: 8307', Very fine calcite rim cement around ooids. Physical breakage of ooids and rims. Pressure solution/stylolitic contacts between ooids (arrow).

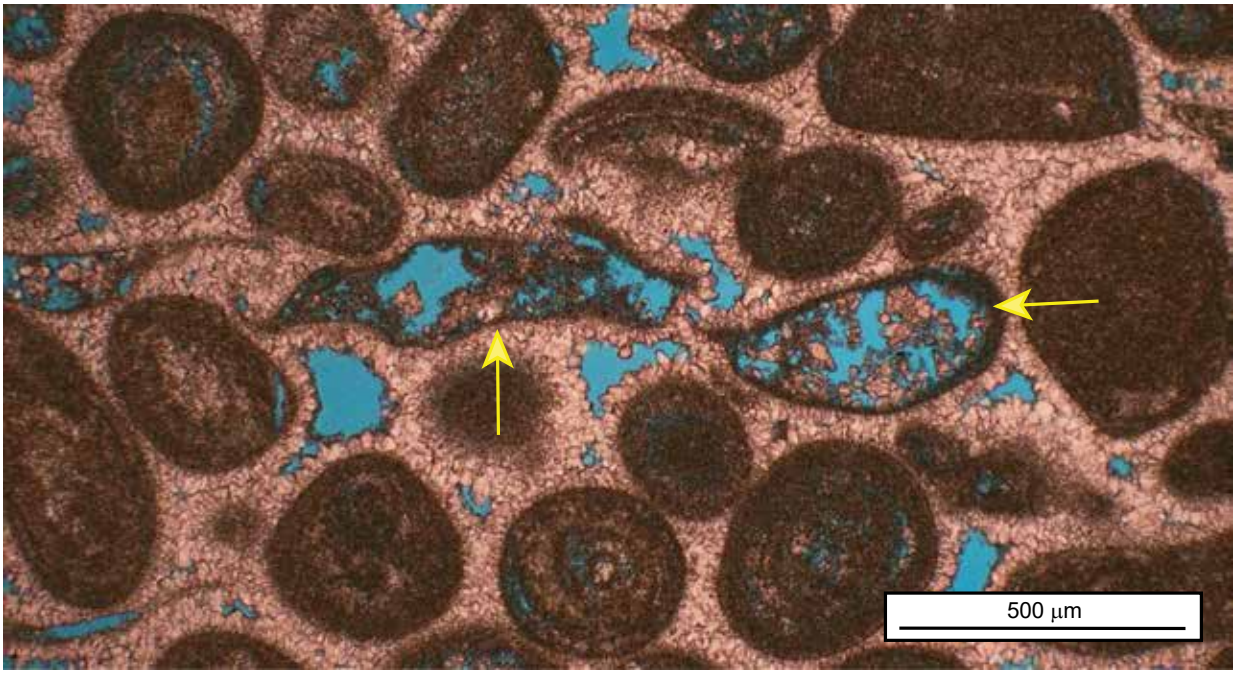


A.4: 8351', Coarse calcite spar cement (Sp).

Kress City SE Field
Permit #34944

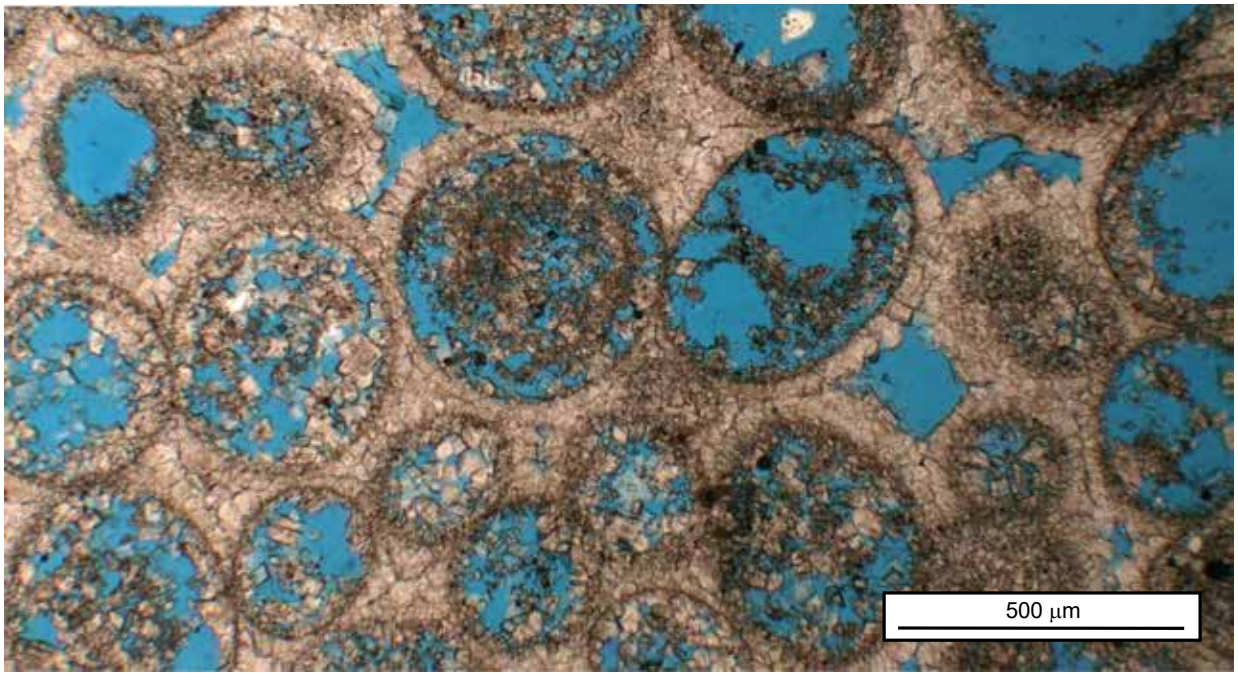


K.C.1: 8445', Broken allochems; broken rims have very fine rim cement indicating pre-compaction cementation (circle). Coarse calcite spar cement (Sp) encasing compacted grains suggest post-compaction cementation.

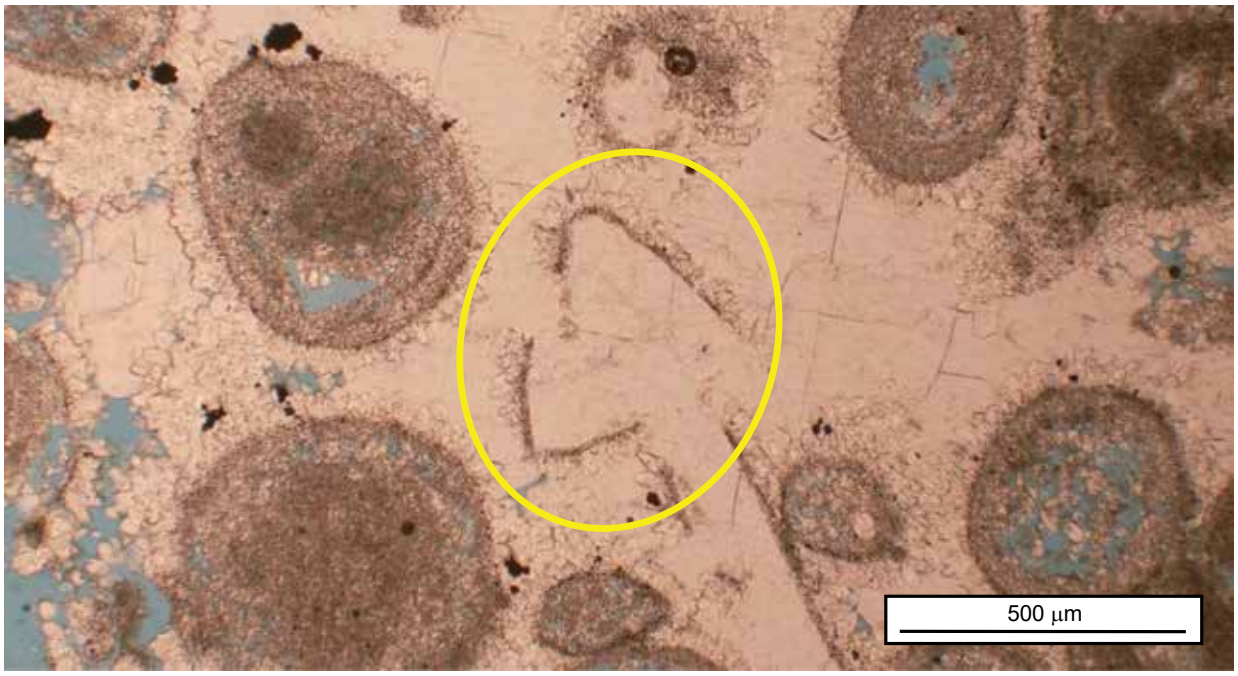


K.C.2: 8451', Equant calcite mosaic cement partially occluding primary interparticle pores. Arrows identify dissolved allochems.

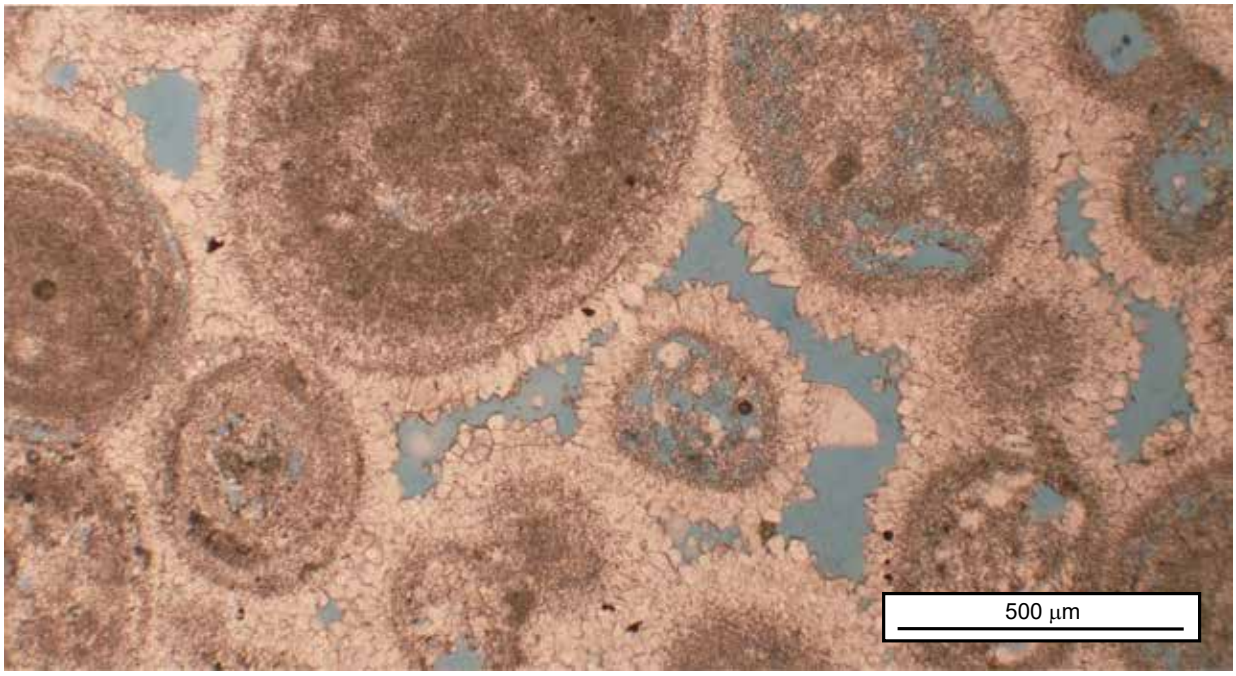
McNeil East Field
Permit #31312



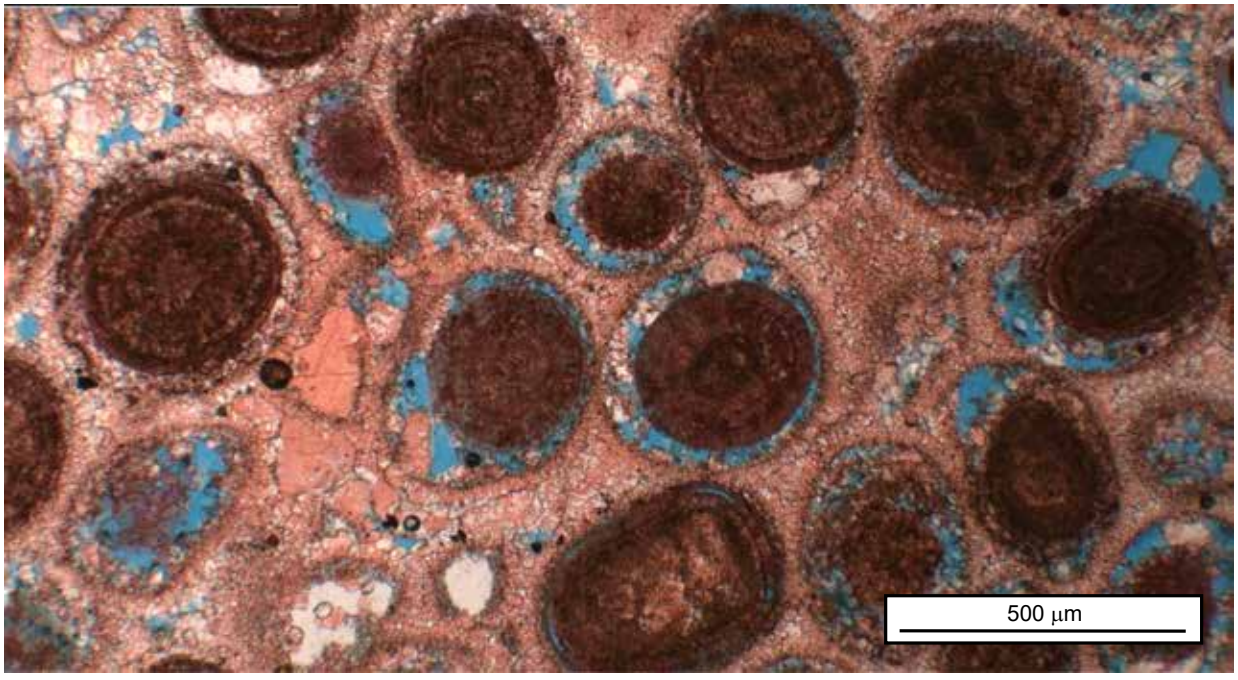
M.E.1: 6517', Dolomitized ooid grainstone.



M.E.2: 6519.5', Poikilotopic dolomite encasing broken cemented rims (circle) suggests early pre-compaction cement rims and post-compaction dolomite.

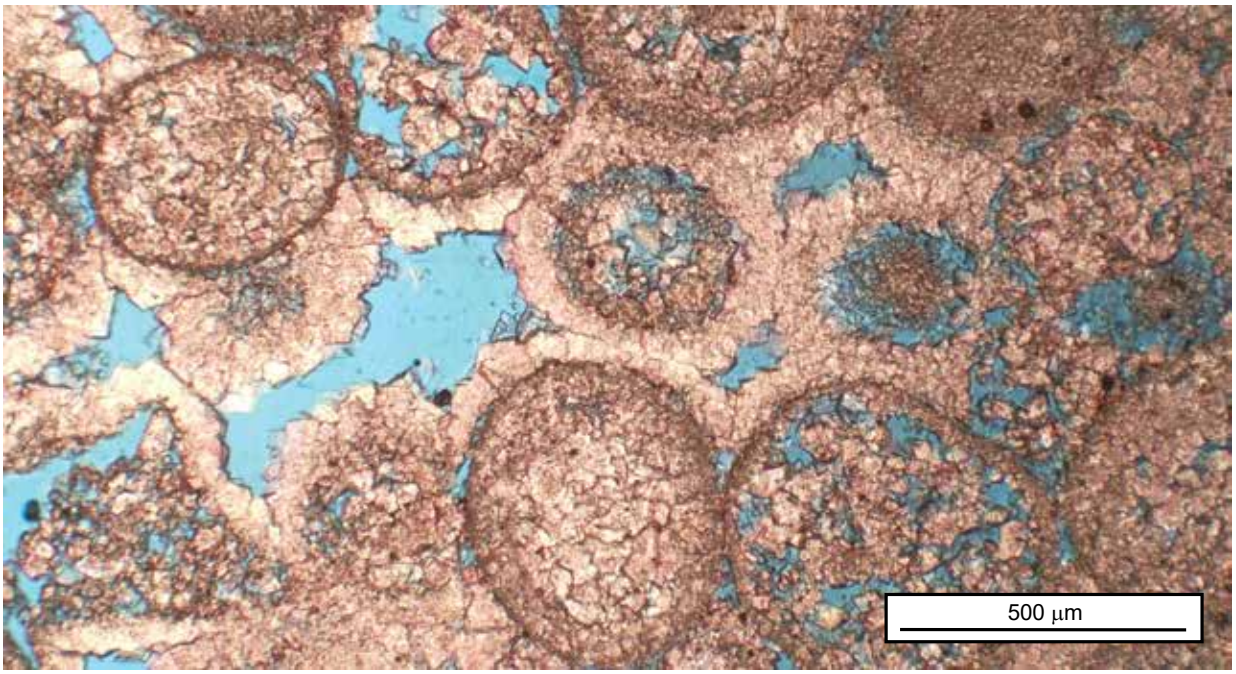


M.E.3: 6519.5’, Bladed calcite rims on partially dissolved and recrystallized allochems.

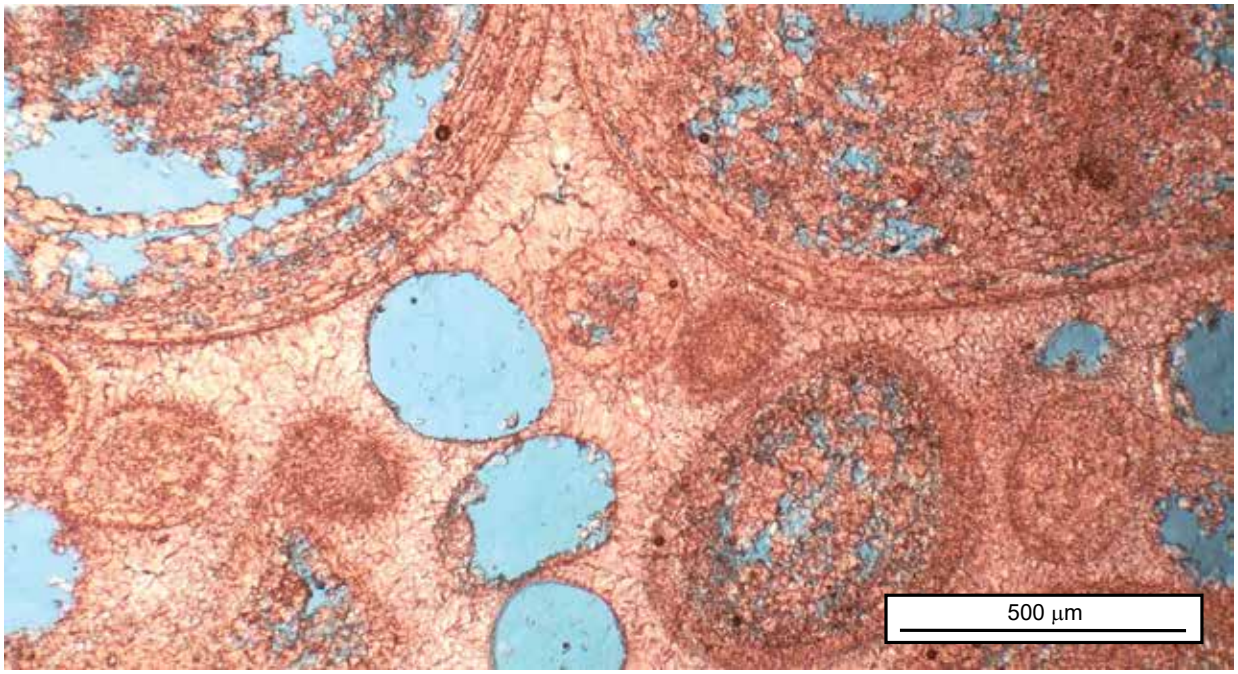


M.E.4: 6522.5’, Inferred partially dissolved micritic ooids. Fibrous to bladed calcite rim cement and mosaic cement occluding interparticle pores.

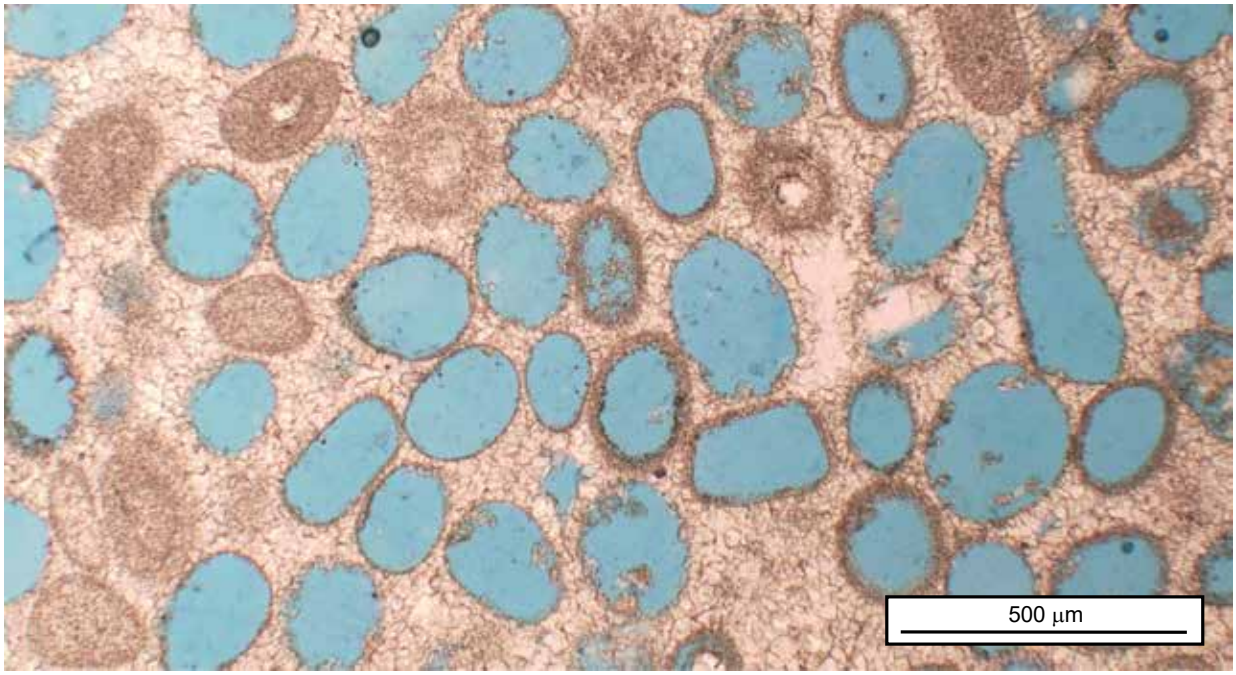
Midway Field
Permit #18344



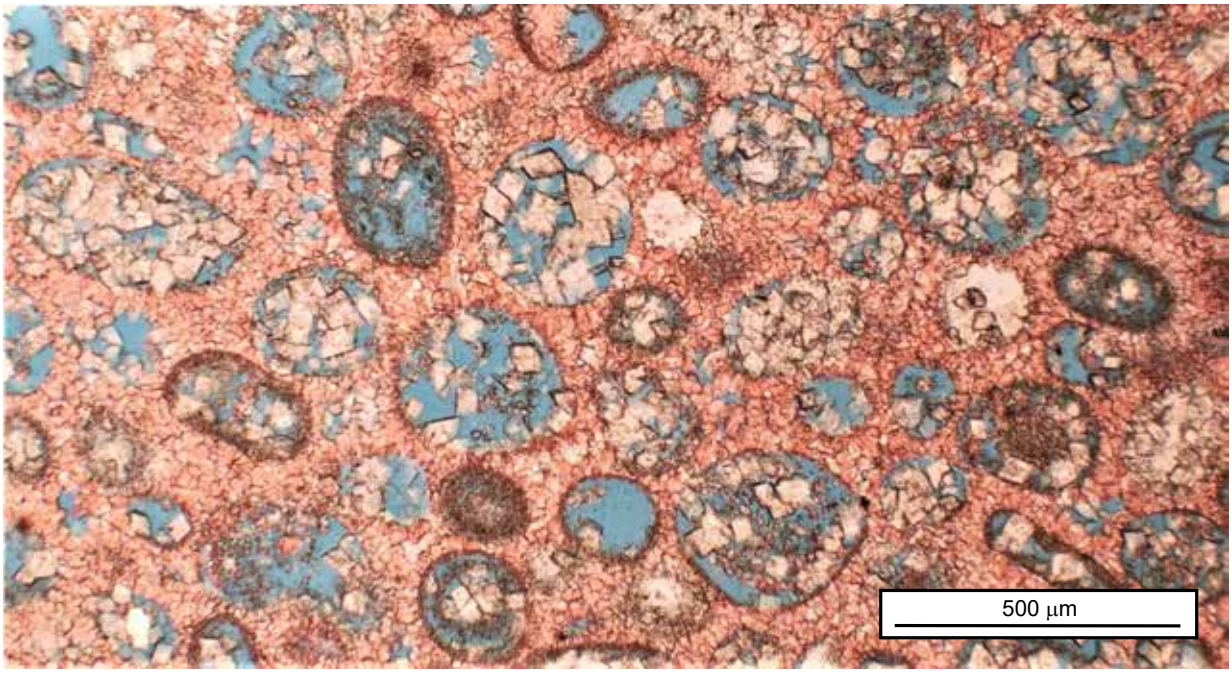
M.W.1: 6314.5', Dolomitized ooid grainstone.



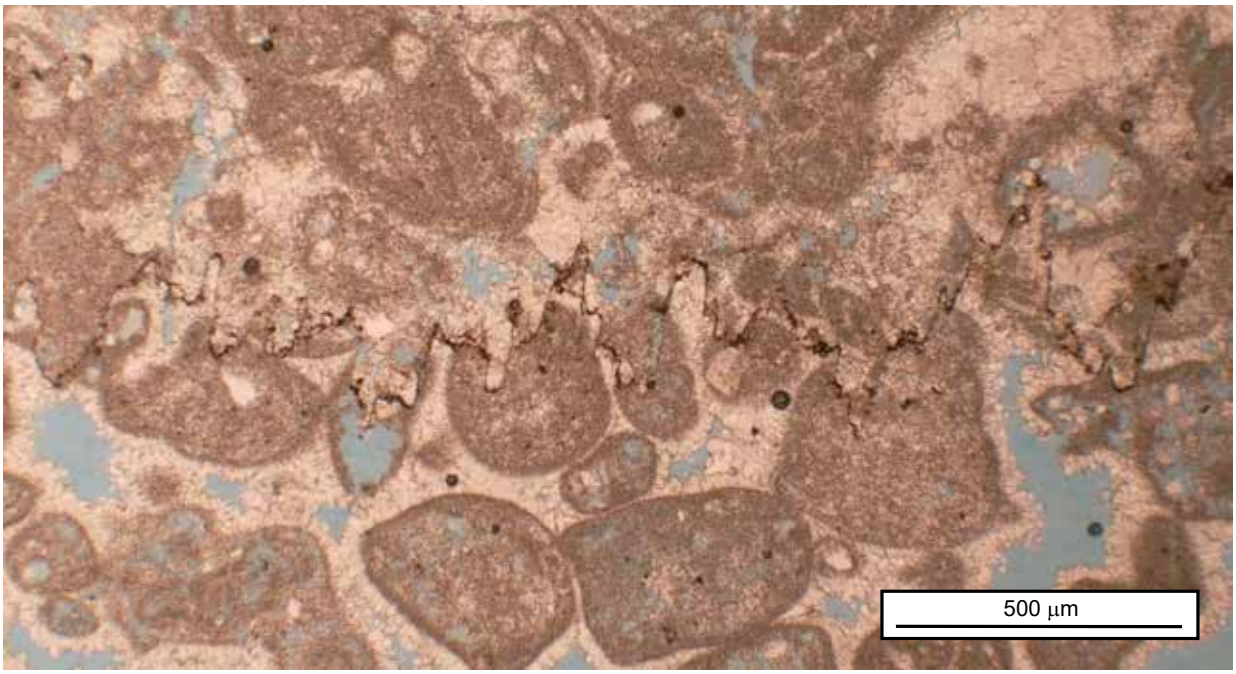
M.W.2: 6319.5', Partially and fully dissolved and recrystallized allochems exhibiting intraparticle and moldic porosity.



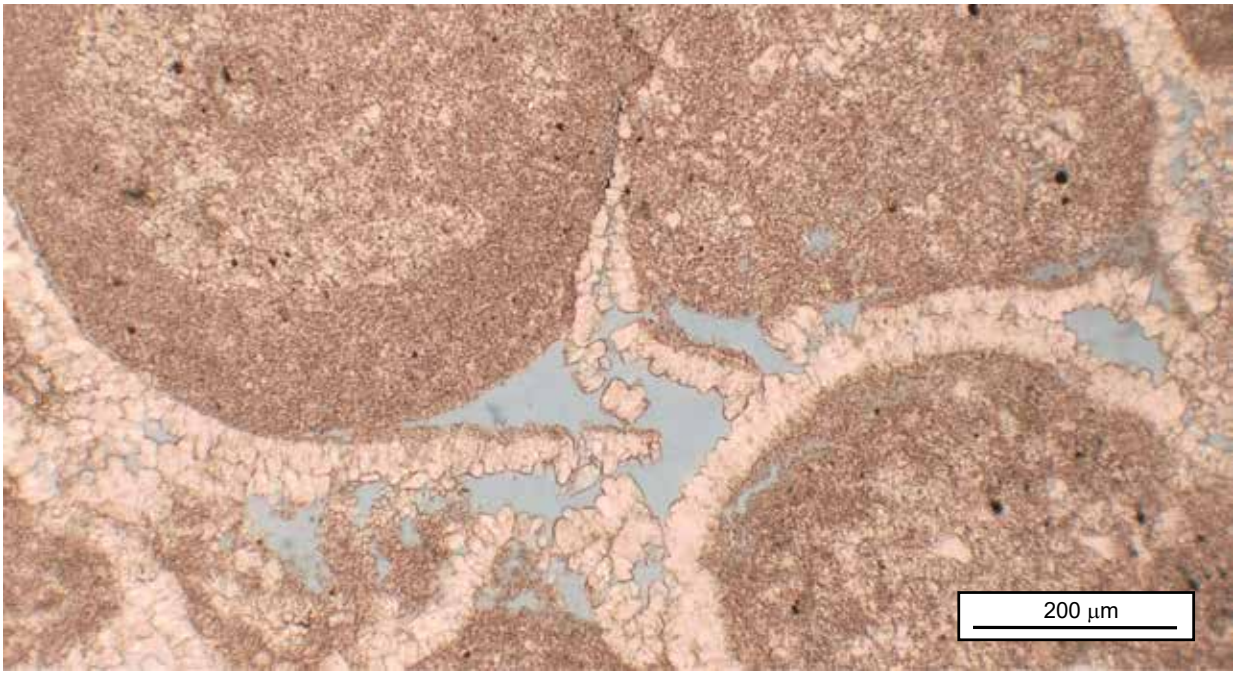
M.W.3: 6325', Moldic porosity from preferential dissolution of ooids.



M.W.4: 6329', Ooids dissolved and moldic pores filled with euhedral dolomite. Equant calcite mosaic cement in interparticle space.

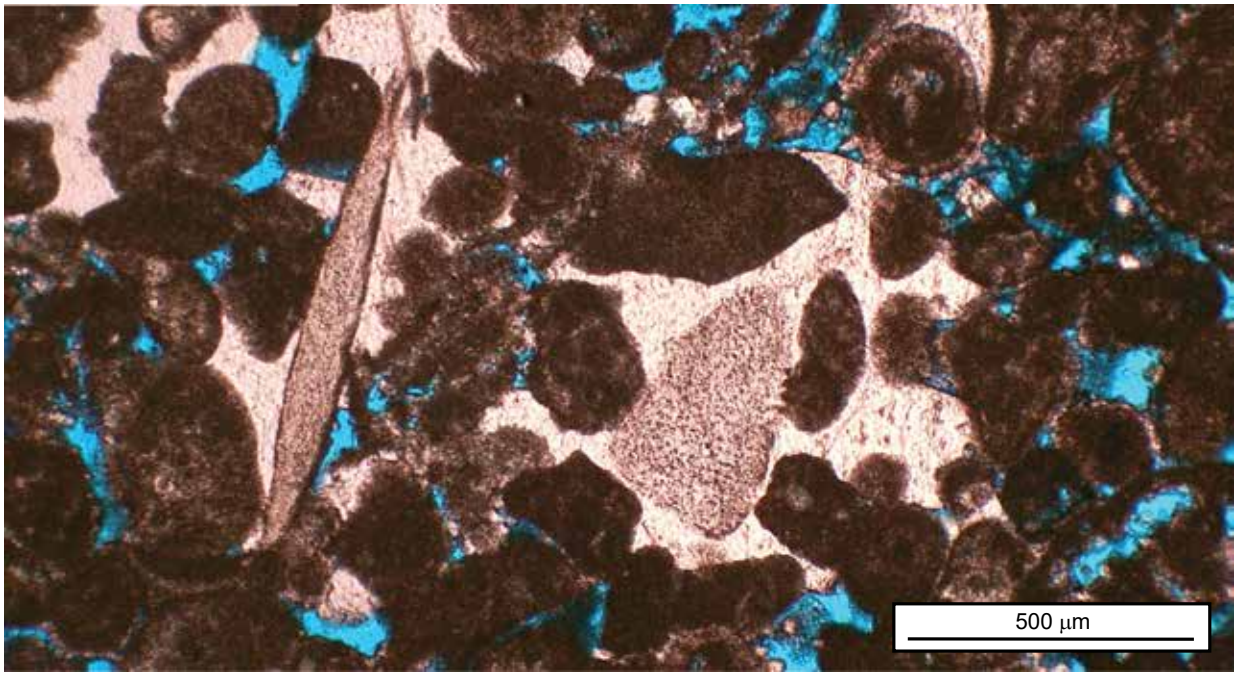


M.W.5: 6386', Stylolite cutting across allochems and cement.

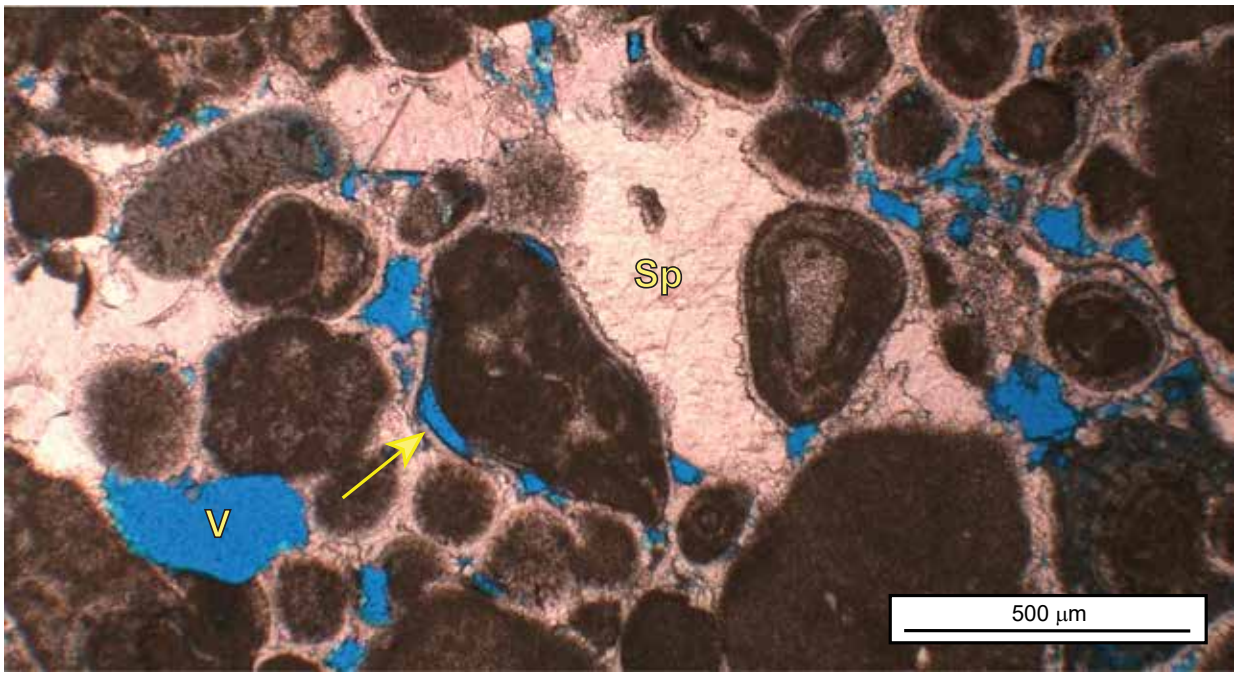


M.W.6: 6386', Recrystallized ooids with bladed calcite rims. Physical compaction evident in broken cement rims.

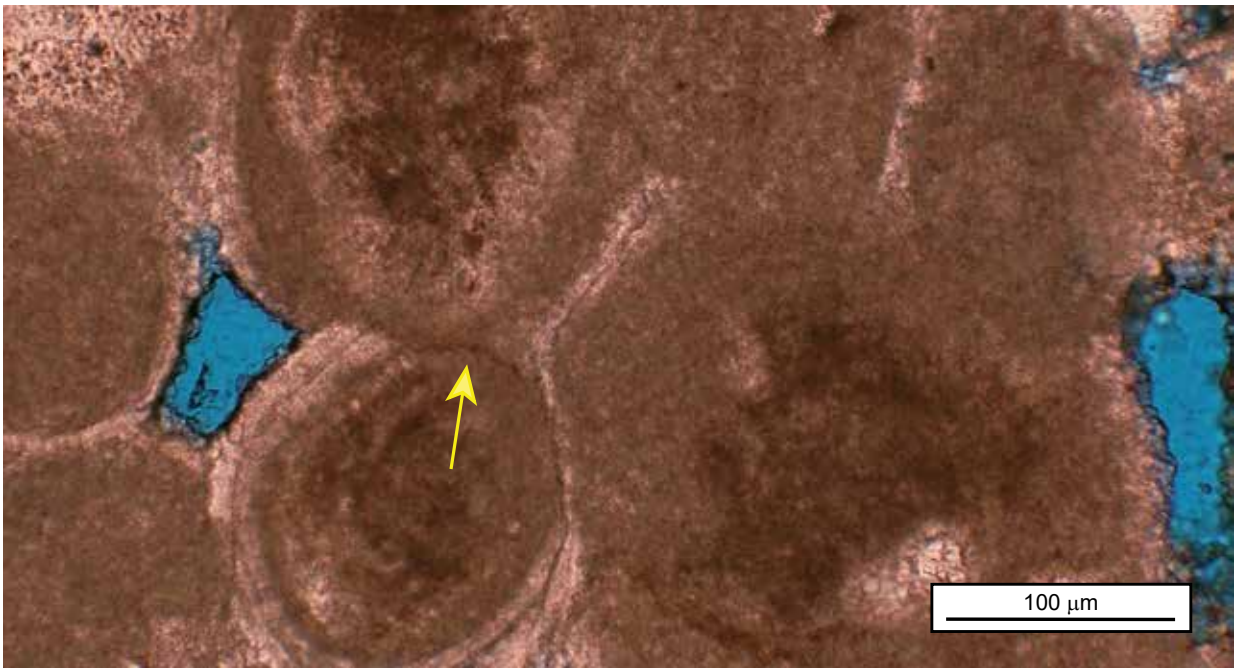
Mt. Vernon Field
Permit #24227



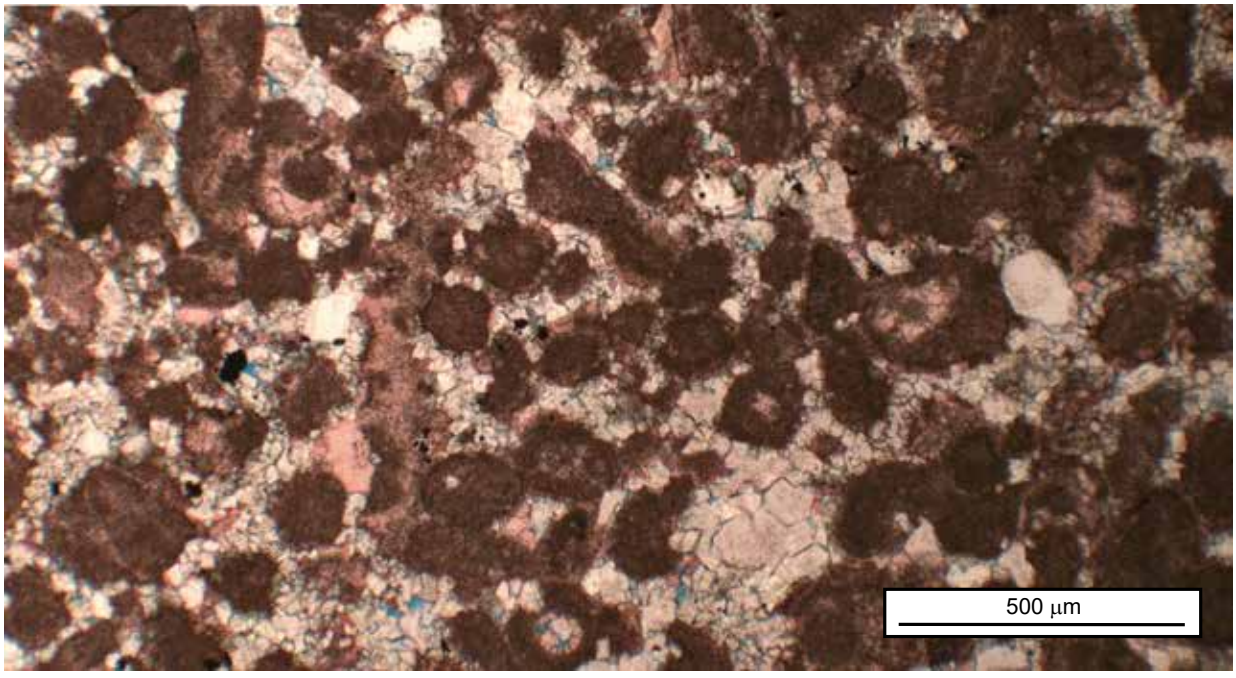
M.V.1: 7940', Minimal calcite cementation around allochems. Syntaxial cement surrounding echinoderm fragments.



M.V.2: 7946.5', Compacted equant cement rims on allochems (arrow). Coarse calcite spar cement (Sp). Vuggy porosity (V).

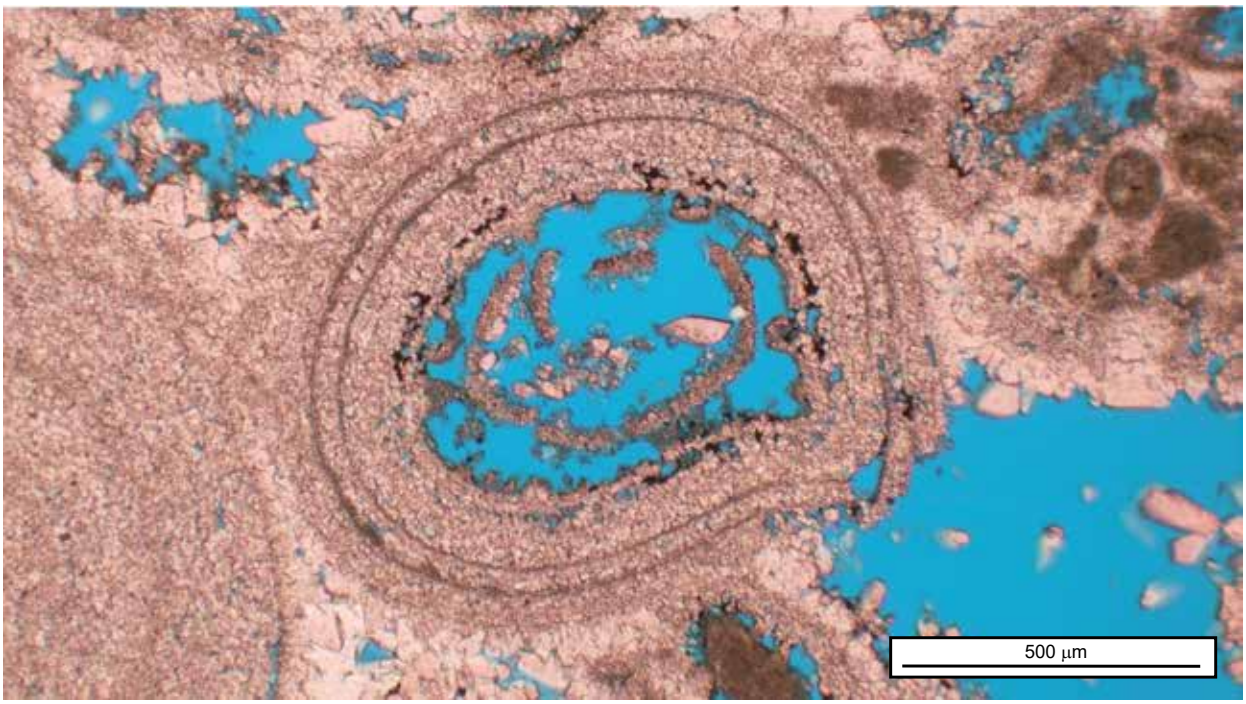


M.V.3: 7952', Pressure solution contacts between allochems (arrow).

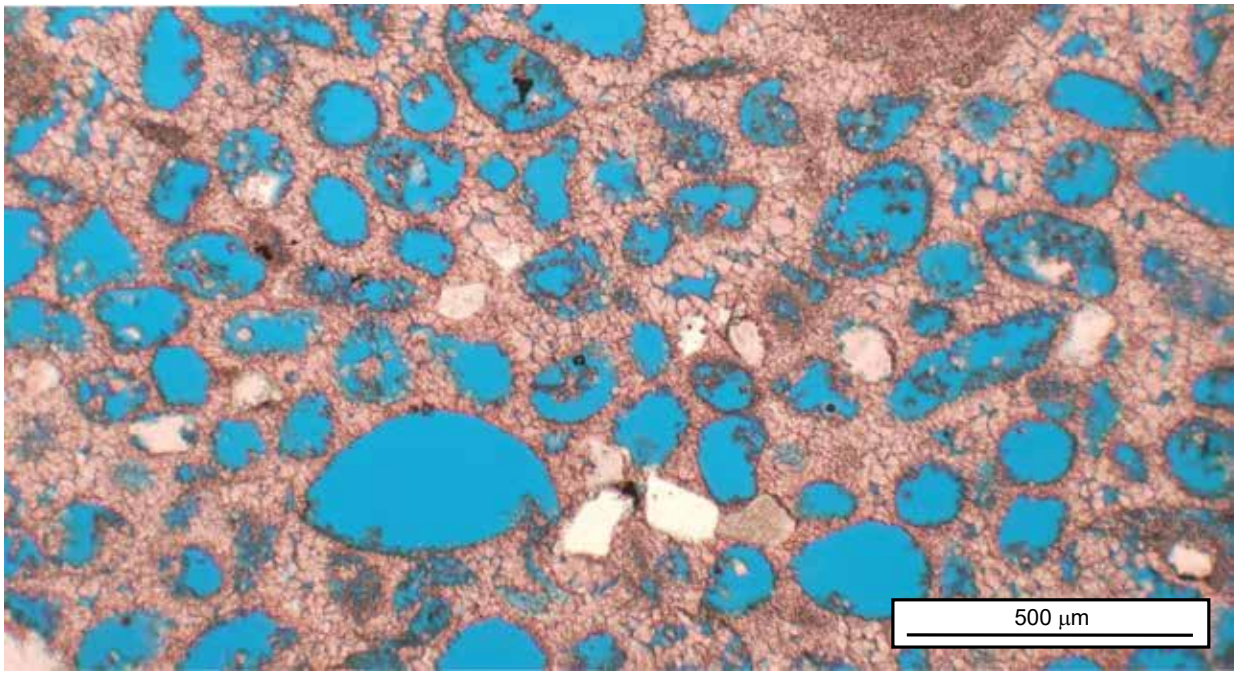


M.V.4: 7957', Abundant dolomite cement occluding pore space.

Paup Spur Field
Permit #24445

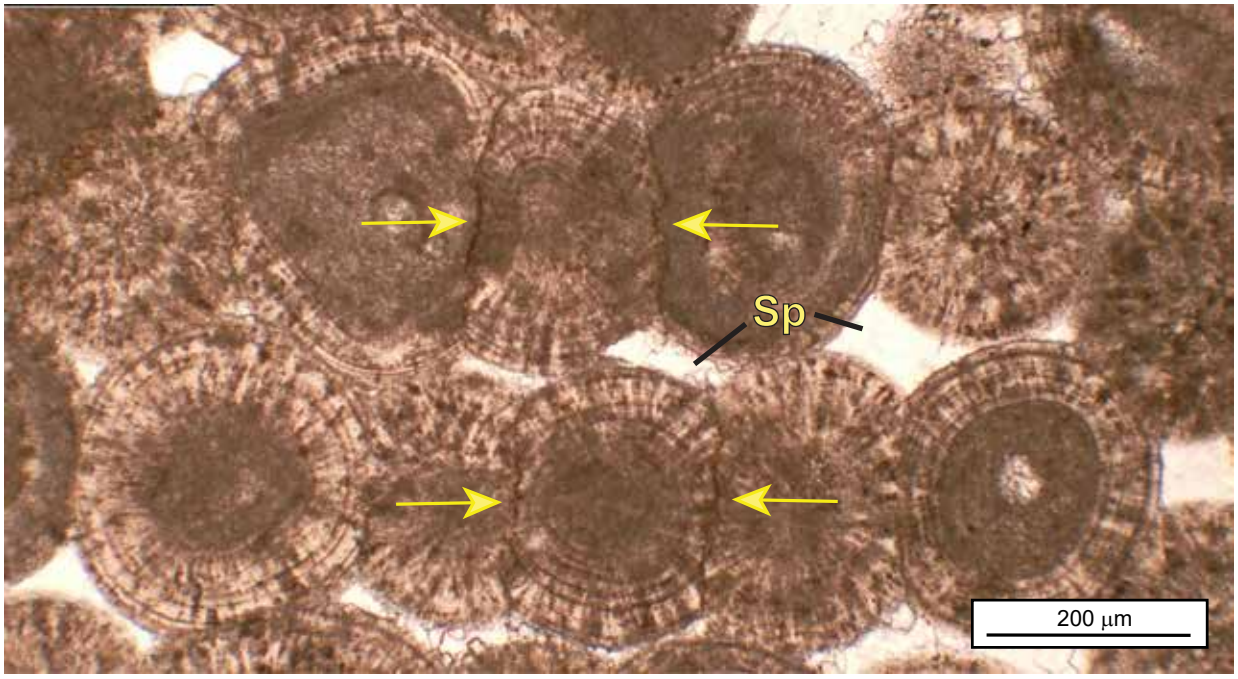


P.S.1: 6222', Recrystallized and partially dissolved ooid with minor physical compaction.

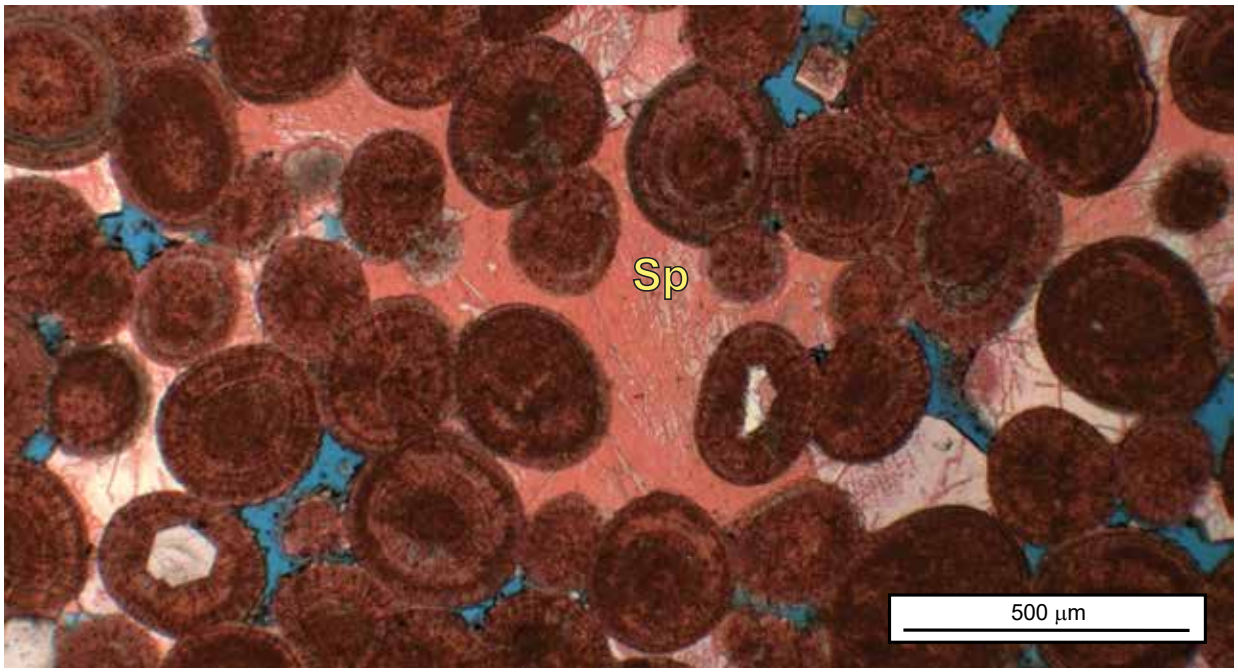


P.S.2: 6245', Moldic porosity from selective dissolution of allochems and fine equant calcite mosaic cement occluding primary interparticle pores.

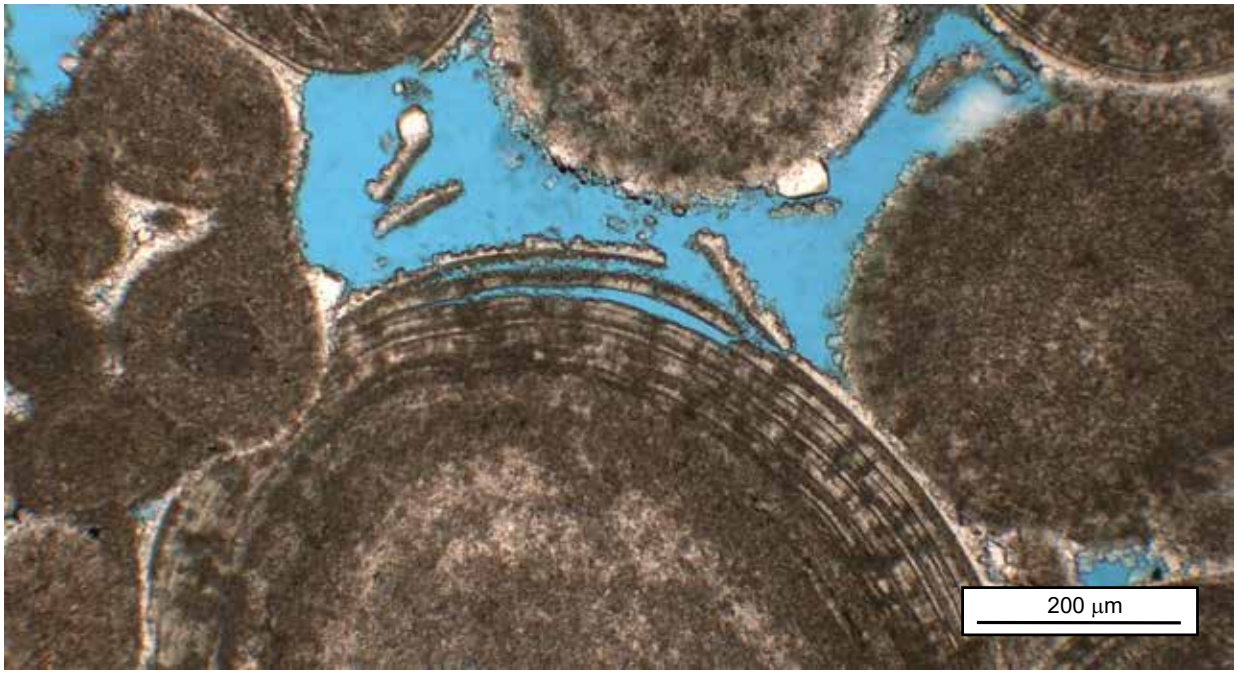
Walker Creek Field
Permit #21833



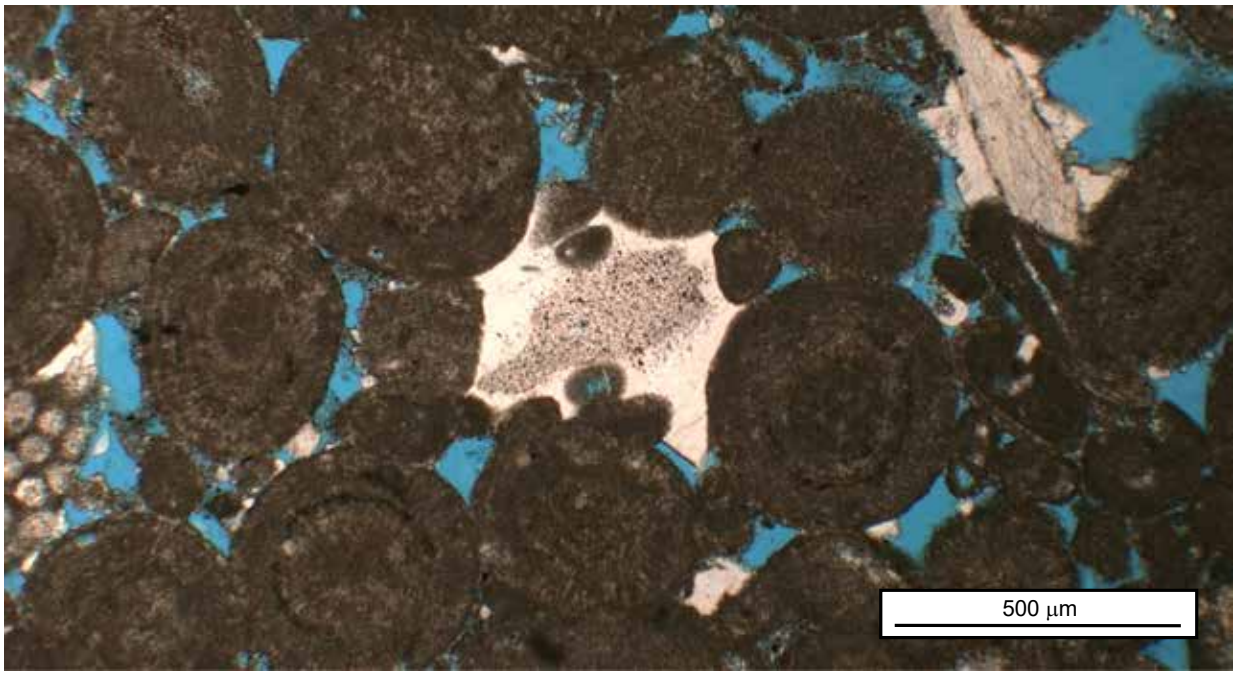
W.C.1: 10,744', Ooids with stylolitic/pressure solution contacts (arrows). Calcite spar cement (Sp).



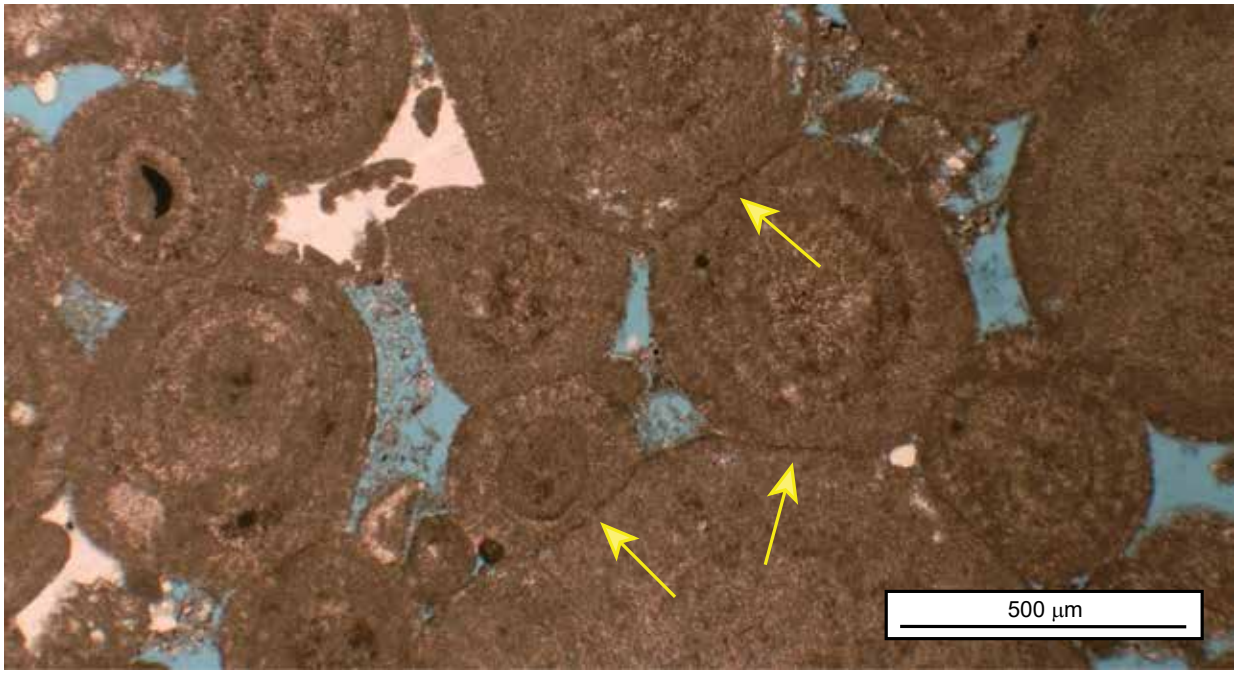
W.C.2: 10,754', Coarse calcite spar cement (Sp).



W.C.3: 10,772', Very fine equant rims broken off ooids.



W.C.4: 10,792', No observable rim cement. Syntaxial cement surrounding echinoderm fragment.



W.C.5: 10,792', Rim cement absent. Pressure solution contacts between ooids (arrows).