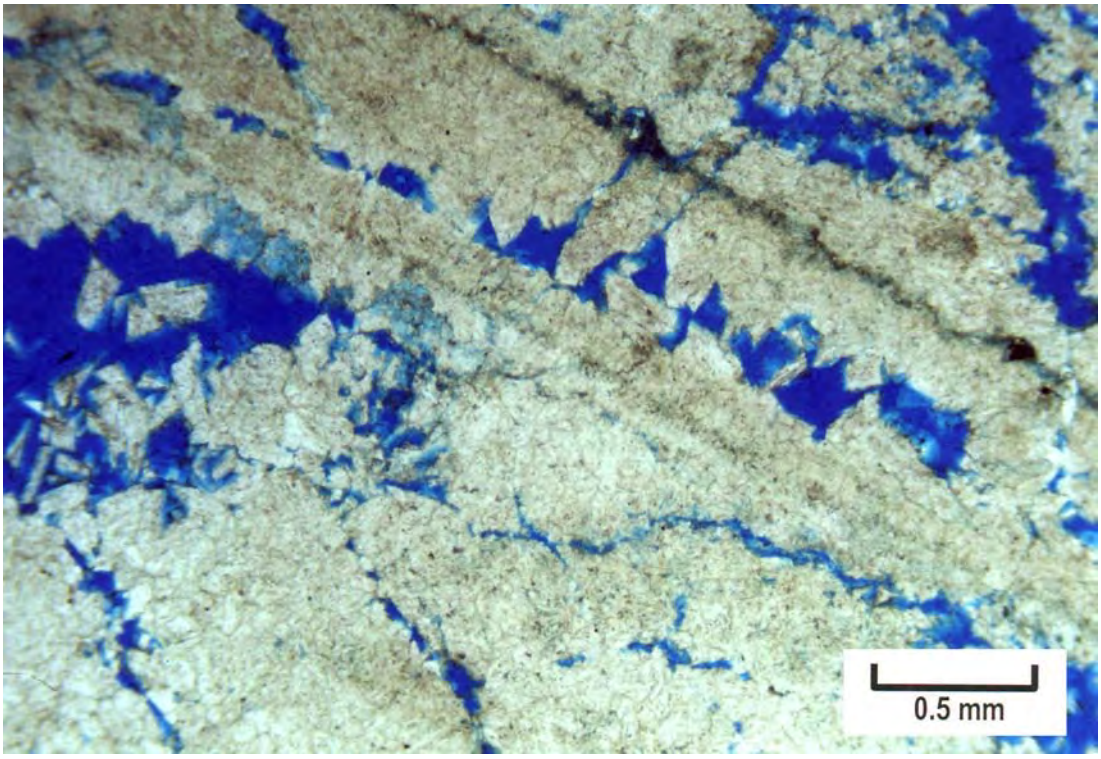
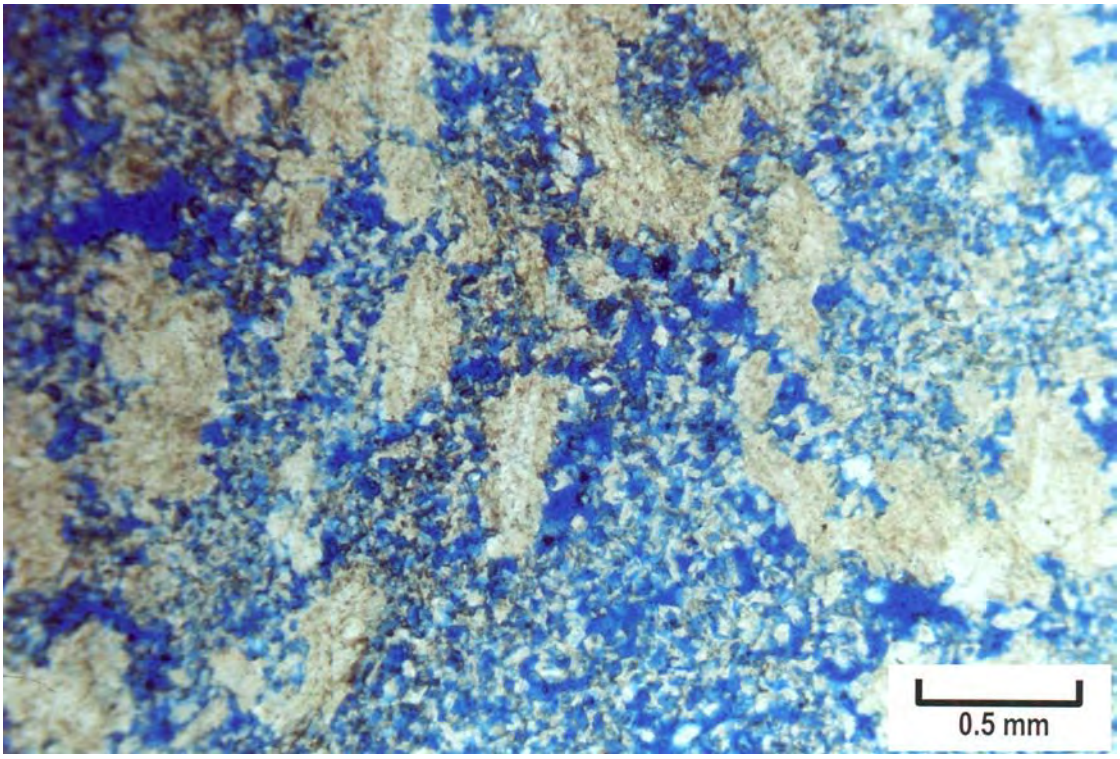
APPENDIX F:
THIN SECTION DESCRIPTIONS, BUG AND CHEROKEE FIELDS, SAN JUAN COUNTY, UTAH

MAY-BUG 2,
BUG FIELD

6,304.0 ft.

Plug:	⌀ - 10.9%, K – 99 md
Description:	dolomite; phylloid-algal bafflestone, in place phylloid algal plates, shelter pores with internal sediments, grading into cement (micrite rims that mark the outlines of a former phylloid plates), dogtooth spar on solution-enlarged fractures, micro-box-work/hollow dolomites present due to freshwater (forming as precipitates in freshwater or leached dolomite after formation in freshwater), poorly preserved leached botryoidal fans of early marine cement (aragonite); no anhydrite or bitumen.
Diagenetic events:	1) early marine cementation (botryoidal cement) 2) meteoric leaching of phylloid plates, 3) leaching to vugs, 4) early dolomitization (mixing zone or seepage reflux).
Pore Types:	SH, vug, BC, Mo, FR

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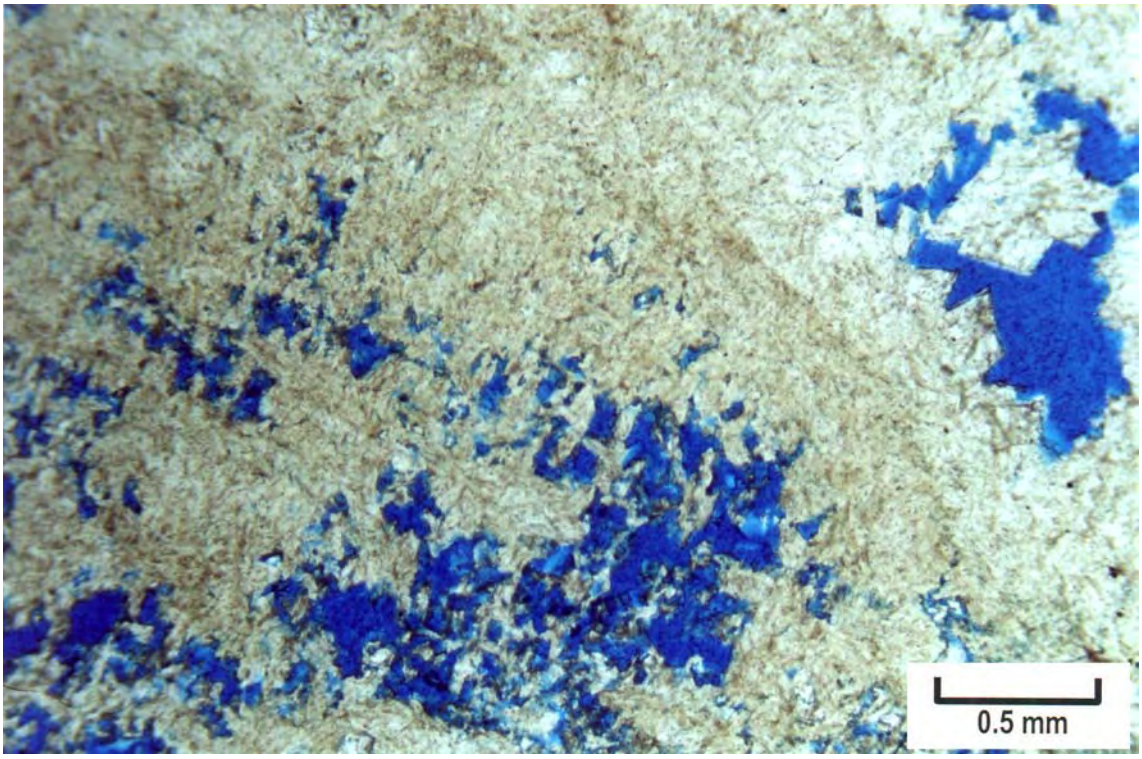
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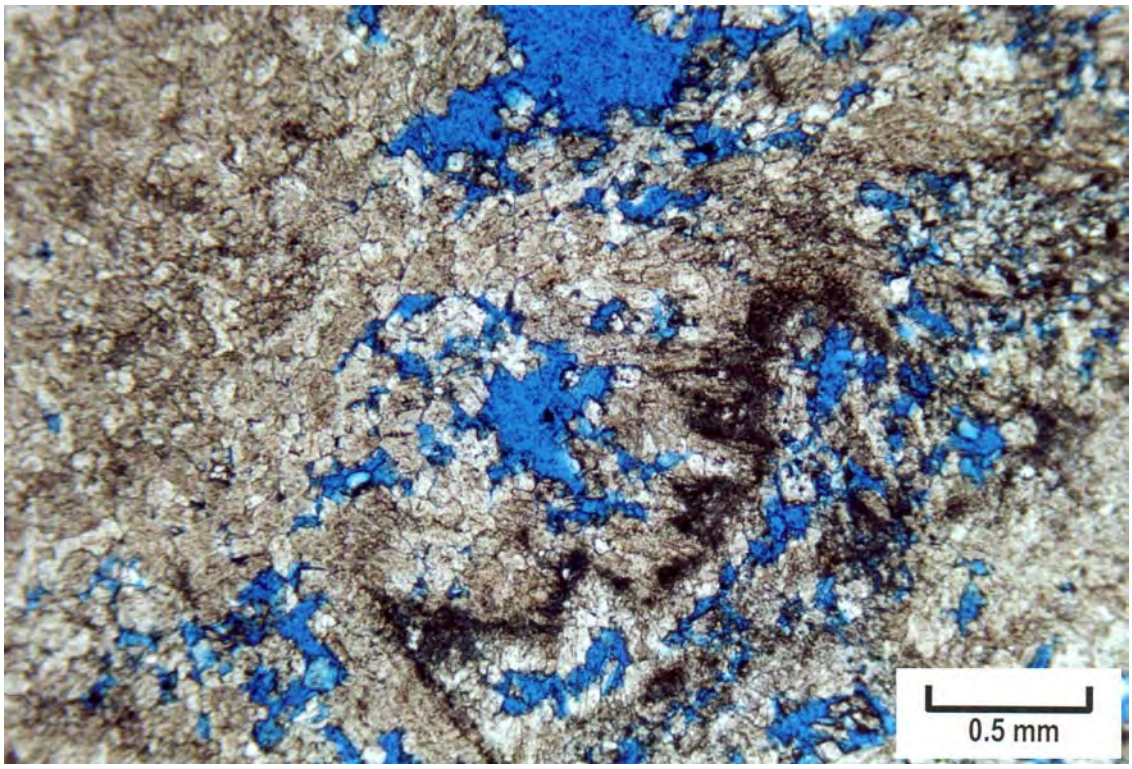
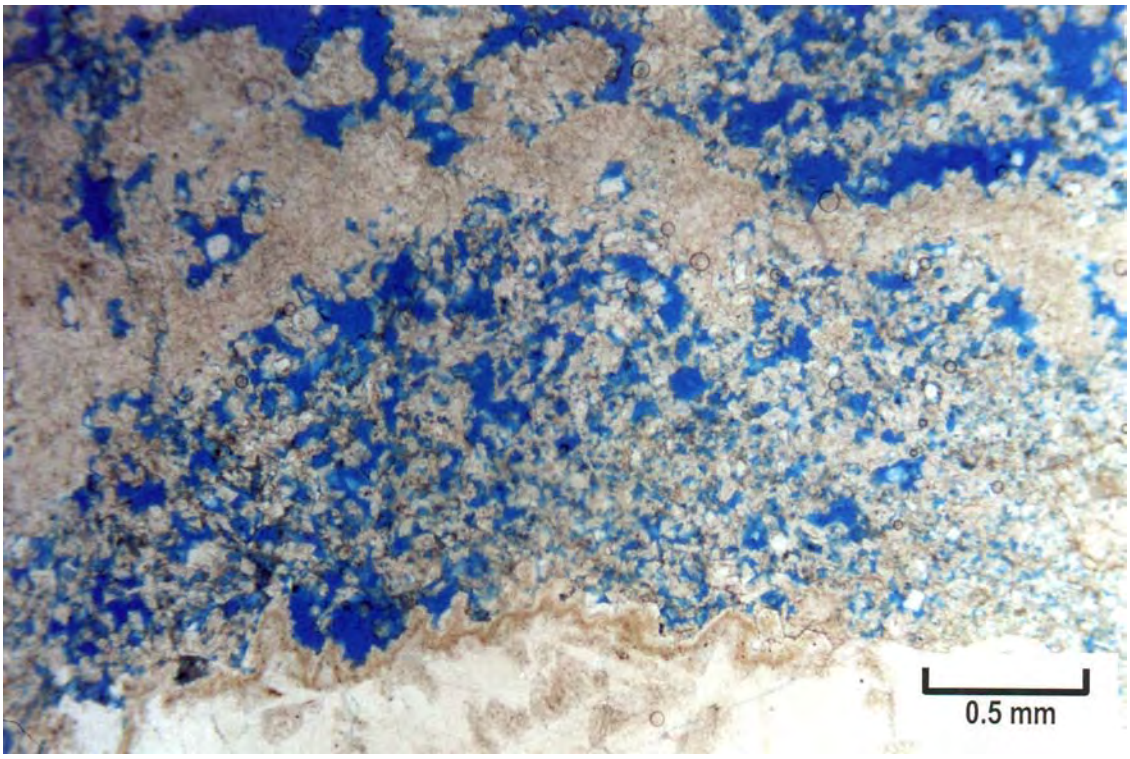
6,306.0 ft.

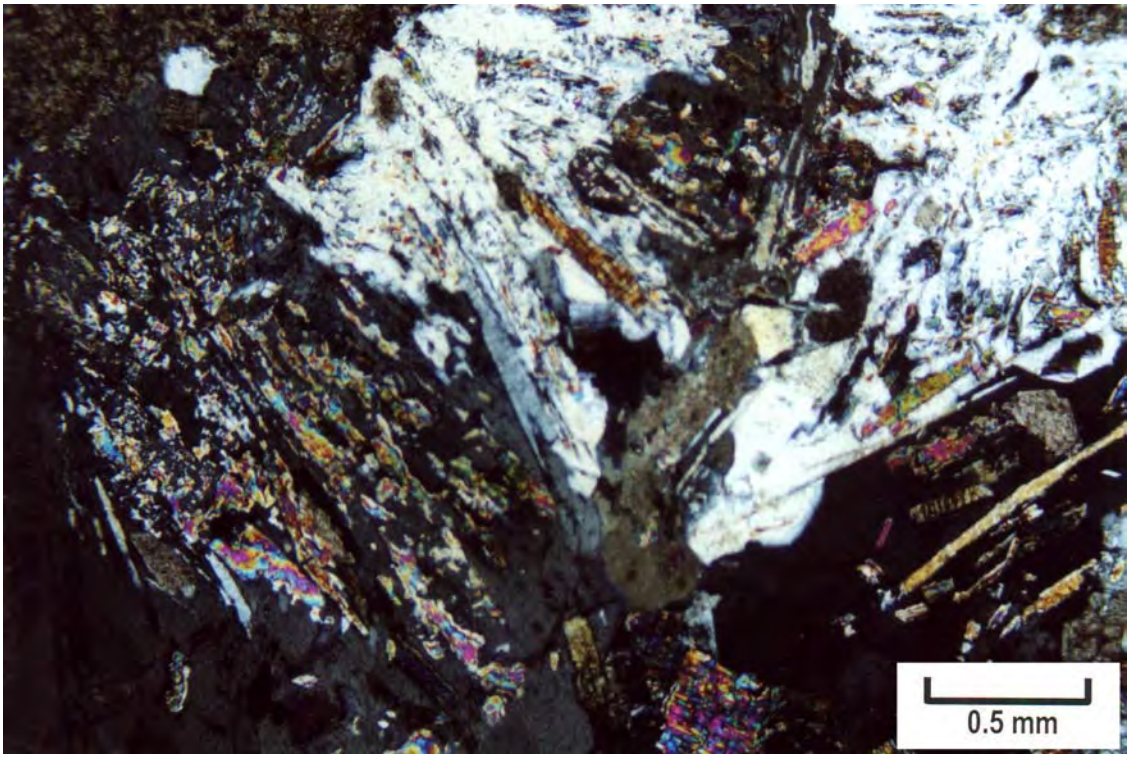
Plug:	⌀ - 10.6%, K – 60 md
Description:	dolomite; phylloid-algal bafflestone, blunt-ended botryoidal fans, outlined with sediment, of early marine cement (aragonite) partially leached; post-dolomitization extensive leaching (meteoric dissolution) resulting in channel pores and linear solution-enlarged fractures.
Diagenetic events:	1) early marine cementation (botryoidal cement) 2) meteoric leaching of phylloid plates, 3) leaching to vugs, 4) early dolomitization (mixing zone or seepage reflux).
Pore Types:	SH, vug, BC, Mo, FR



6,312.0 ft.

Plug:	⌀ - 14.9%, K – 30 md
Description:	dolomite; phylloid-algal bafflestone, compaction breakage of phylloid algal plates, some shelter pores with internal sediments; meteoric leaching; solution-enlarged fractures, bedding planes, and micro-caves; micro-box-work/hollow dolomites; late anhydrite going to cement (chert).
Diagenetic events:	1) early marine cementation (botryoidal cement) 2) meteoric leaching of phylloid plates, 3) leaching to vugs, 4) early dolomitization (mixing zone or seepage reflux), 5) anhydrite replacement, and 6) silicification.
Pore Types:	SH, vug, BC, Mo, FR

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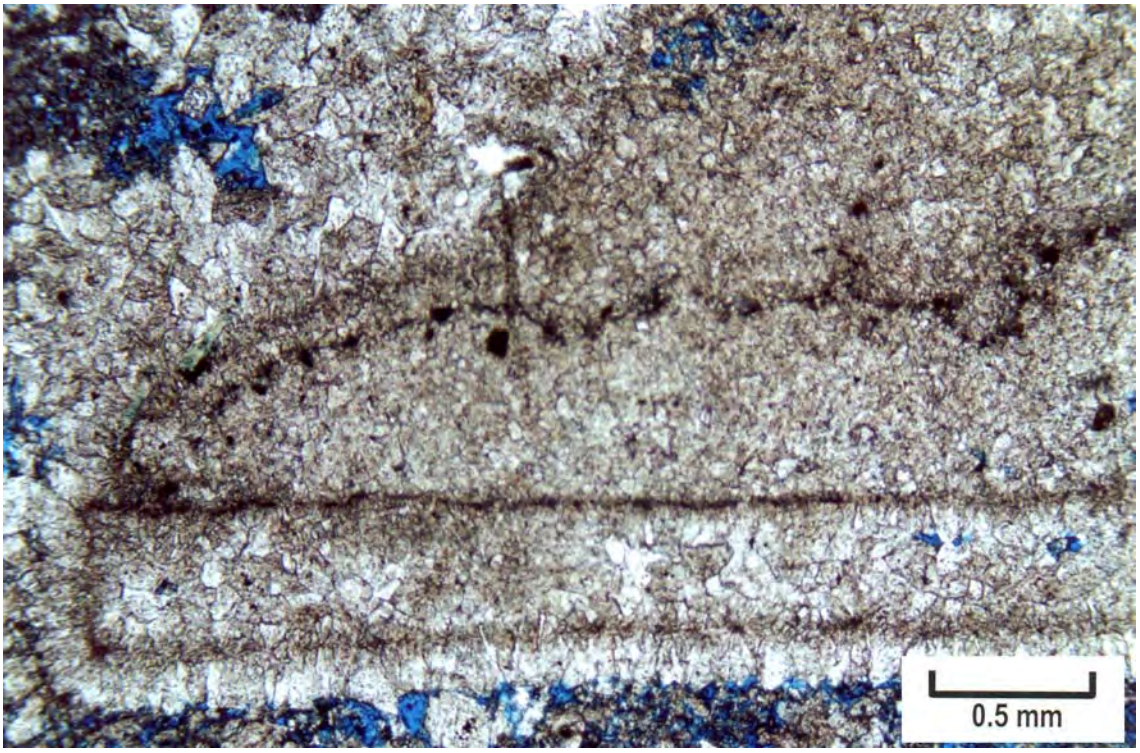
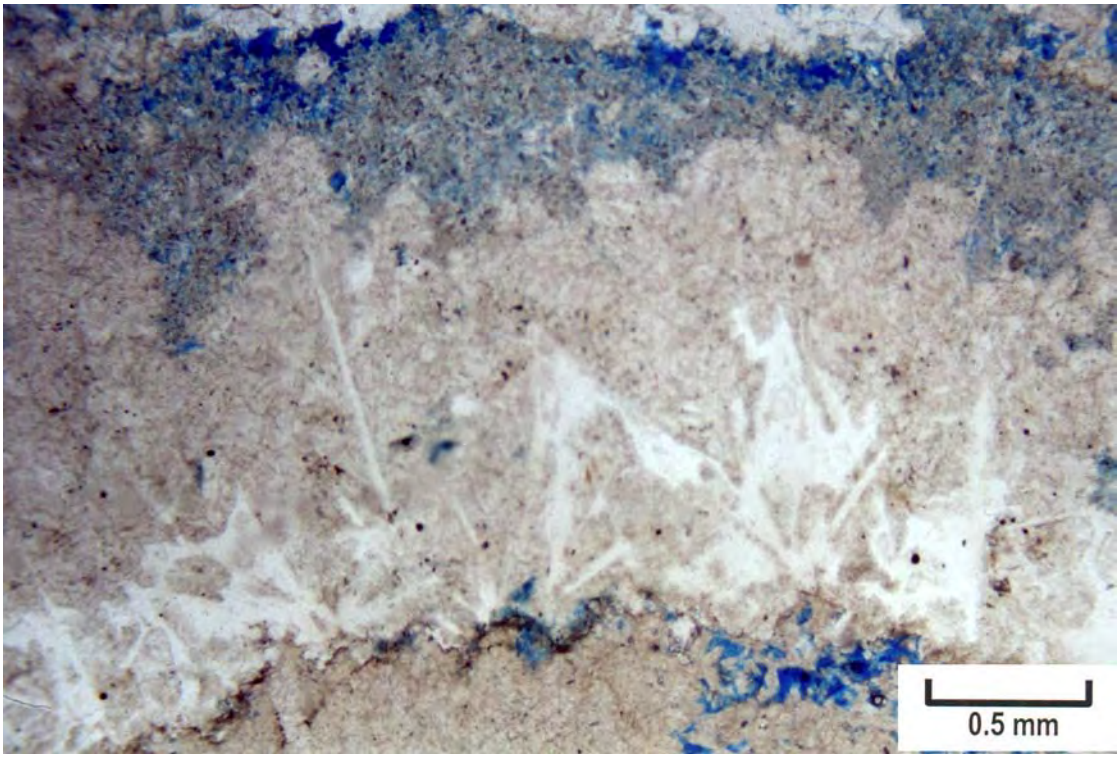
6,313.5 ft.

Plug:	⌀ - 13.4%, K – 20 md
Description:	dolomite; phylloid-algal bafflestone (still in mound); early depositional layer, skeletal, crystal growth of anhydrite as an early cement – bottom growth of gypsum now anhydrite plus late anhydrite pore filling.
Diagenetic events:	1) dolomitization, 2) meteoric leaching of phylloid plates to form vugs, 3) early anhydritic cement, and 4) late anhydrite cement.
Pore Types:	SH, vug, BC, Mo

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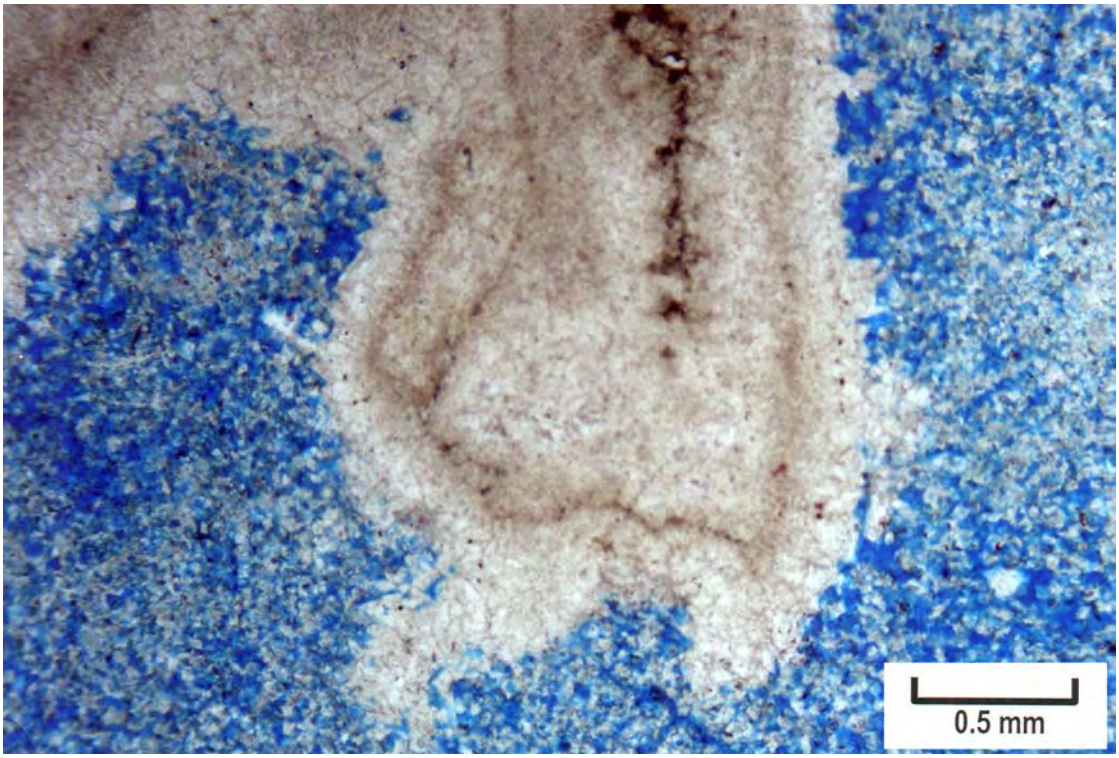
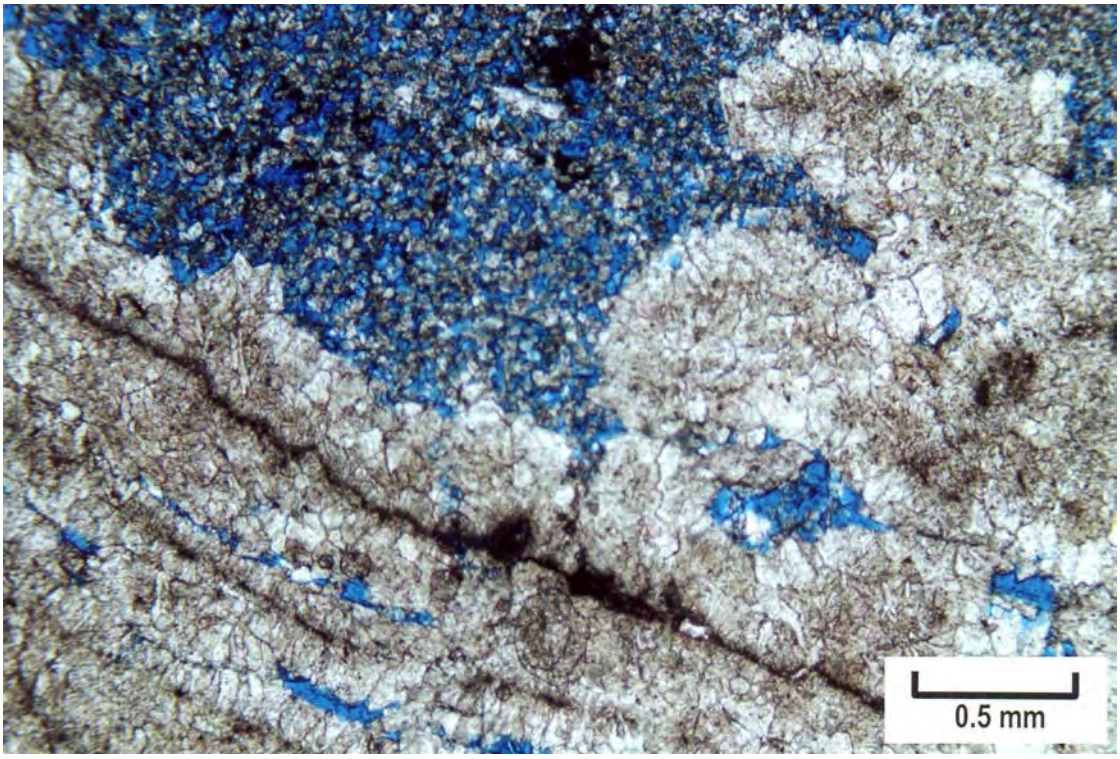
6,315 ft.

Plug:	⌀ - 10.3%, K – 5.7 md
Description:	dolomite; phylloid-algal bafflestone; vuggy from solution-enlarged of pores, dissolution/leaching (post dolomitization); remnant cement on phylloid algal plates; micro-box-work/hollow dolomites; sharp transition between dolomitization to micro-box-work, some late anhydrite and bitumen. EF shows a few patches of tight dolomite with oil and some pores with oil bleeding into them from adjacent tight dolomite; oil accumulates up against anhydrite.
Diagenetic events:	1) dolomitization, 2) meteoric leaching of phylloid plates to form vugs, 3) formation of box-work/hollow dolomite, 4) anhydrite replacement, and 5) bitumen.
Pore Types:	SH, vug, BC, Mo, FR

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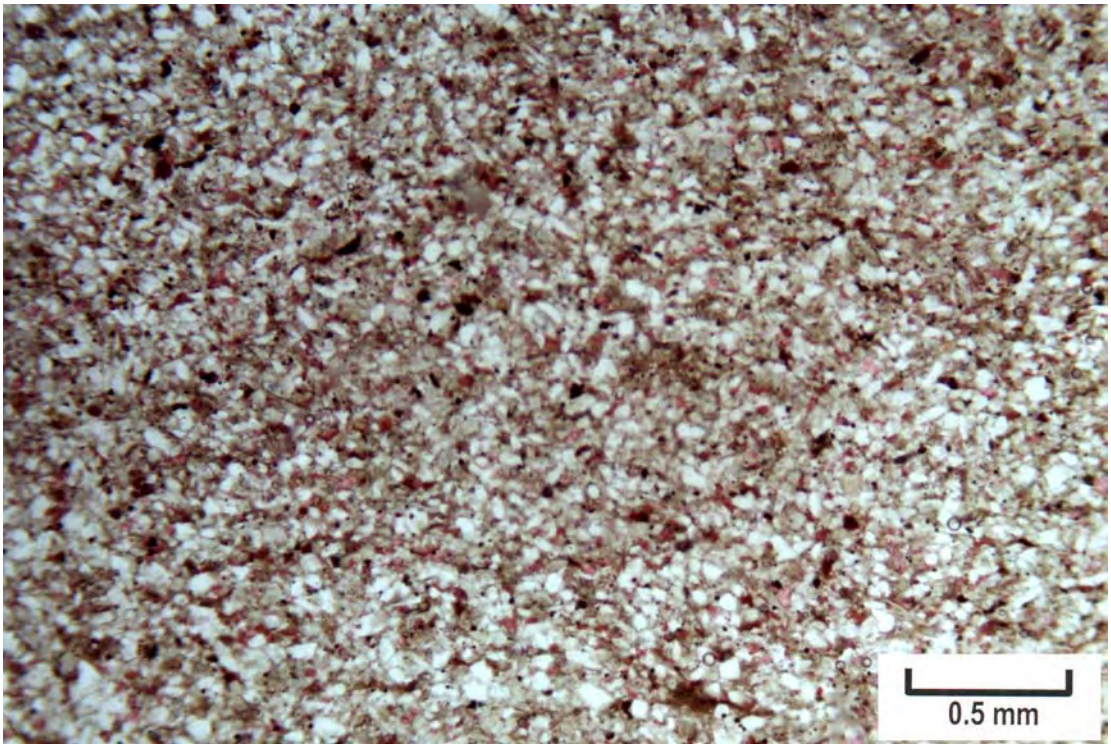
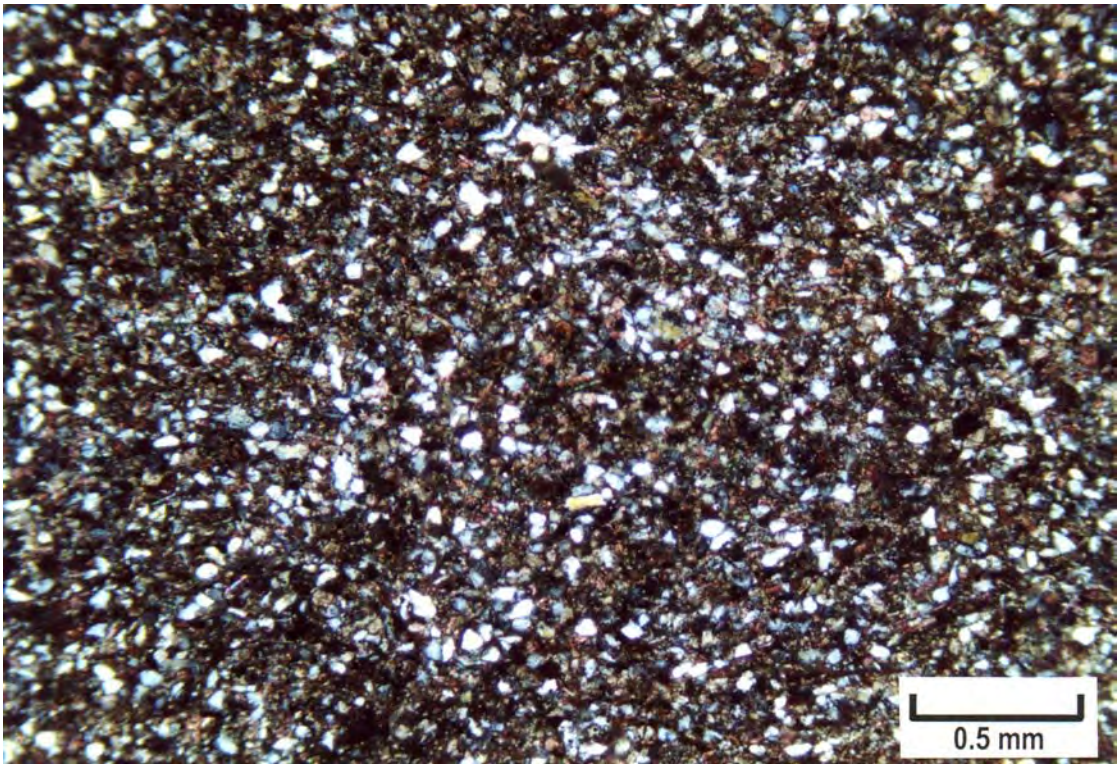
BUG 3,
BUG FIELD

6,355.7 ft.

Plug:	⌀ - No data (ND), K - ND
Description:	siltstone (no dolomite); quartz silt, mica (muscovite) chert, some grains of calcite silt; and some anhydrite replacement.
Diagenetic events:	anhydrite replacement
Pore Types:	none

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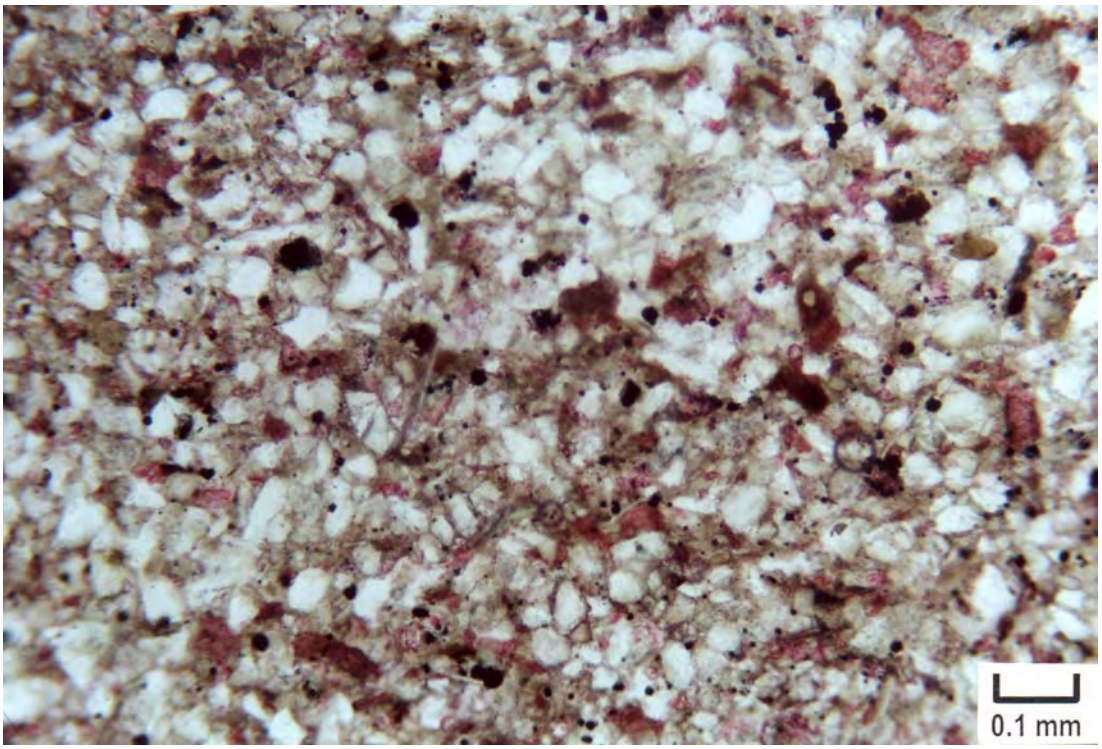
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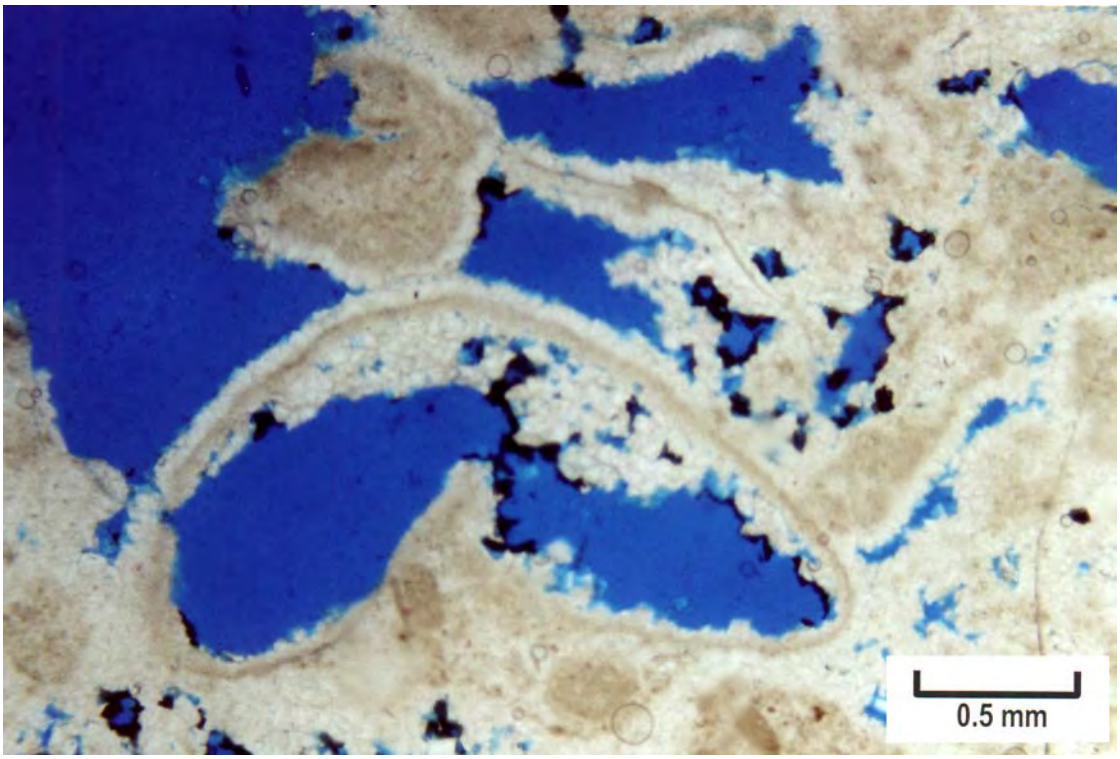
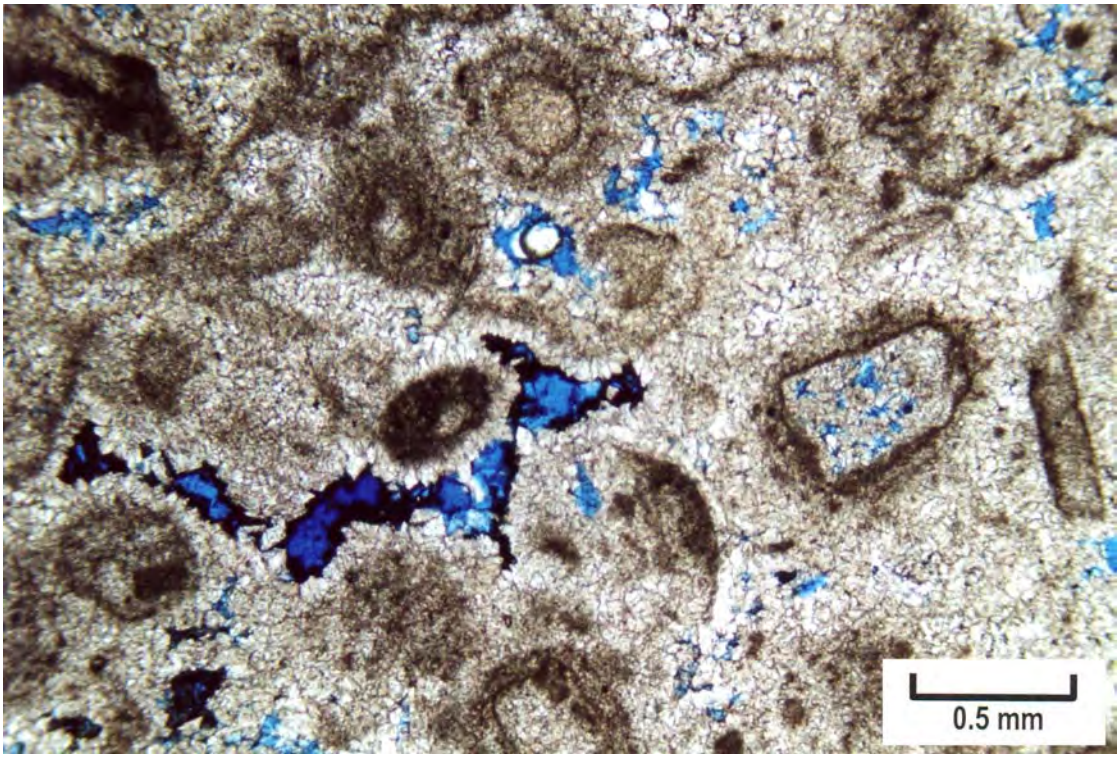
BUG 4,
BUG FIELD

6,284.2 ft.

Plug:	⌀ - 6.9%, K – 2.5 md
Description:	skeletal peloidal dolomite; grainstone to packstone; bladed fresh water cement; dissolution; bitumen-lined pores filled with anhydrite.
Diagenetic events:	1) meteoric leaching of leaching to vugs, interparticle porosity, and intraparticle porosity, 2) freshwater cementation, 3) early dolomitization (mixing zone or seepage reflux), 4) bitumen, and 5) anhydrite plugging (?).
Pore Types:	WP, BP, vug

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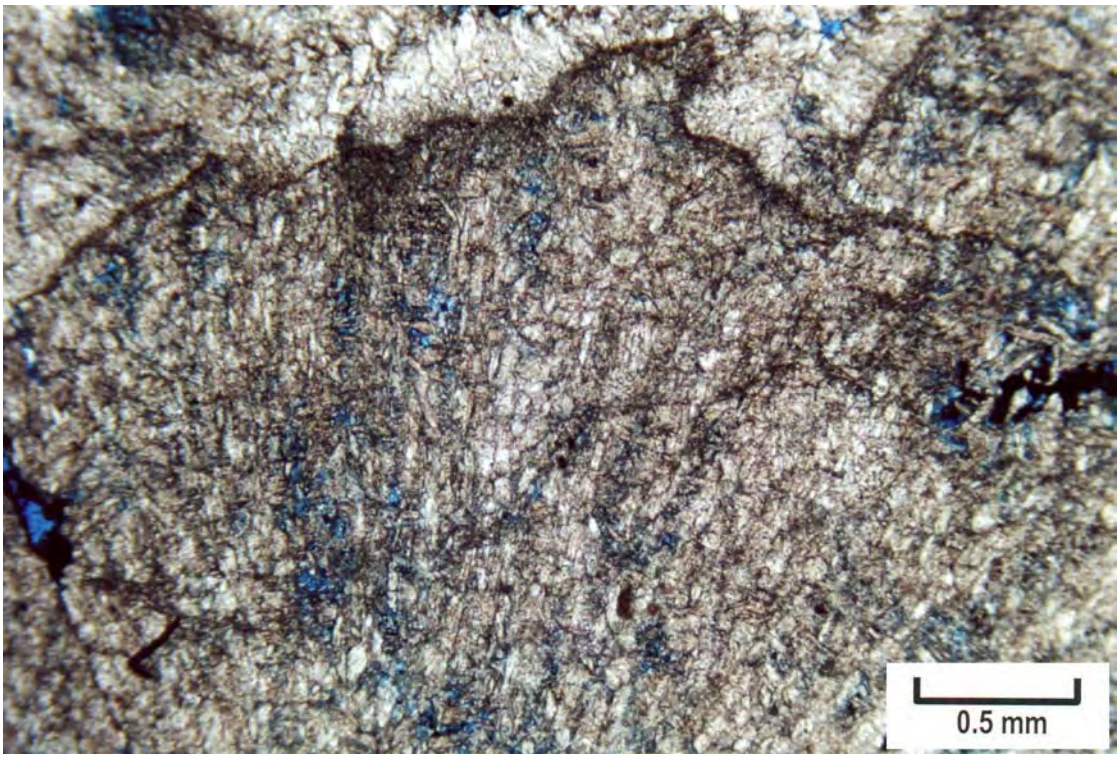
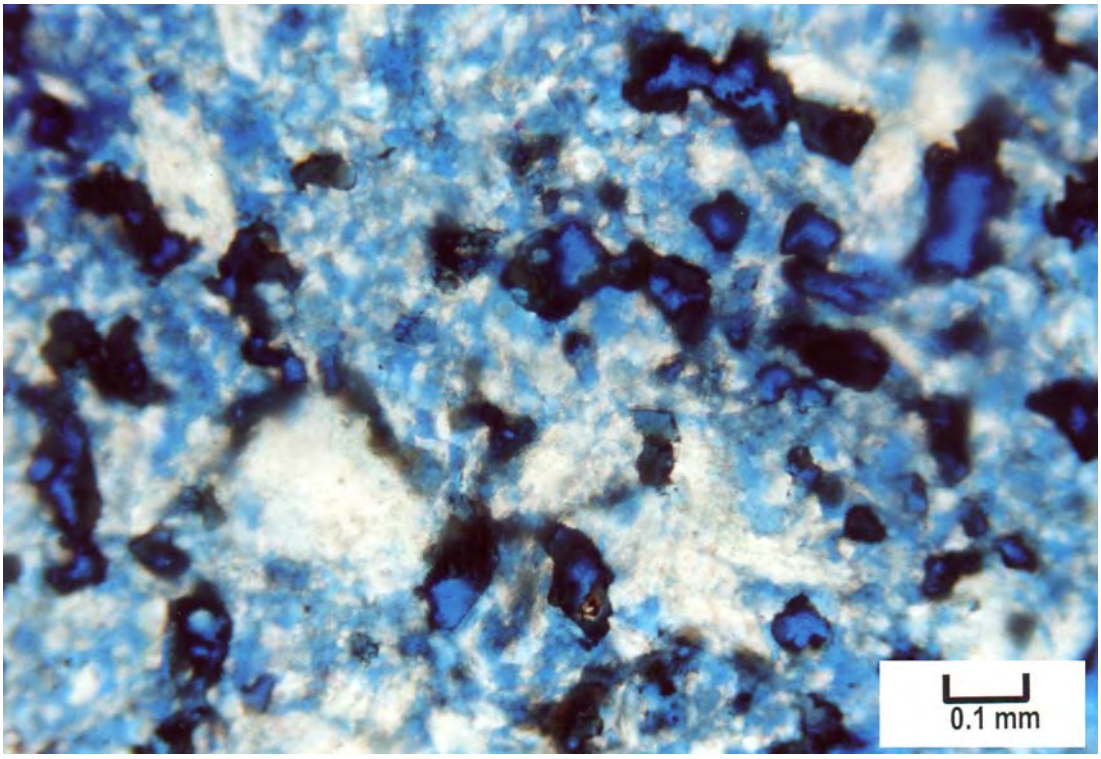
6,289.7 ft.

Plug:	⌀ - 14.5%, K – 92 md
Description:	dolomite; phylloid-algal bafflestone; phylloid algal plates with shelter pores; bladed botryoidal early marine cement; dogtooth calcite spar on shelter pores; leaching/dissolution to micro-box-work/hollow dolomites; bitumen.
Diagenetic events:	1) early marine cementation (botryoidal cement) 2) freshwater cements, 3) meteoric leaching of phylloid plates and leaching to form vugs and micro-box-work dolomite, 4) early dolomitization (mixing zone or seepage reflux), and 5) bitumen.
Pore Types:	SH, vug, BC

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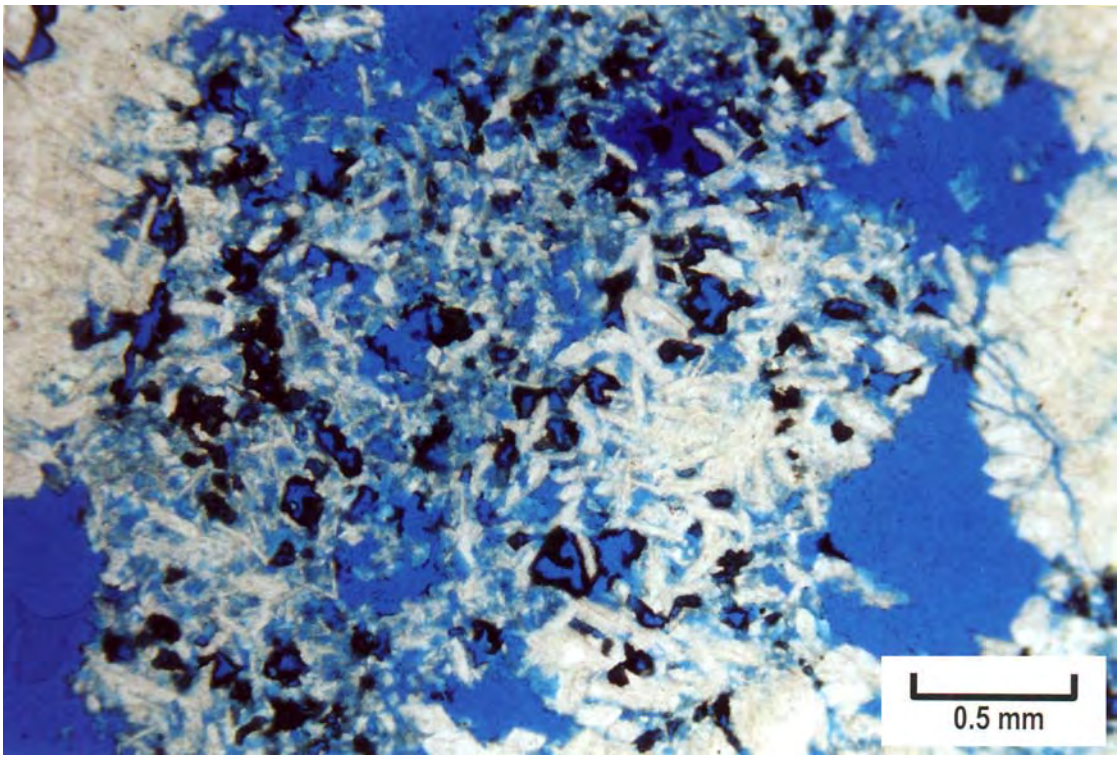
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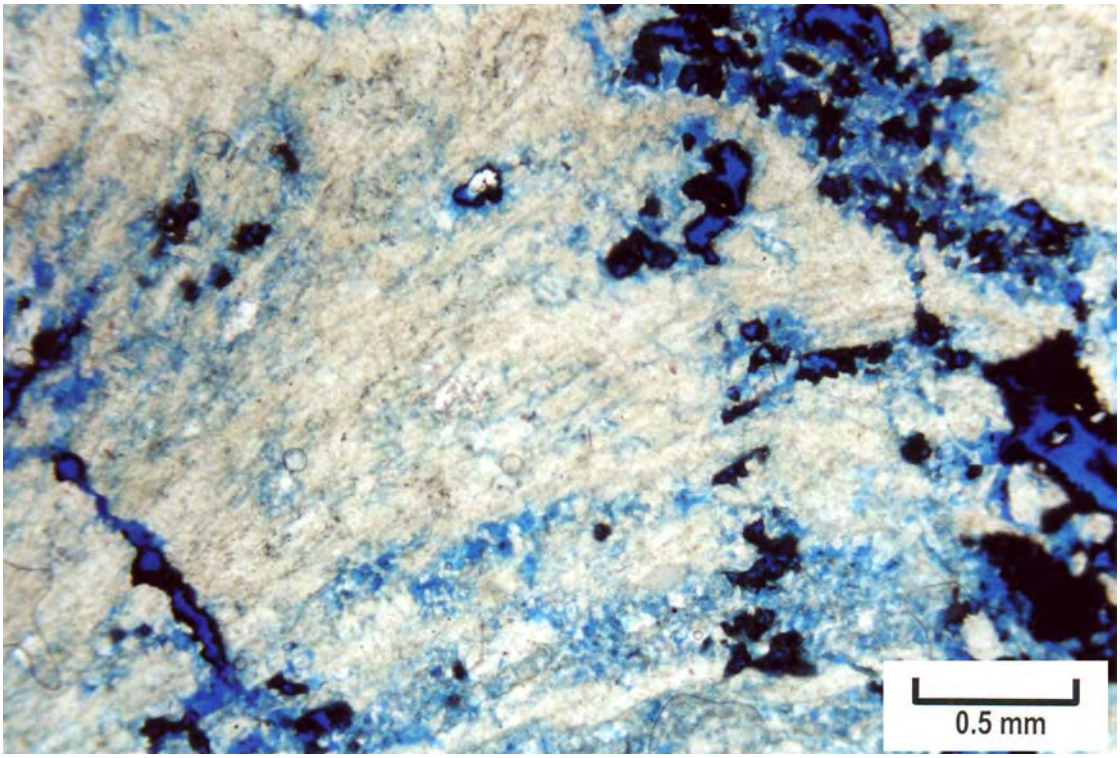
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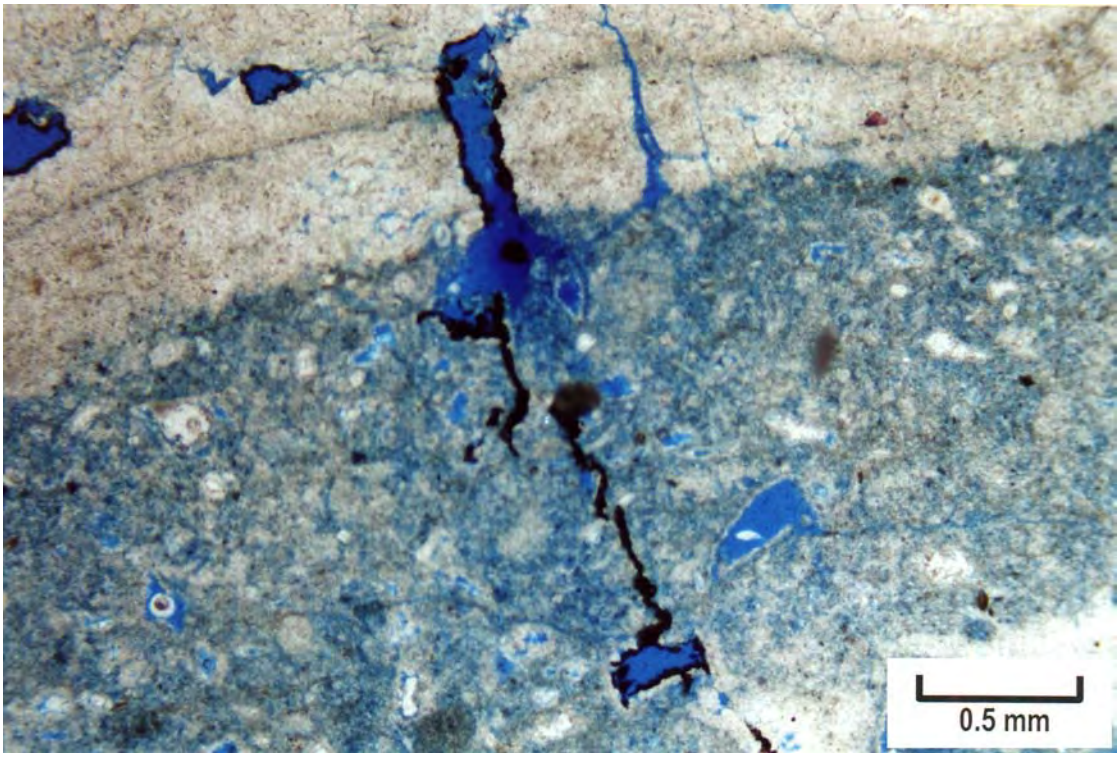
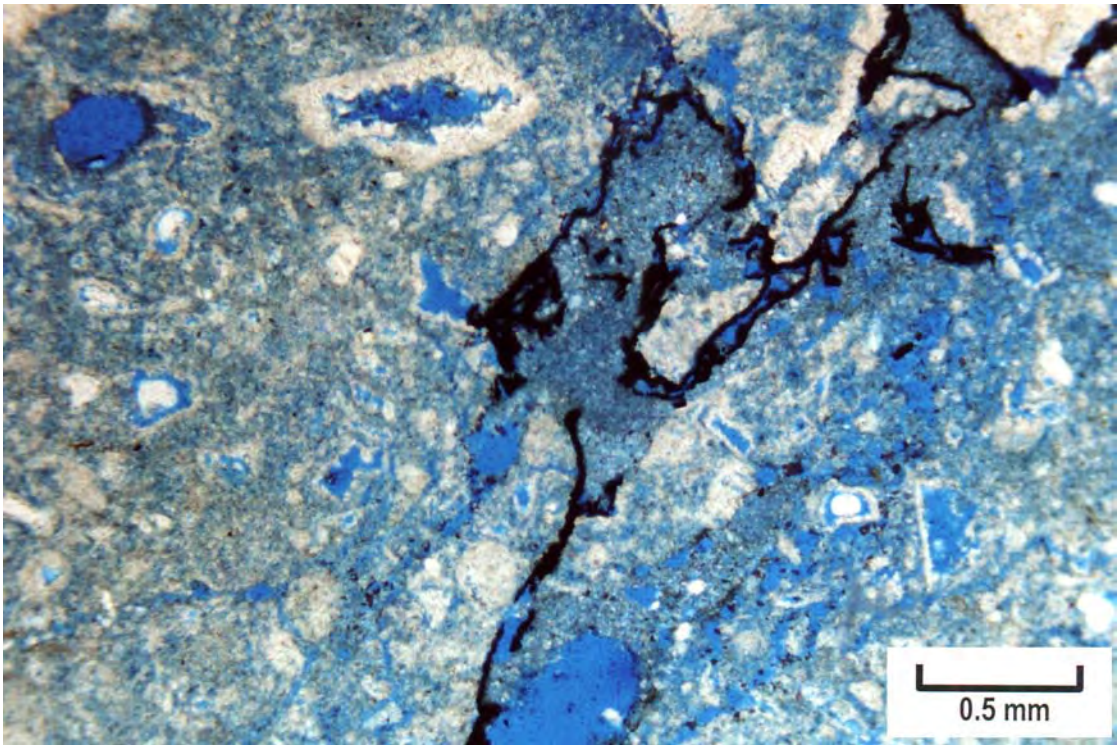
6,294.3 ft.

Plug:	⌀ - 13.5%, K – 87 md
Description:	dolomite; phylloid-algal bafflestone; internal sediment; solution-enlarged pores; leaching/dissolution to molds and micro-box-work/hollow dolomites; late hydrothermal caused (?) microporosity; some bitumen.
Diagenetic events:	1) meteoric leaching of phylloid plates and leaching to form vugs and micro-box-work dolomite, 2) early dolomitization (mixing zone or seepage reflux), 3) late dissolution/microporosity development, and 4) bitumen.
Pore Types:	BC, Mo, micro-BC

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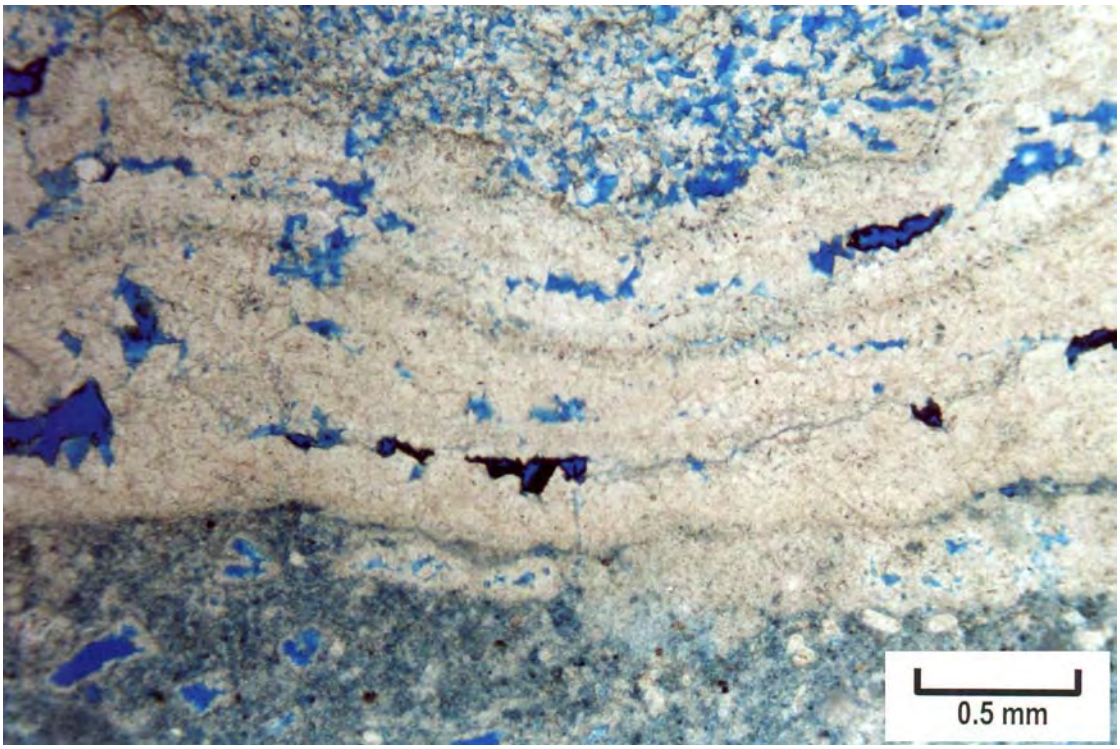
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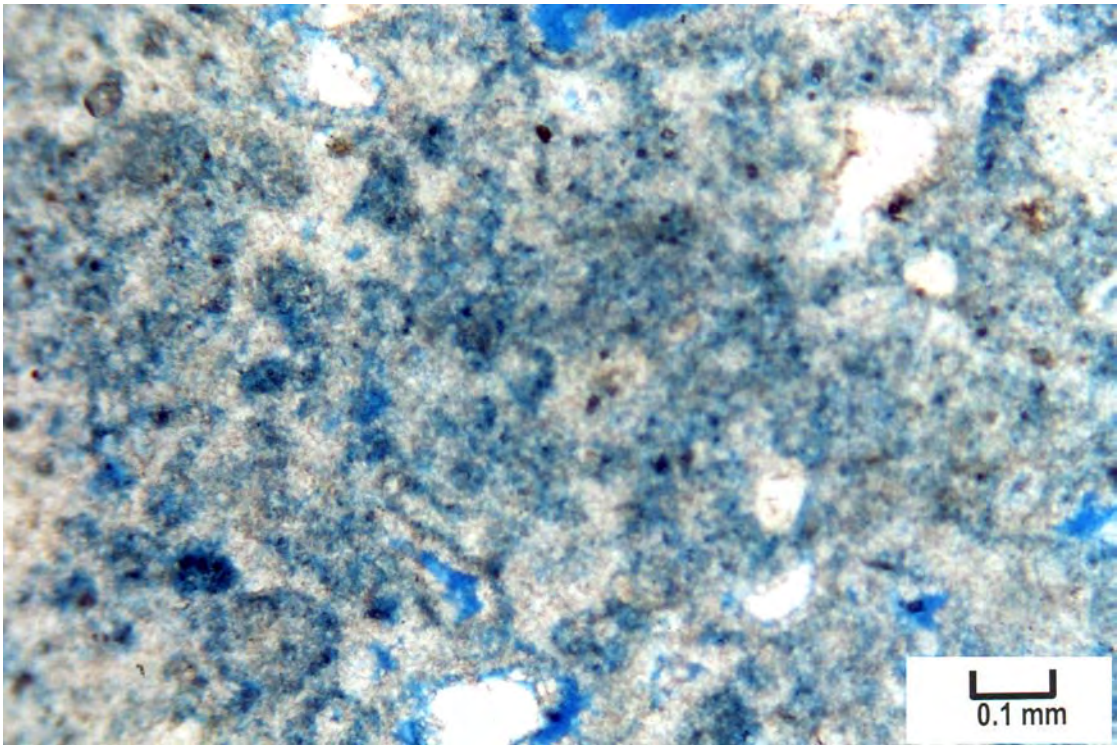
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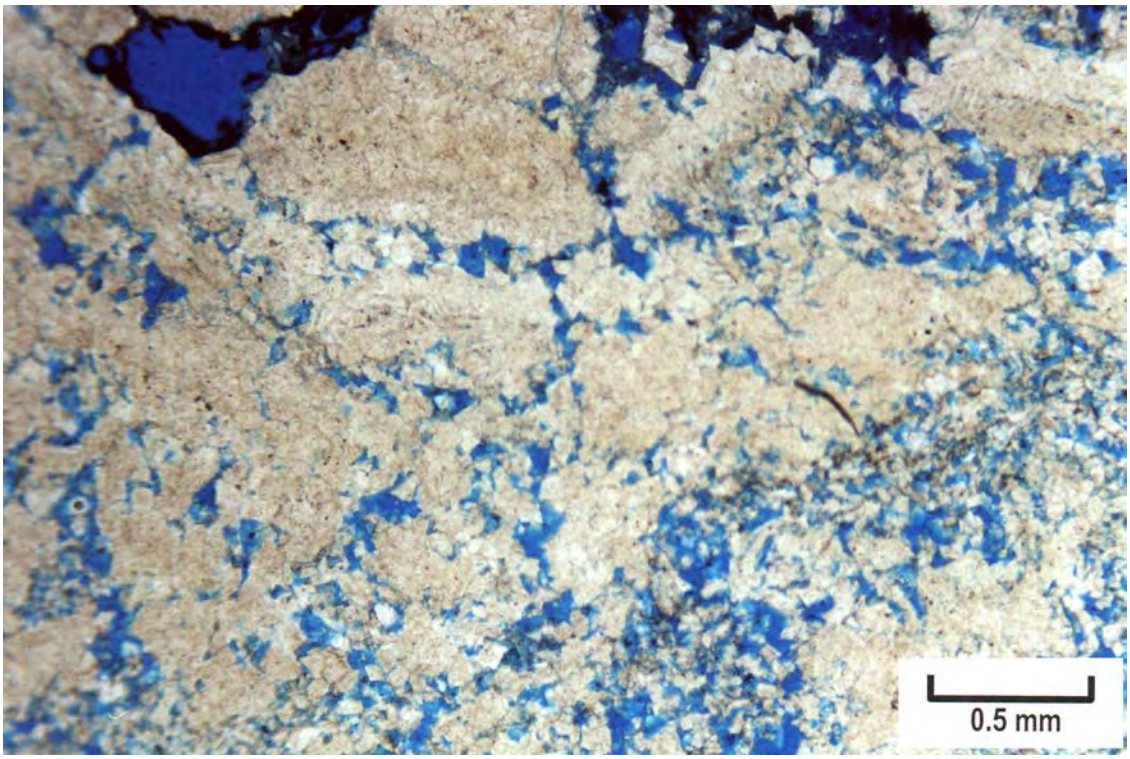
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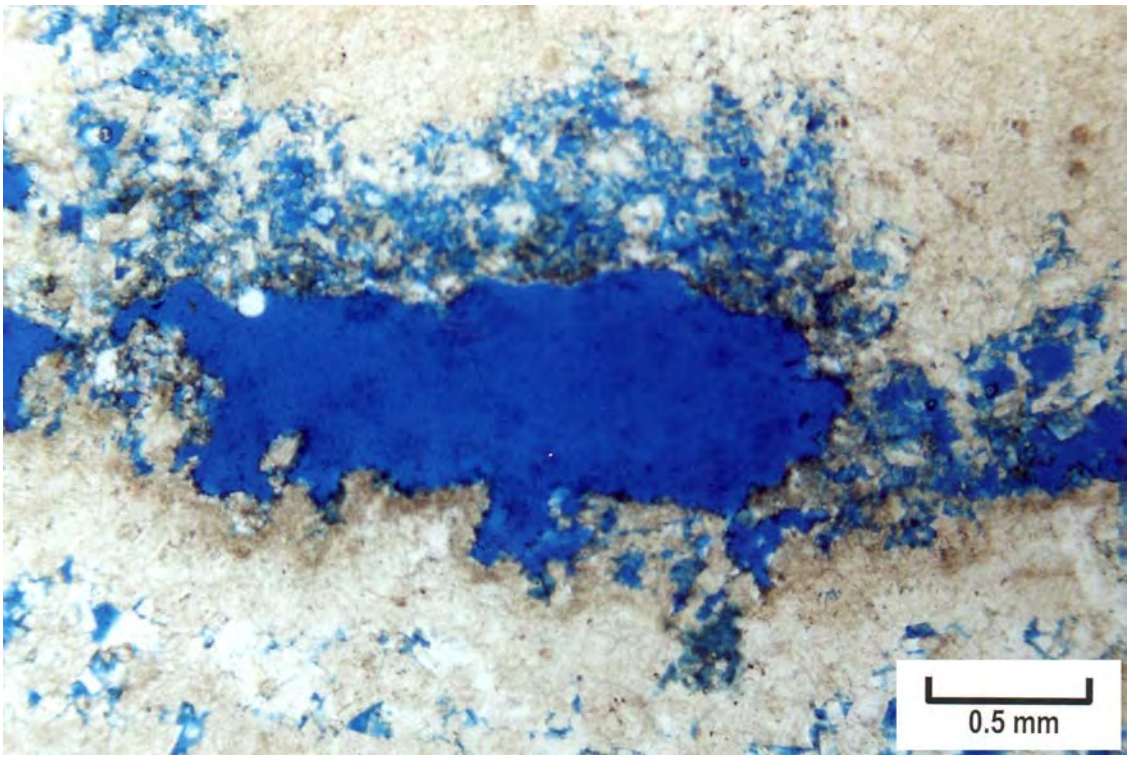
6,297.4 ft.

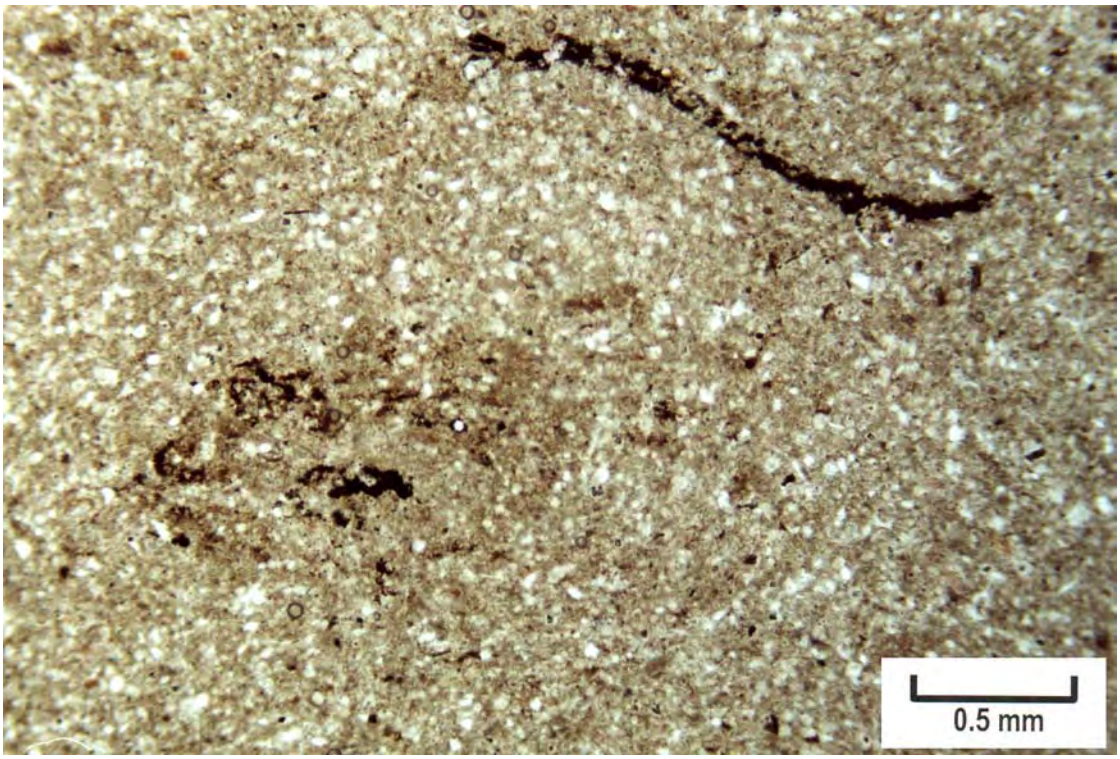
Plug:	⌀ - 10.5%, K – 18 md
Description:	dolomite; phylloid-algal bafflestone; remnant of early marine cement (botryoidal) along vugs; leaching and solution front of micro-box-work/hollow dolomite; some anhydrite; chalcedony (silica).
Diagenetic events:	1) early marine botryoidal cementation, 2) meteoric leaching of phylloid plates to vugs, 3) early dolomitization (mixing zone or seepage reflux), 4) micro-box-work dolomitization, 5) anhydrite replacement, and 6) chalcedony (silica) replacement.
Pore Types:	vug, BC



BUG 7-A,
BUG FIELD

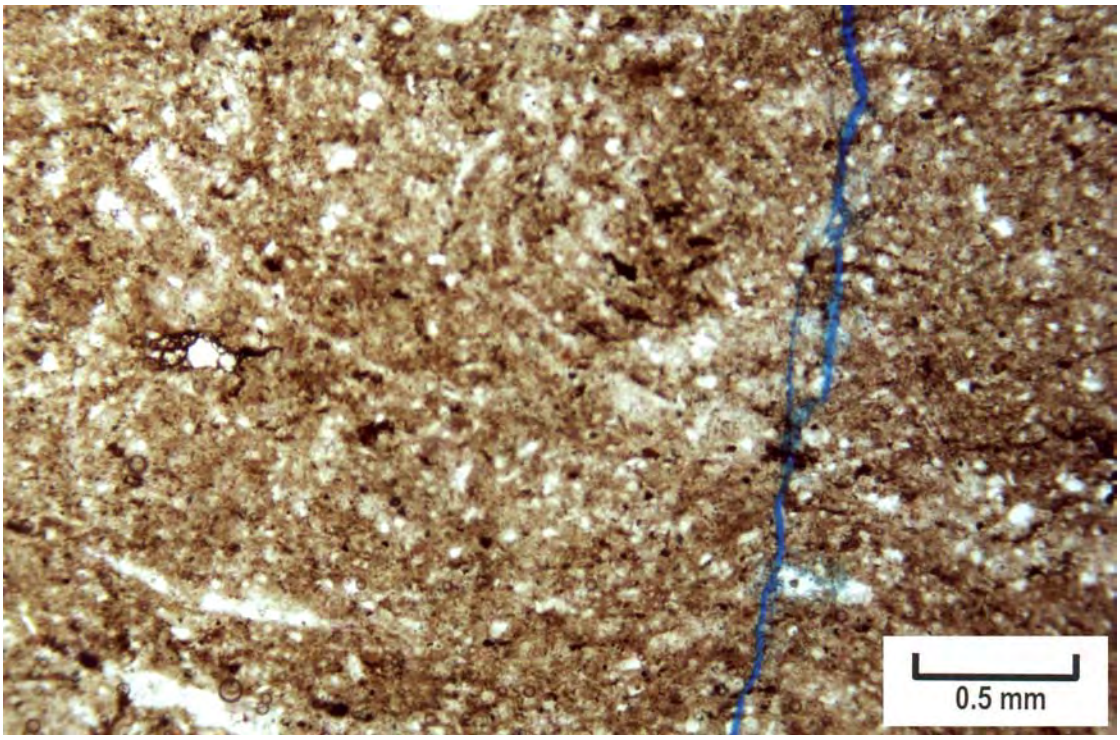
6,359.3 ft.

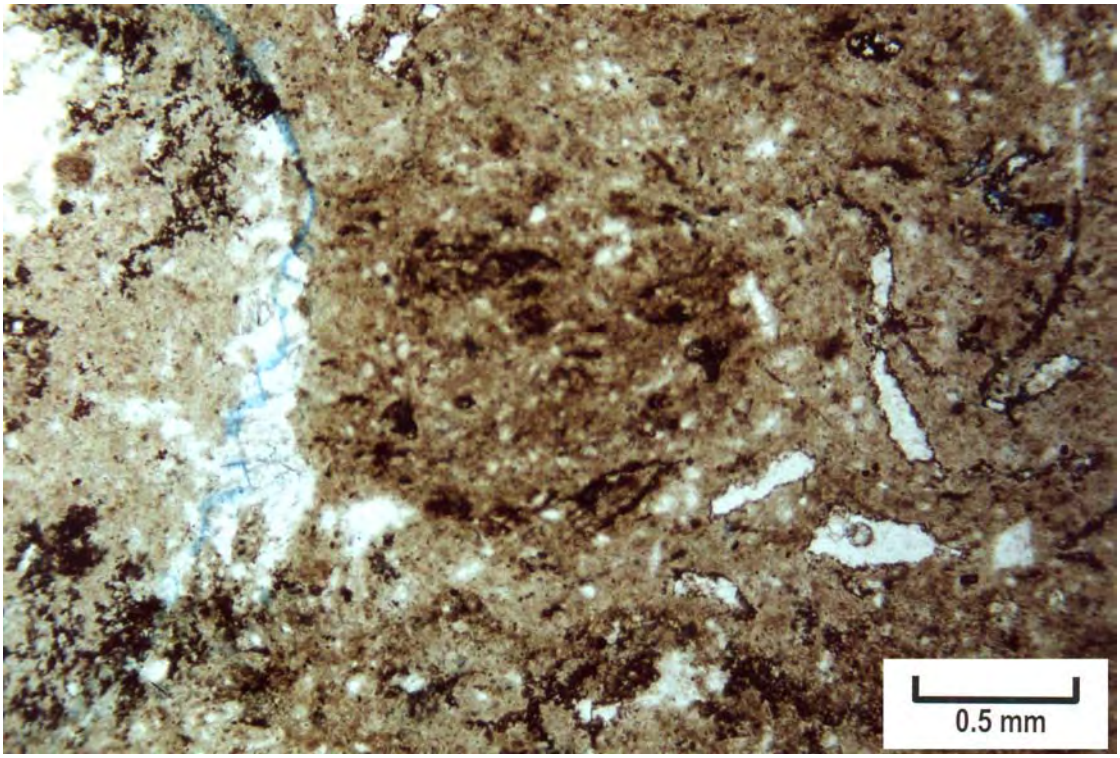
Plug:	⌀ - 4.3%, K – <0.01 md
Description:	dolomite; mudstone to siltstone; micas (muscovite), quartz, kerogenous organic matter; burrows.
Diagenetic events:	early dolomitization (mixing zone or seepage reflux)
Pore Types:	BP (ineffective)



6,360.7 ft.

Plug:	⌀ - 5.8%, K – 0.02 md
Description:	fossiliferous dolomite; wackestone; silty; bivalves,/brachiopods; burrows; leaching; stylolitic; some anhydrite replacement; open marine – low energy.
Diagenetic events:	1) early dolomitization (mixing zone or seepage reflux), 2) leaching, 3) stylolite formation, and 4) anhydrite replacement.
Pore Types:	Mo (ineffective)

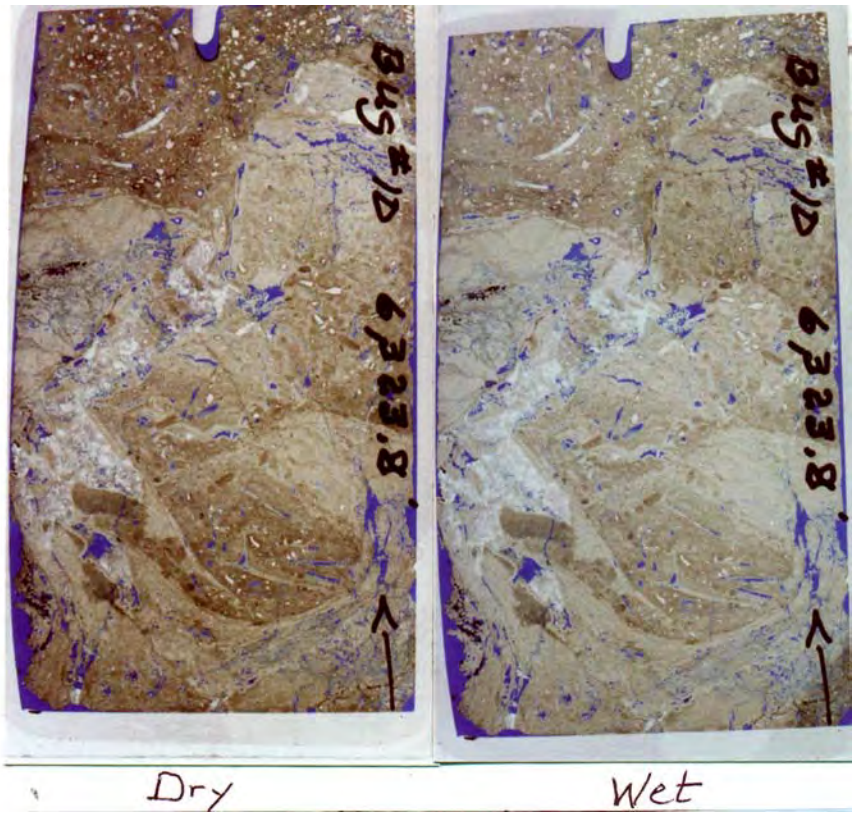



0.5 mm

BUG 10,
BUG FIELD

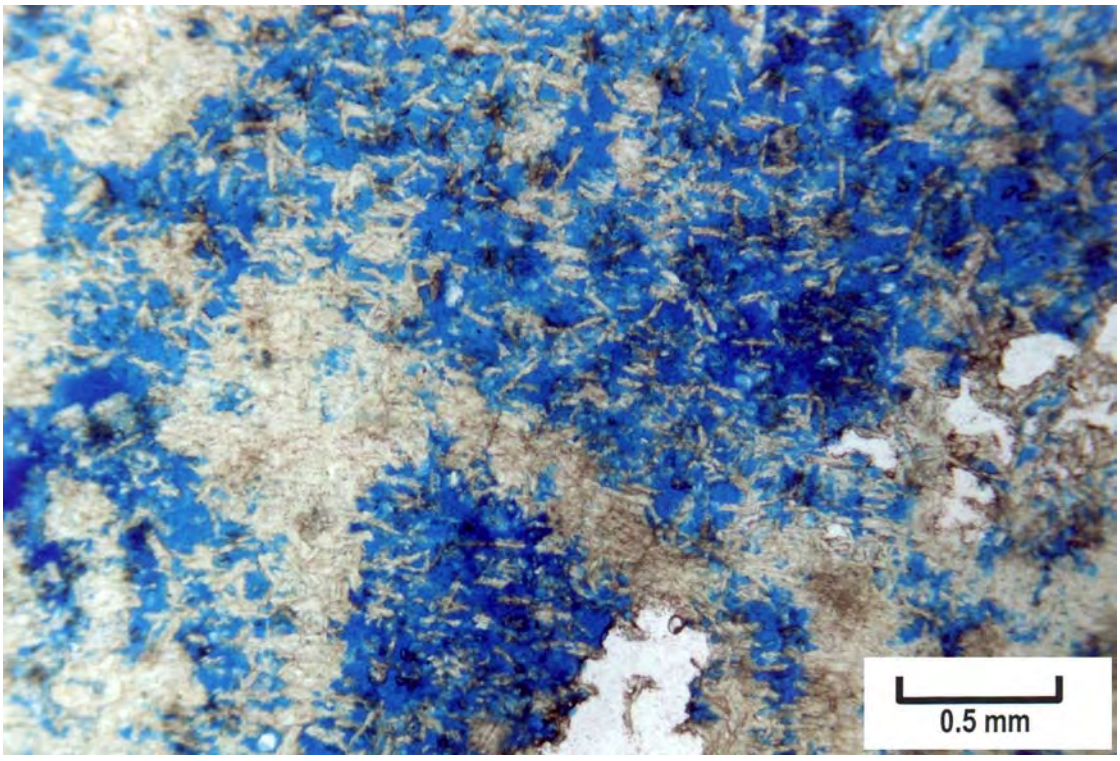
6,323.8 ft.

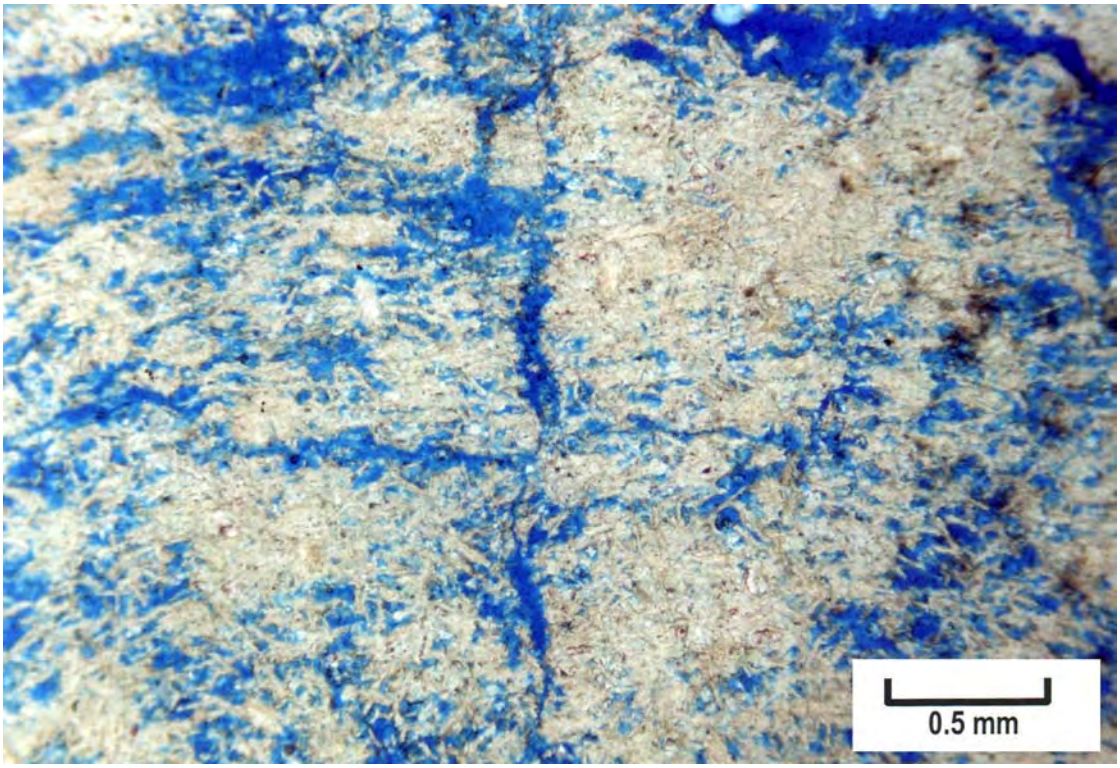
Plug:	⌀ - 7.7%, K – 62 md
Description:	dolomite; phylloid-algal bafflestone, internal sediments grading into early marine cement; leaching and freshwater cementation (dogtooth and bladed) (some molds ineffective due to partial filling be cement); solution enlarged microfractures; , dogtooth spar on solution-enlarged fractures; anhydrite and bitumen.
Diagenetic events:	1) early marine cementation (botryoidal cement), 2) meteoric leaching of phylloid plates, 3) freshwater cementation, 4) early dolomitization (mixing zone or seepage reflux), 5) minor anhydrite replacement, and 6) bitumen.
Pore Types:	Mo, vug, BC, FR



6,327.5 and 6,327.9 ft.

Plug:	⌀ - 10.5%, K – 7.5 md
Description:	dolomite; phylloid-algal bafflestone; geopedals; stylolites; dolomitization; alternating environment between meteoric and marine resulting in heterogeneity with tight dolomite and dissolution features; marine = early marine botryoidal cement (aragonite) (now corroded), meteoric = dissolution front with dissolution microfractures, microcave environment, solution pits, patchy micro-box-work dolomite; late anhydrite.
Diagenetic events:	1) early marine cementation (botryoidal cement), 2) meteoric leaching of phylloid plates and dissolution, 3) freshwater cementation, 4) early dolomitization (mixing zone or seepage reflux), 5) meteoric bladed dolomite, and 6) anhydrite replacement.
Pore Types:	mainly BC, vugs, some BP, FR

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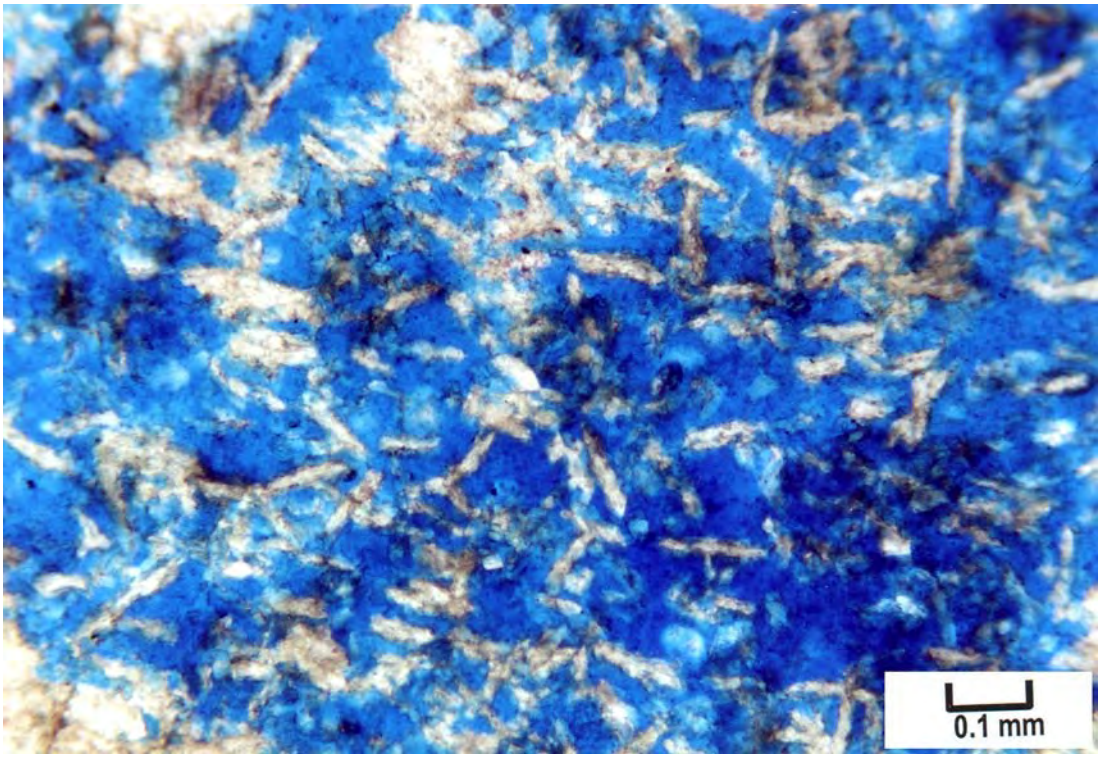
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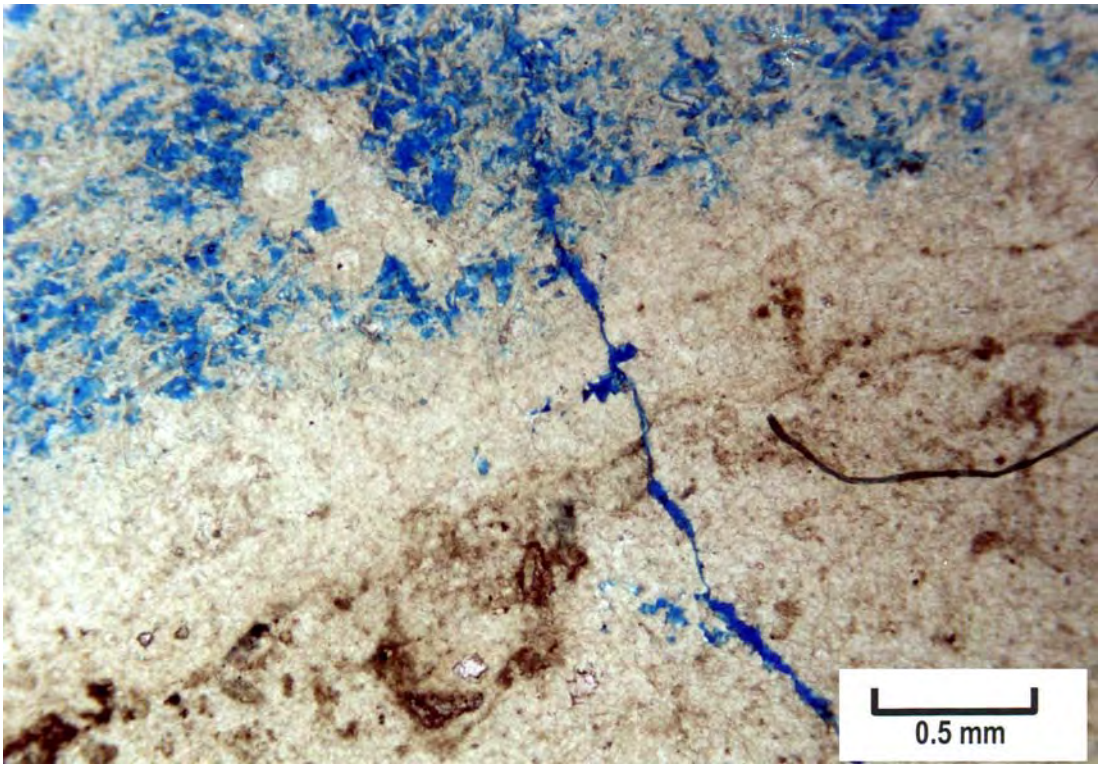
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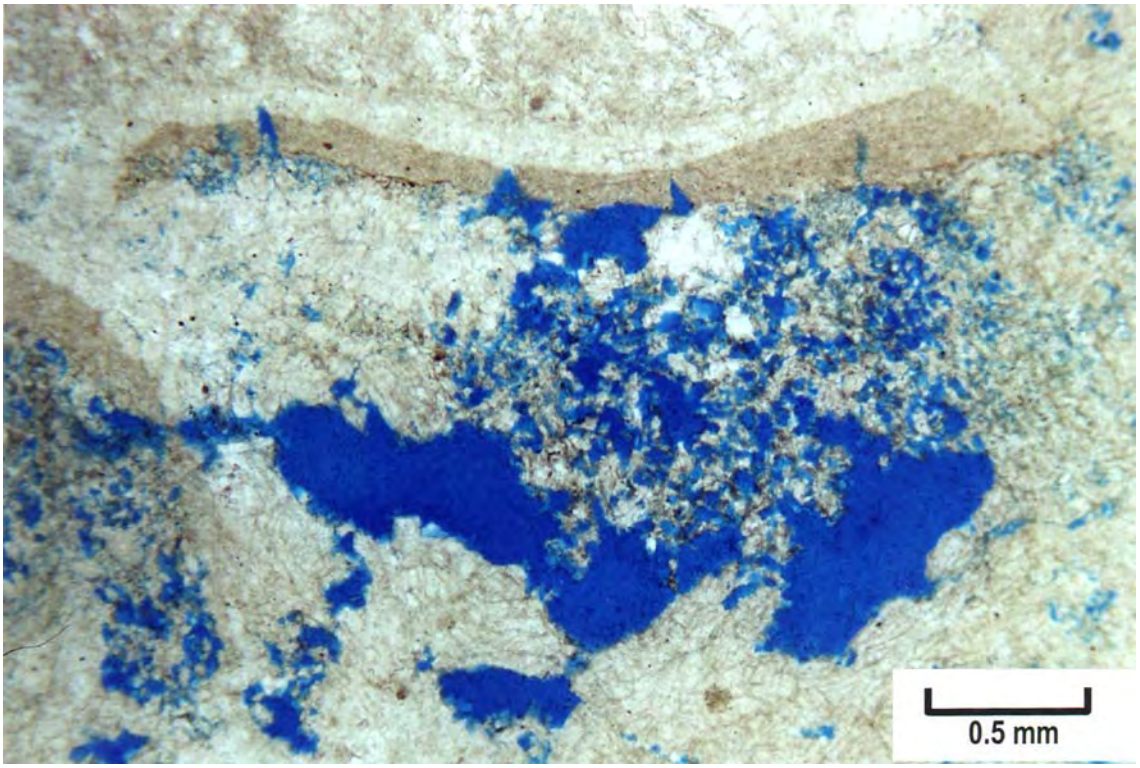
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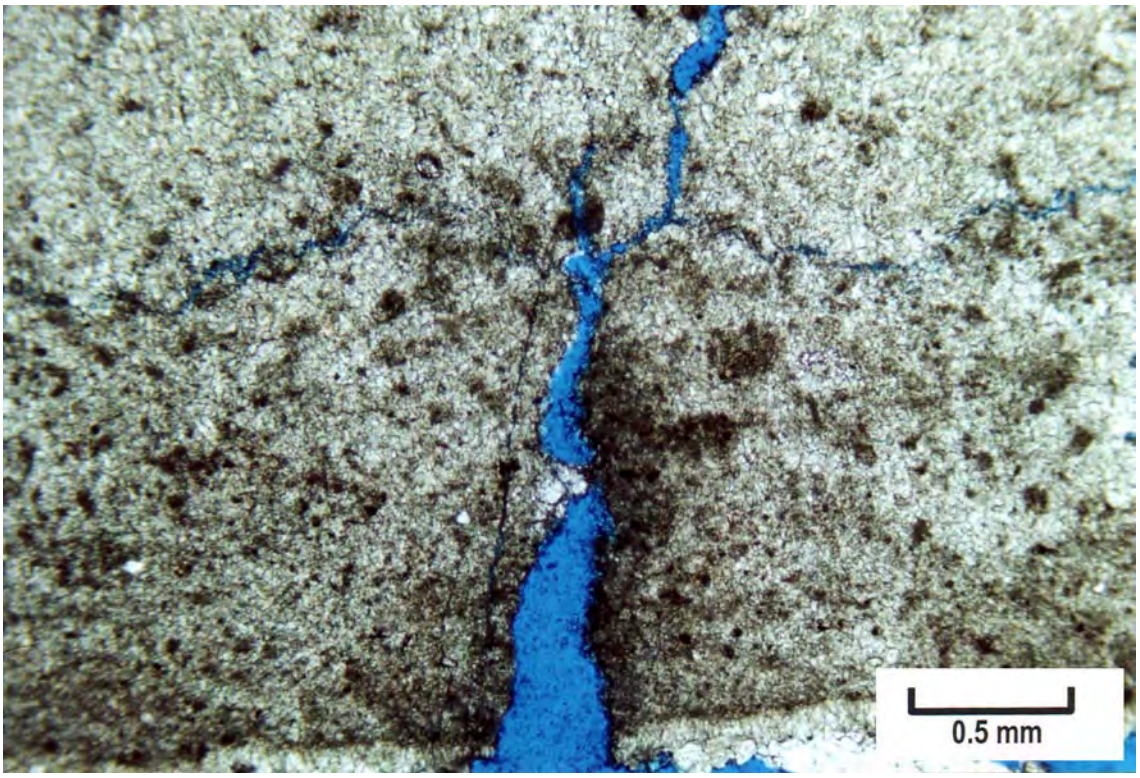
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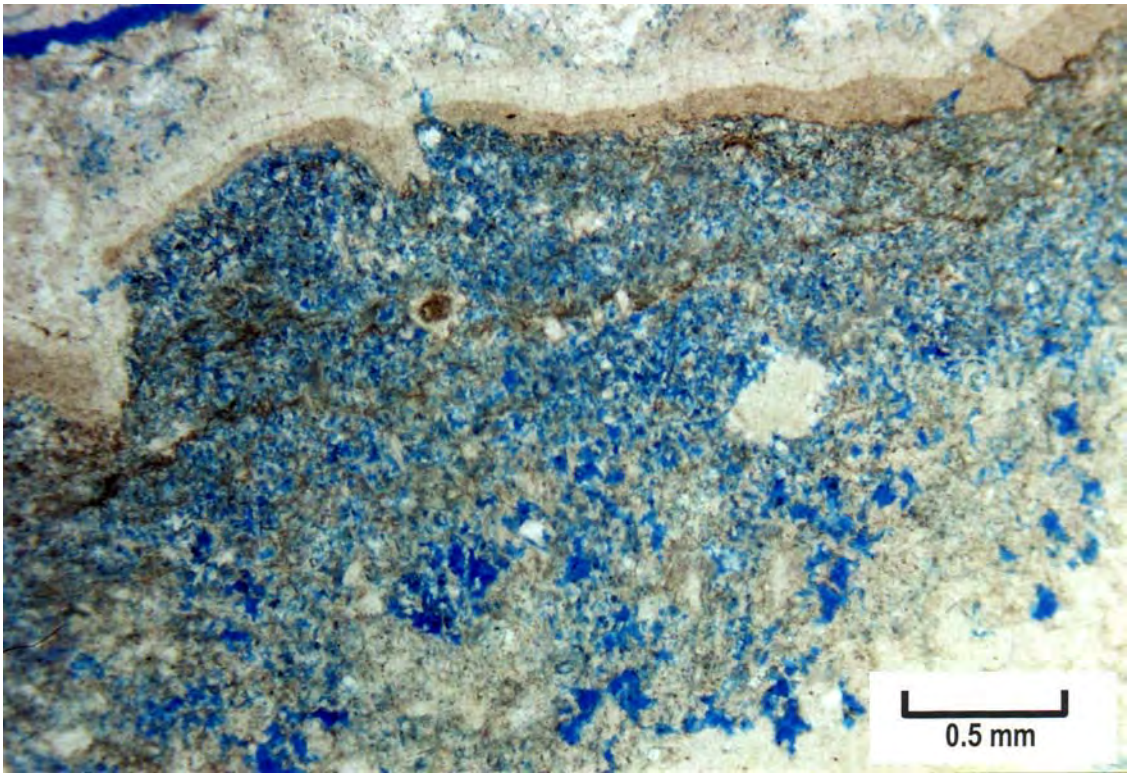
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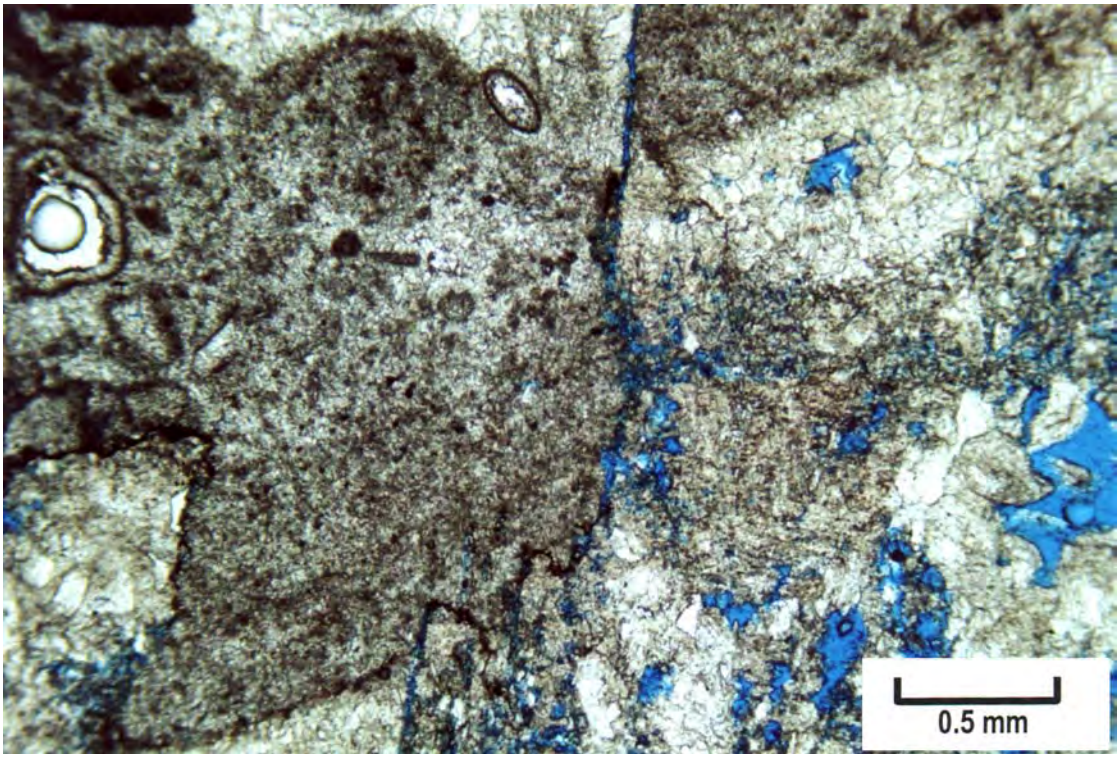
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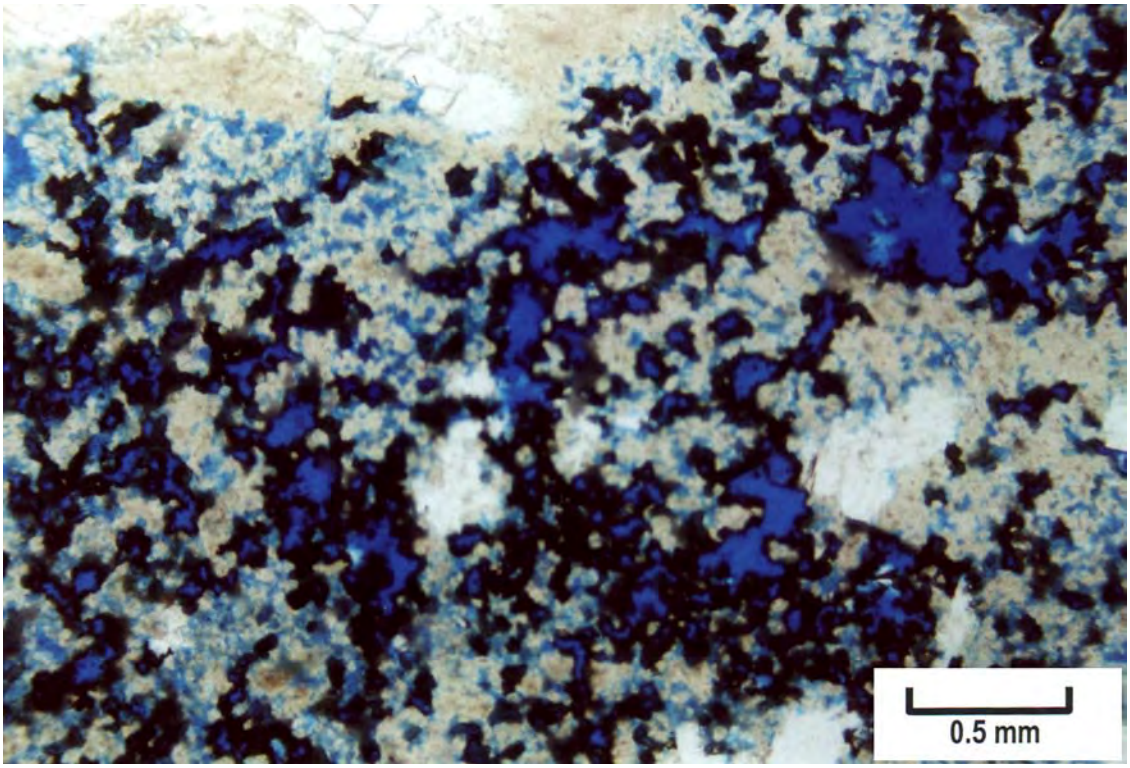
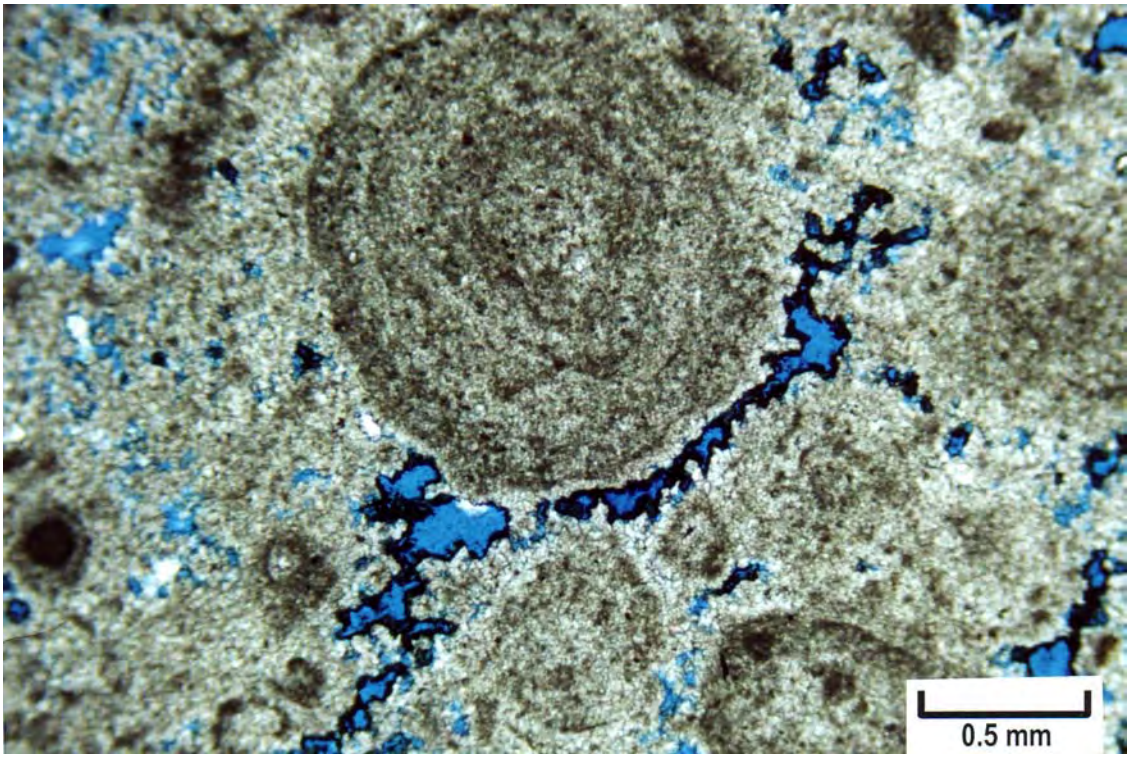
BUG 13,
BUG FIELD

5,930.6 ft.

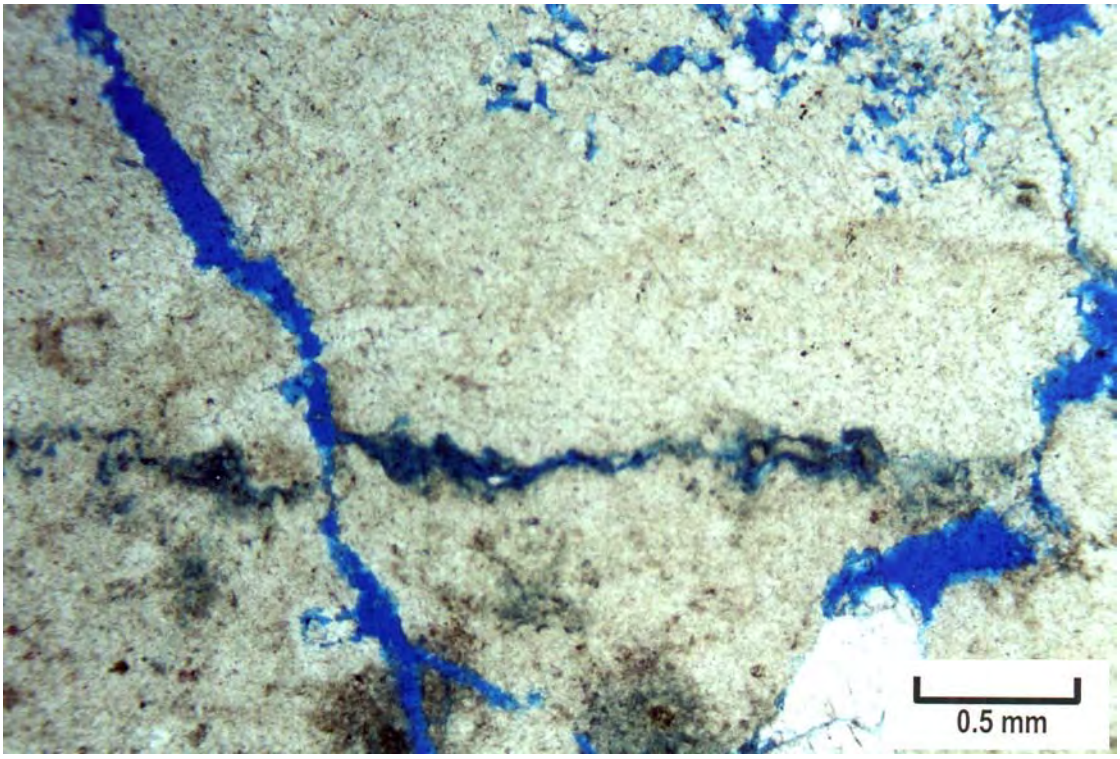
Plug:	⌀ - 9.3%, K – 15 md
Description:	dolomite; pisolitic/peloidal grainstone; soil pisolites indicating subaerial exposure of the mound cap; solution-enlarged channels; late microporosity (reservoir near faults (?); anhydrite and bitumen.
Diagenetic events:	1) meteoric leaching of peloids and pisolites, 2) early dolomitization (mixing zone or seepage reflux), 3) microporosity to channel porosity development, 4) minor anhydrite replacement, and 5) bitumen.
Pore Types:	Mo, BC, micro-BC, CH, FR




0.5 mm

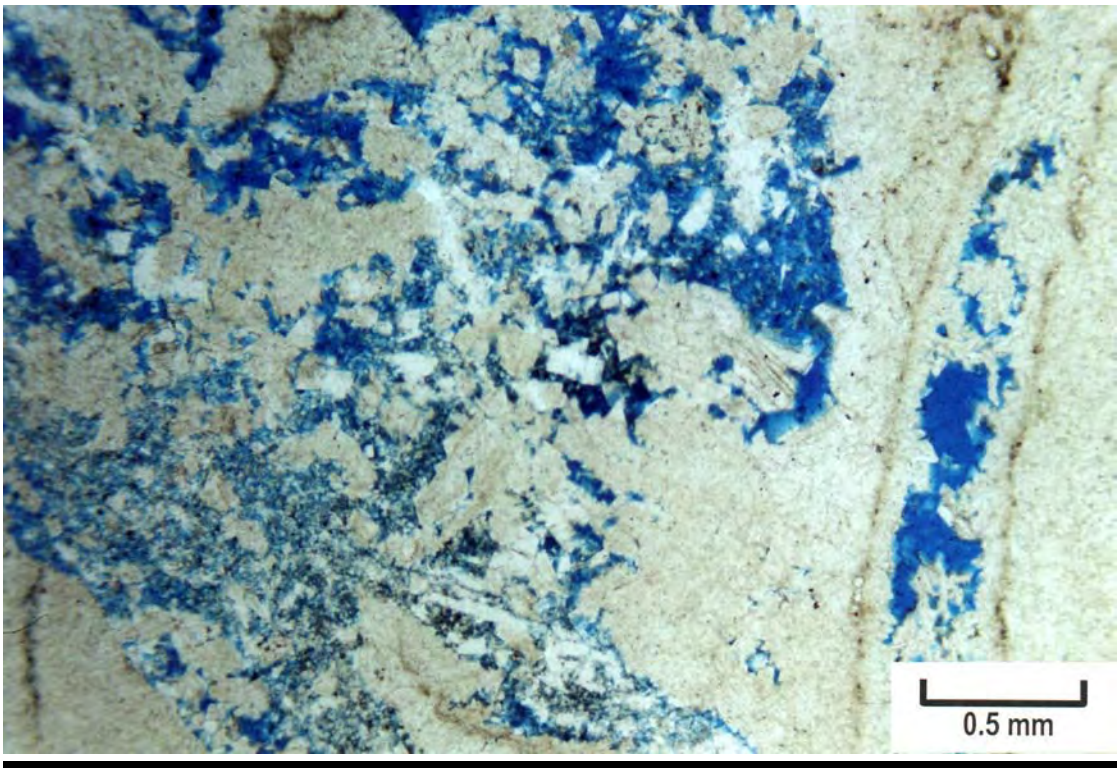
5,935.8 ft.

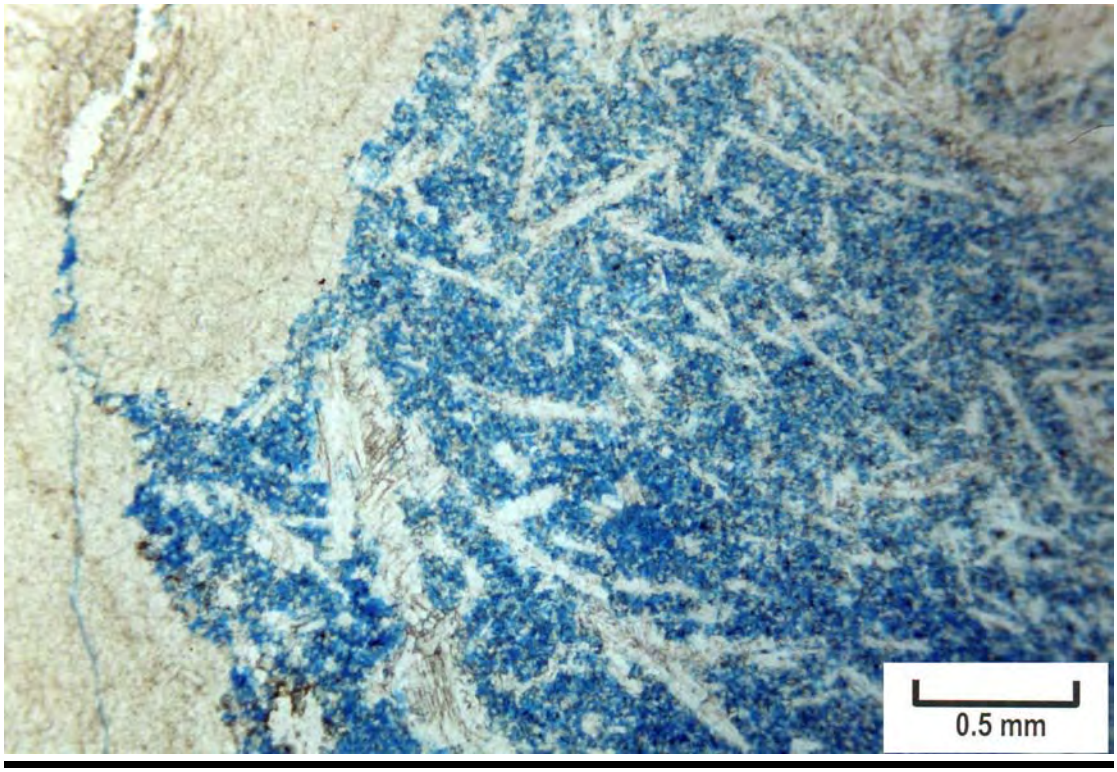
Plug:	⌀ - 11.9%, K – 14 md
Description:	dolomite; tight phylloid-algal bafflestone; upper mound; alternating environment between marine (early botryoidal cement [attached by dissolution first] with dust lines) and meteoric (bladed dolomitic cement [etching]); dissolution features include micro-box-work dolomite to vugs to solution-enlarged fractures; late anhydrite; minor silica.
Diagenetic events:	1) early marine cementation (botryoidal cement), 2) meteoric leaching of phylloid plates and dissolution, 3) freshwater cementation, 4) early dolomitization (mixing zone or seepage reflux), 5) meteoric bladed dolomite, 6) anhydrite replacement, and 7) silicification.
Pore Types:	SH, BP, Mo, BC, FR, vugs



5,939.6 ft.

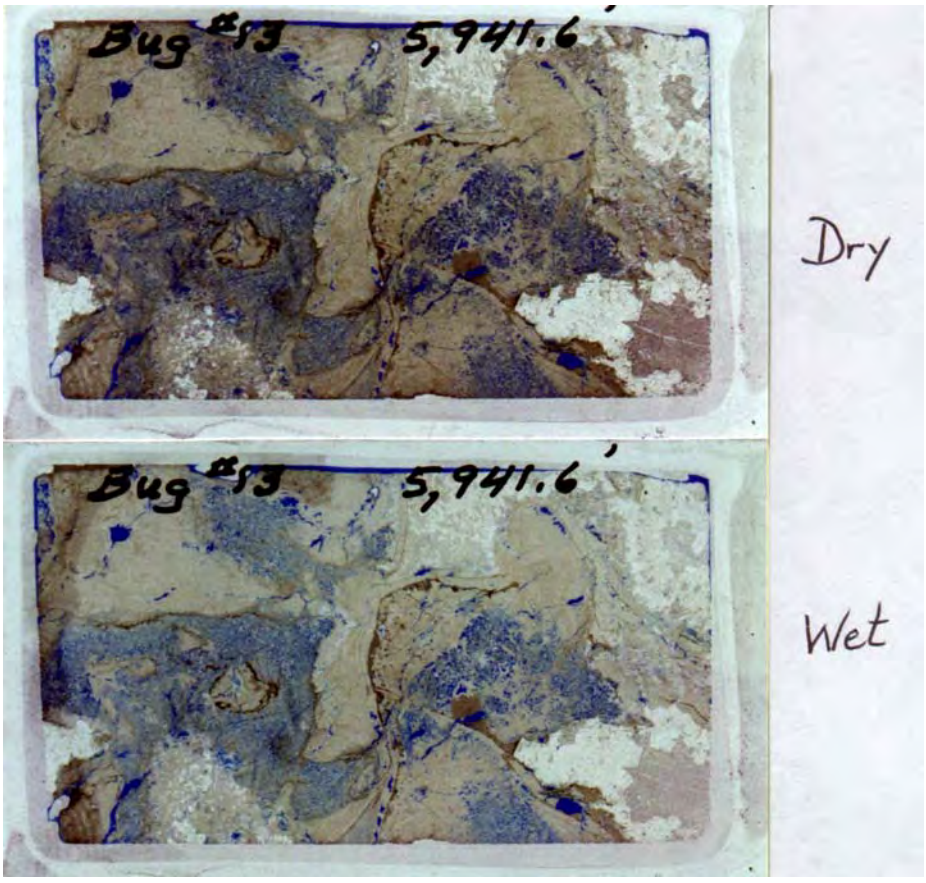
Plug:	⌀ - 12%, K – 6.9 md
Description:	dolomite; phylloid-algal bafflestone; lower mound; early marine botryoidal cement with a dust line and meteoric cement (attached); dissolution features include micro-box-work dolomite; intercrystalline to unaltered.
Diagenetic events:	1) early marine cementation (botryoidal cement), 2) meteoric leaching of phylloid plates and dissolution, 3) freshwater cementation, 4) early dolomitization (mixing zone or seepage reflux).
Pore Types:	BC




0.5 mm

5,941.6 ft.

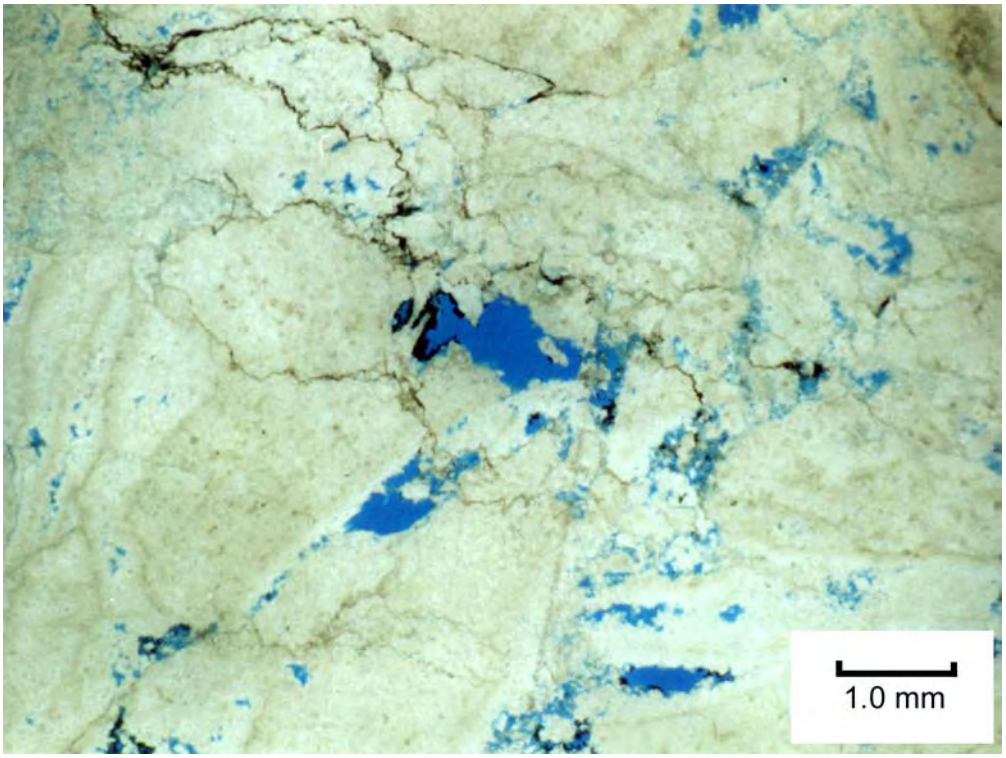
Plug:	⌀ - 8.5%, K – 1.8 md
Description:	dolomite; phylloid-algal bafflestone; early marine botryoidal and microbial cement nearly completely dissolved; meteoric (bladed dolomitic cement); dissolution front and dissolution features including solution-enlarged microfractures, molds, and co-occurring micro-box-work/hollow dolomite; little anhydrite or bitumen.
Diagenetic events:	1) early marine cementation (botryoidal cement), 2) meteoric leaching of phylloid plates and dissolution, 3) freshwater cementation, 4) early dolomitization (mixing zone or seepage reflux), 5) meteoric bladed dolomite, 6) some anhydrite replacement, and 7) some bitumen.
Pore Types:	Mo, BC, BP, FR

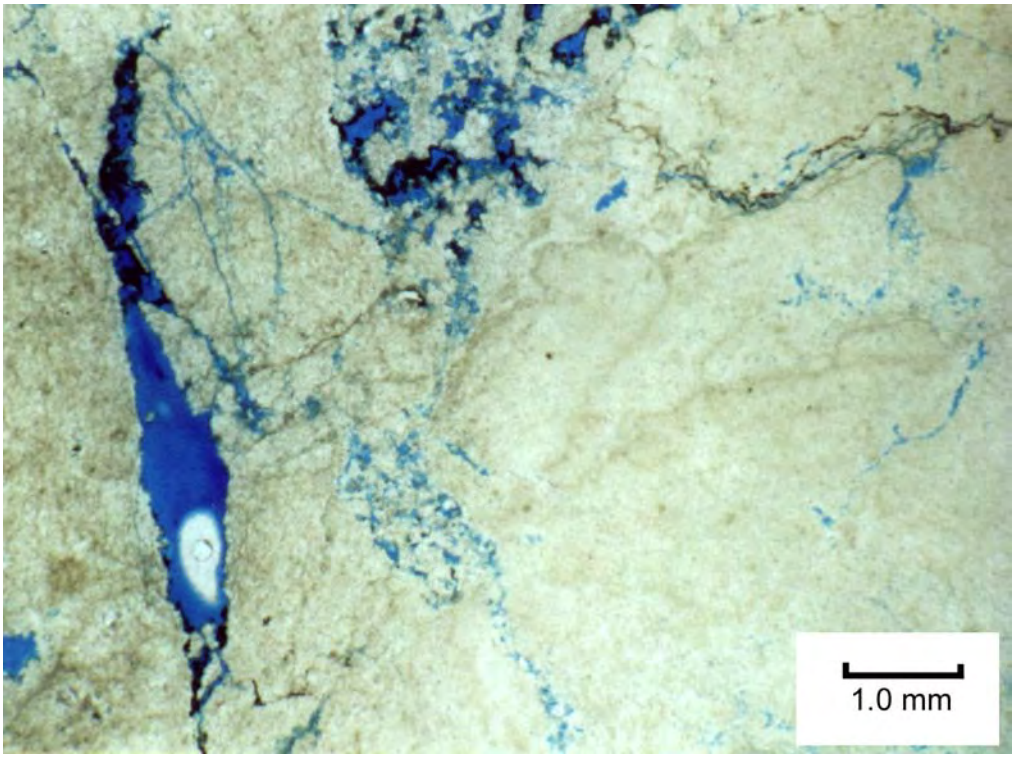


BUG 16,
BUG FIELD

6,299.3 ft.

Plug:	⌀ - 10.3%, K – 3.4 md
Description:	dolomite; phylloid-algal bafflestone; early marine cements with dust lines and meteoric cements; dissolution fabric with micro-box-work dolomite, vugs (lined with bitumen), solution-enlarged fractures and lots of microfractures, ghosts of cement and patchy areas of dissolution; modest bitumen.
Diagenetic events:	1) early marine cementation (botryoidal cement), 2) meteoric leaching of phylloid plates and dissolution, 3) freshwater cementation, 4) early dolomitization (mixing zone or seepage reflux), and 5) bitumen.
Pore Types:	Mo, vug, FR, BC

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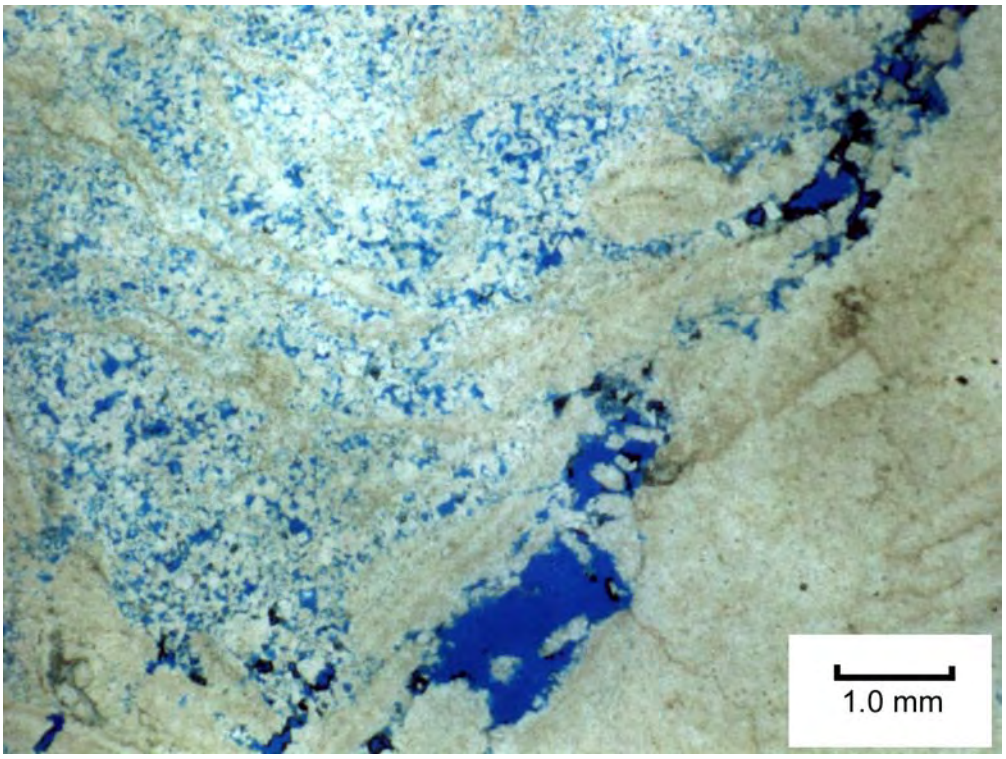
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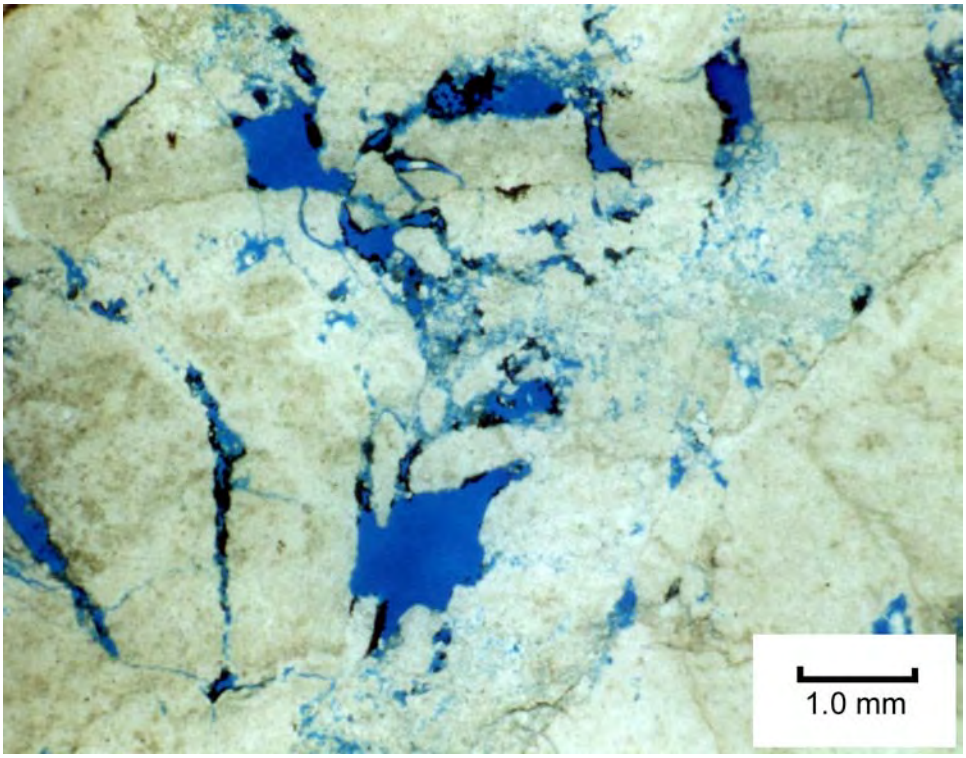
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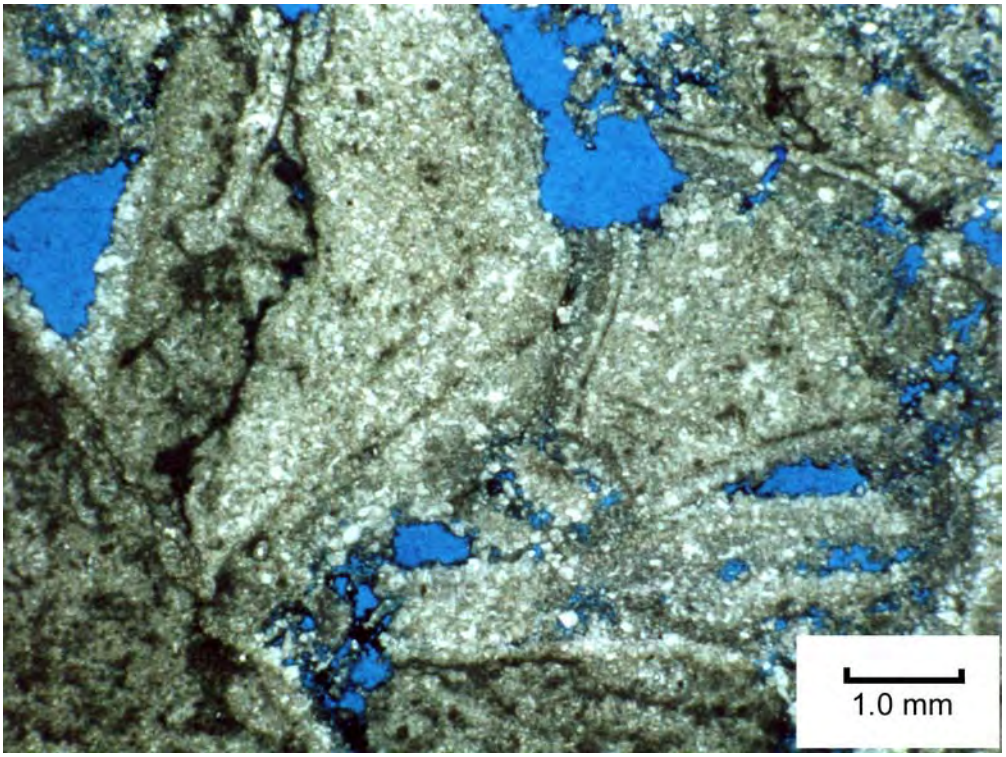
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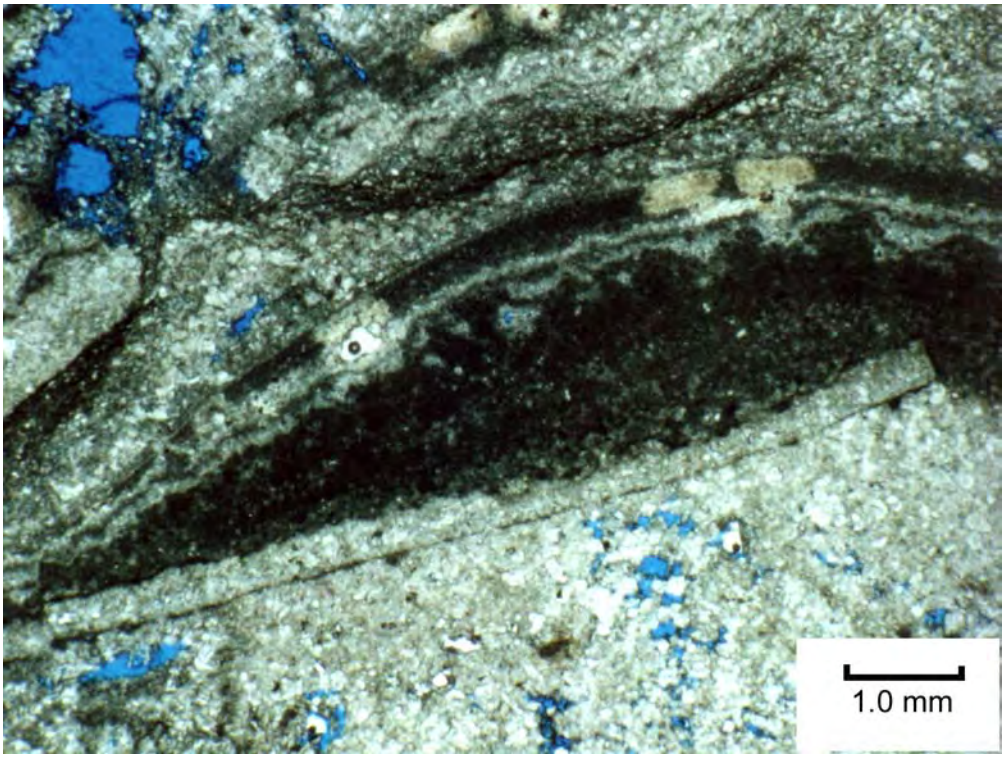
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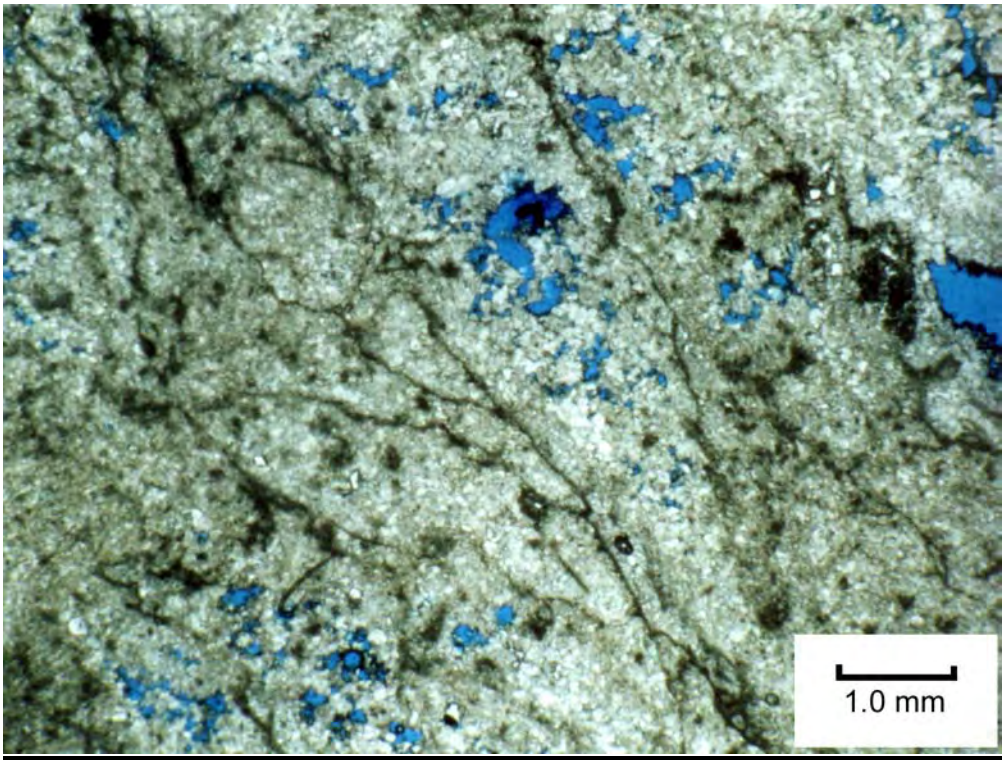
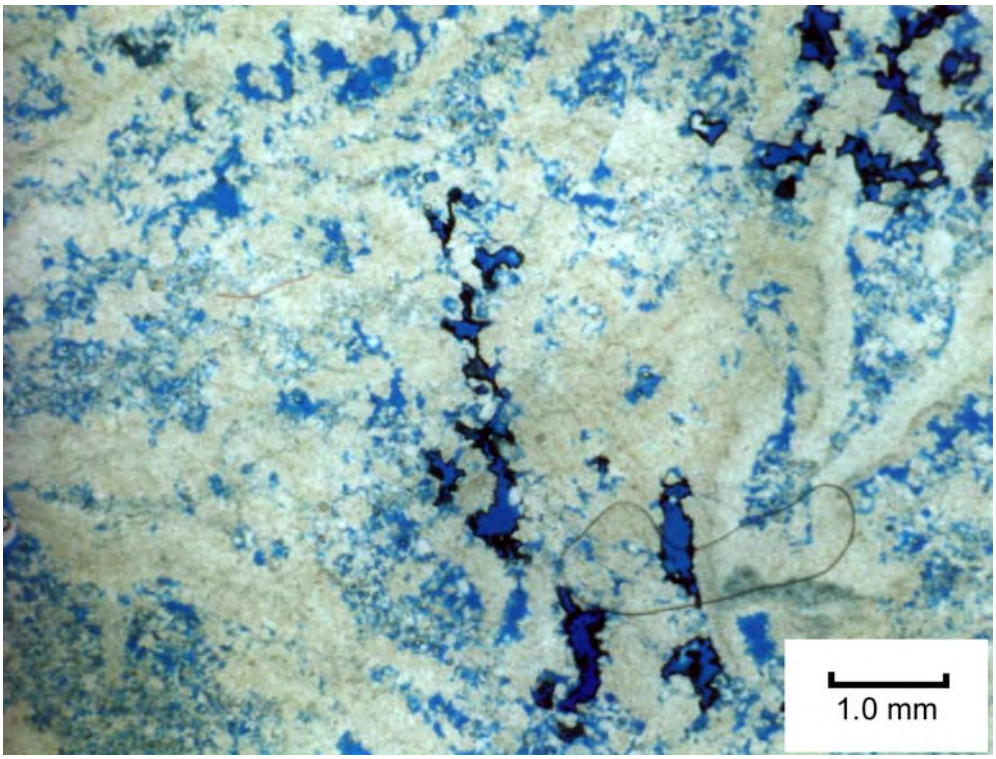
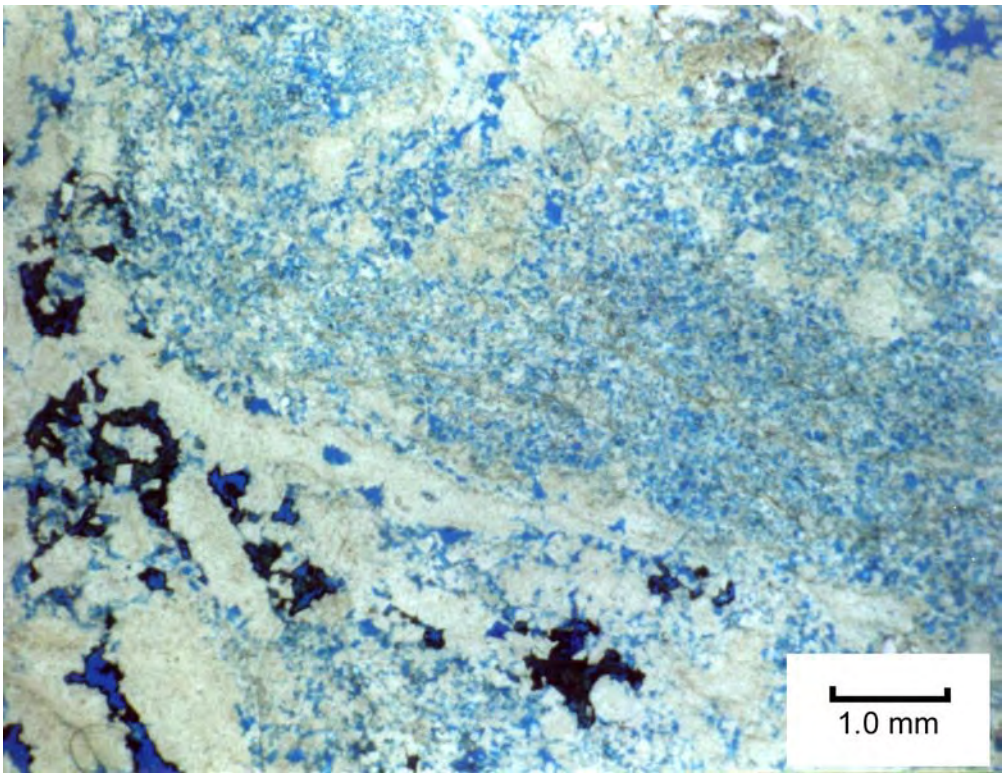

1.0 mm

6,300.5 ft.

Plug:	⌀ - 15.9%, K – 76 md
Description:	dolomite; tight phylloid-algal bafflestone; upper mound; alternating environment between marine (early botryoidal) and meteoric (dogtooth cement); massive dissolution with dissolution front and dissolution features including micro-box-work/hollow dolomite, vugs (lined with bitumen); late microporosity (without bitumen).
Diagenetic events:	1) early marine cementation (botryoidal cement), 2) meteoric leaching of phylloid plates and dissolution, 3) freshwater cementation, 4) early dolomitization (mixing zone or seepage reflux), 5) microporosity development, and 6) bitumen.
Pore Types:	vug, BC, SH, FR, micro-BC

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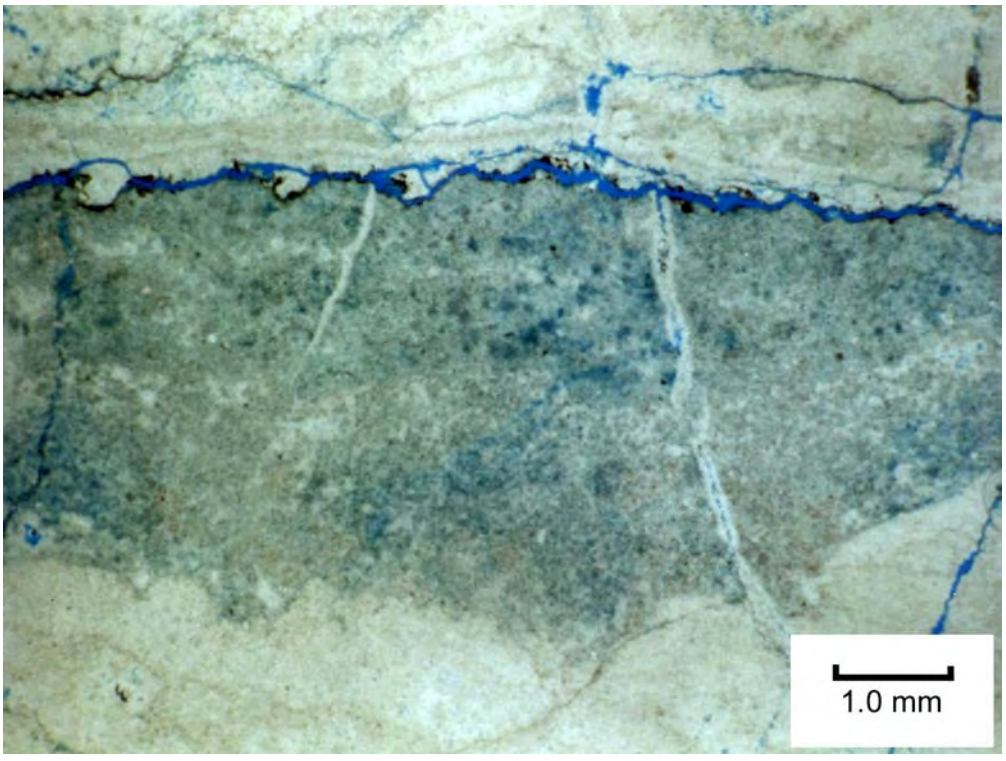
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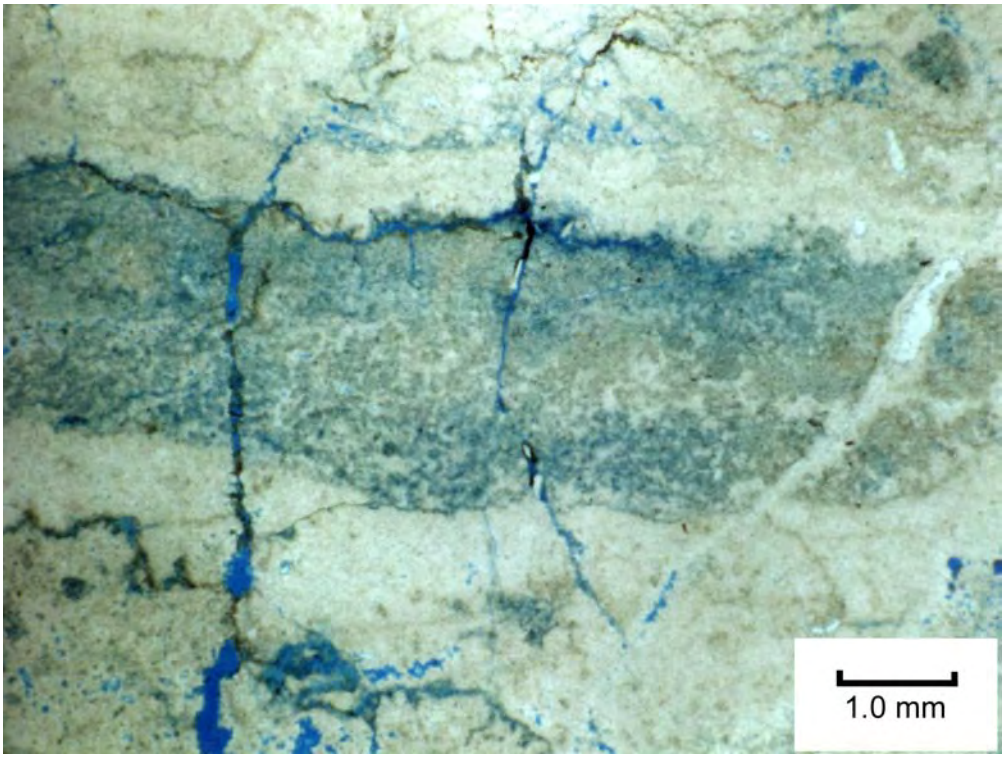
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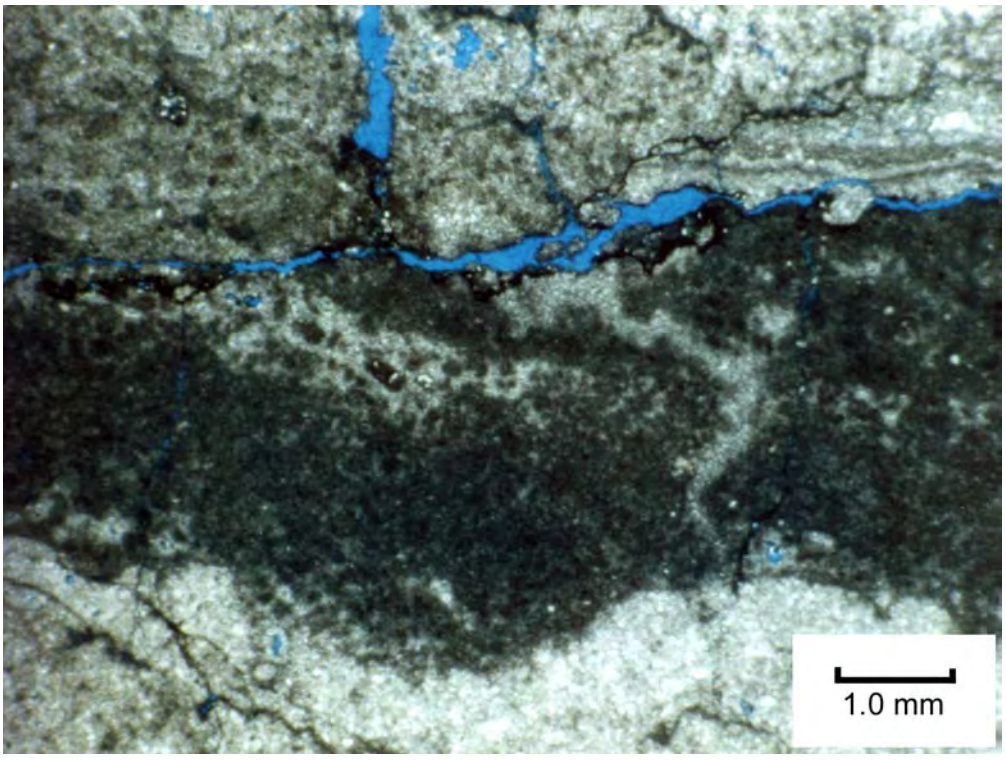
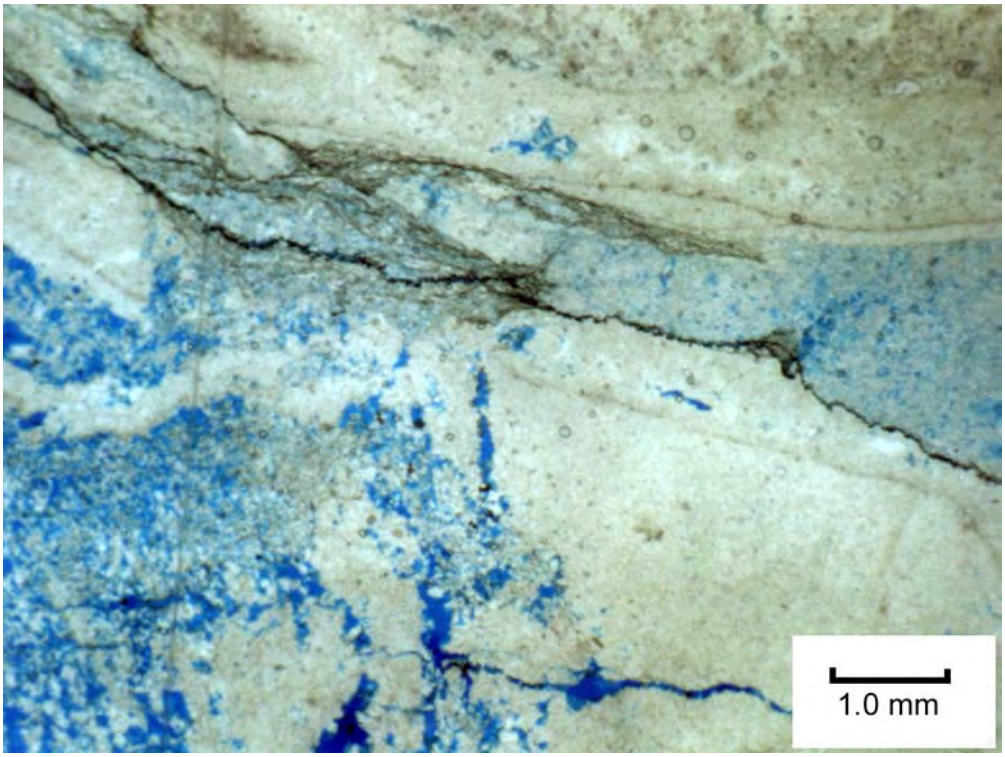
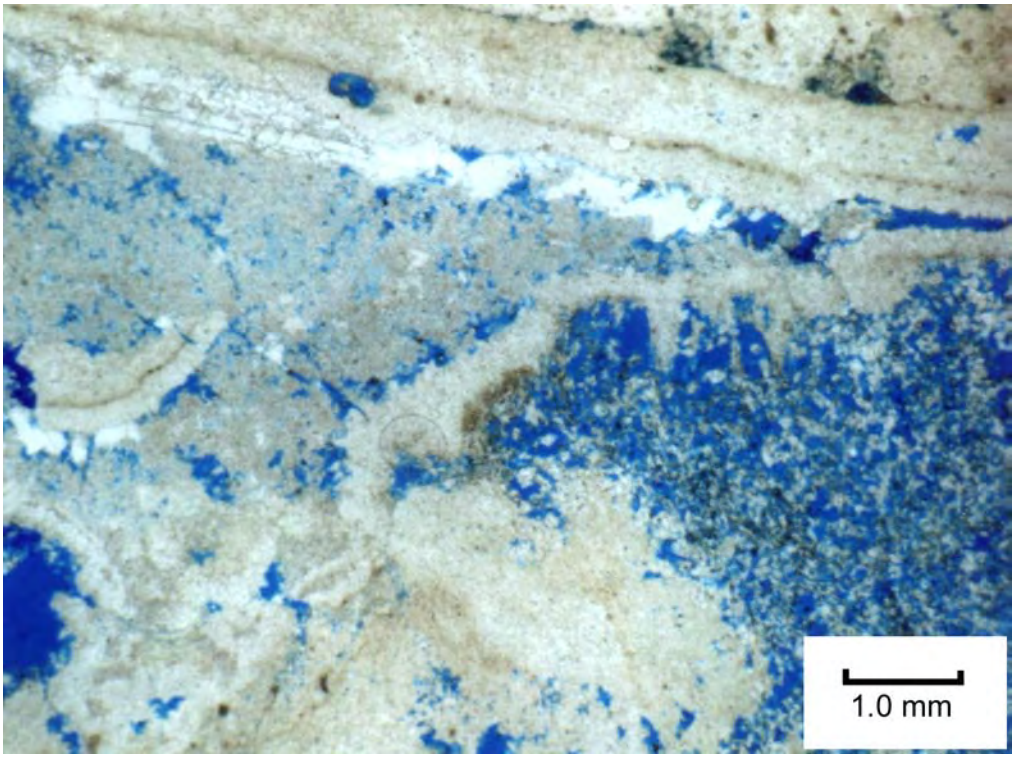

1.0 mm

6,314.3 ft.

Plug:	⌀ - 13.8%, K – 14 md
Description:	dolomite; phylloid-algal bafflestone; original shelter pores and geopedals; freshwater bladed cements; dissolution front and dissolution features including large solution-enlarged open fractures, micro-box-work/hollow dolomite, vugs (connected to fractures); some late microporosity (with microbial character) indicating a nearby fault or conduit; replacement anhydrite.
Diagenetic events:	1) meteoric leaching of phylloid plates and dissolution, 2) freshwater cementation, 3) early dolomitization (mixing zone or seepage reflux), 4) microporosity development, and 5) anhydrite replacement
Pore Types:	SH, vug, BC, FR, micro-BC

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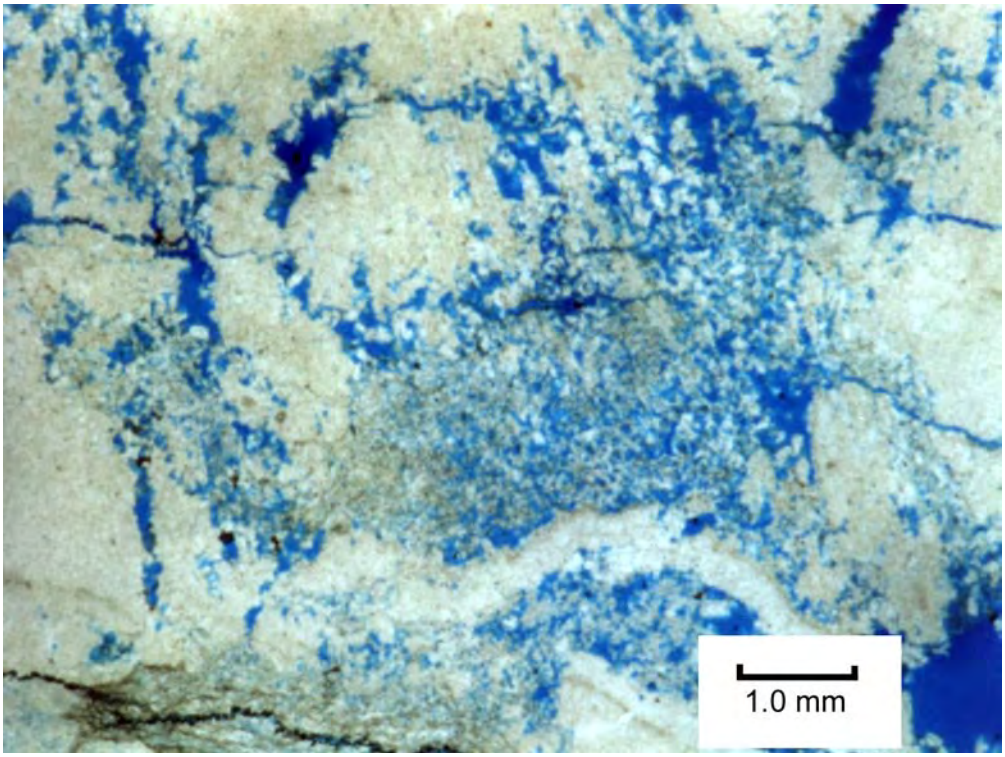
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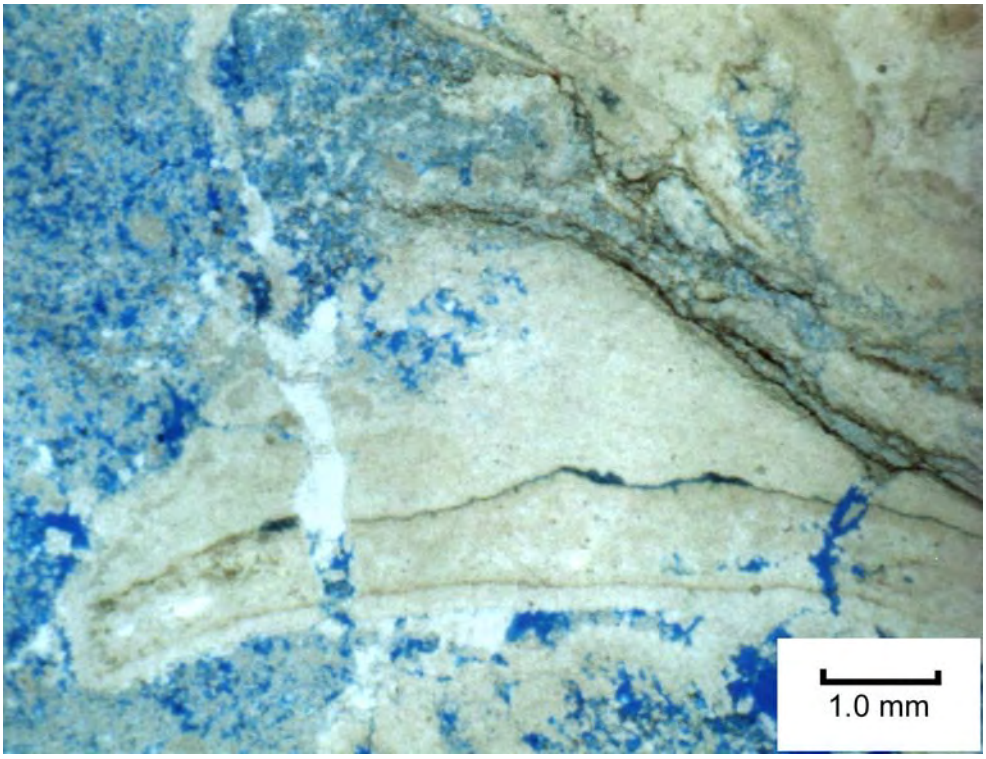
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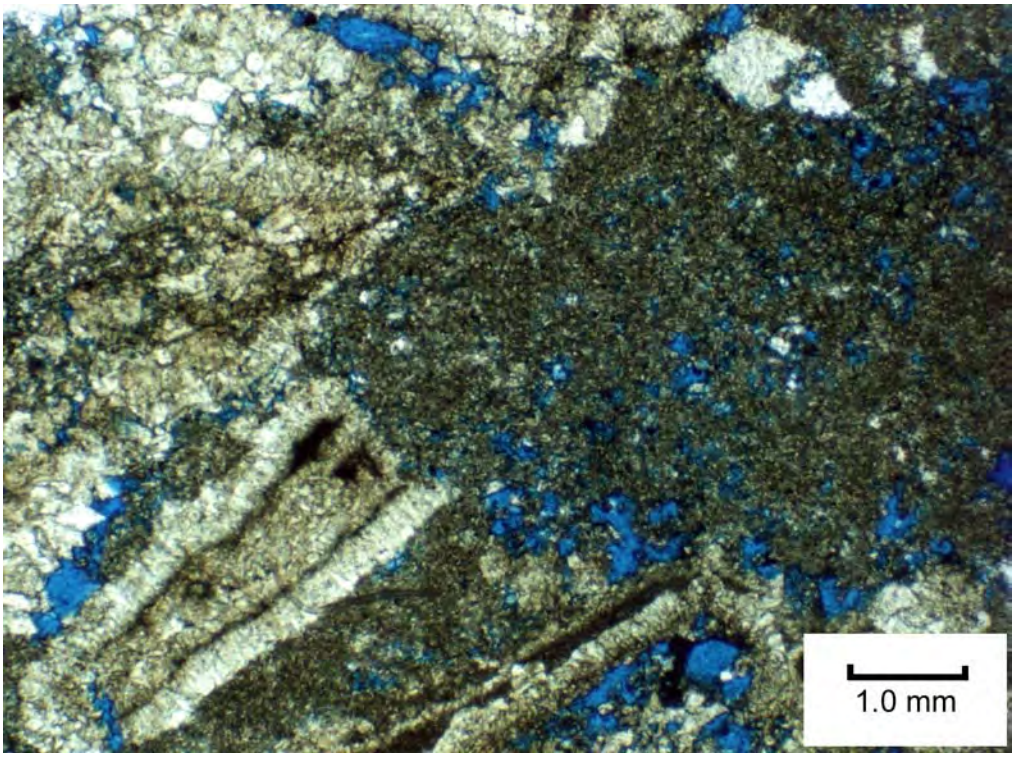
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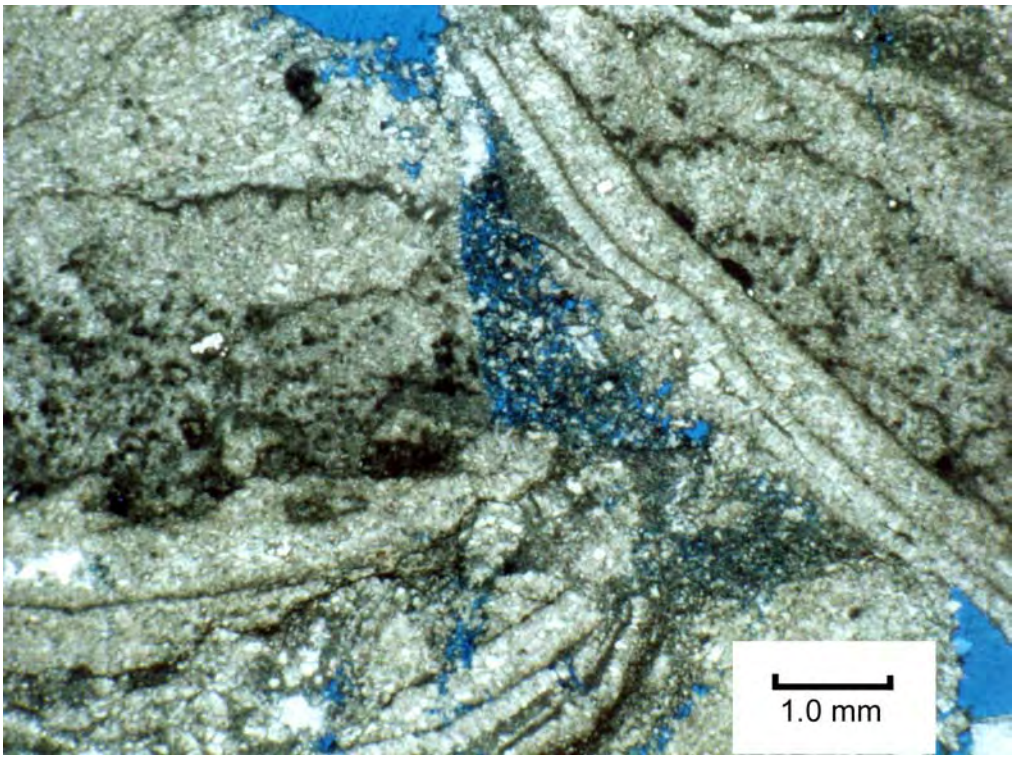
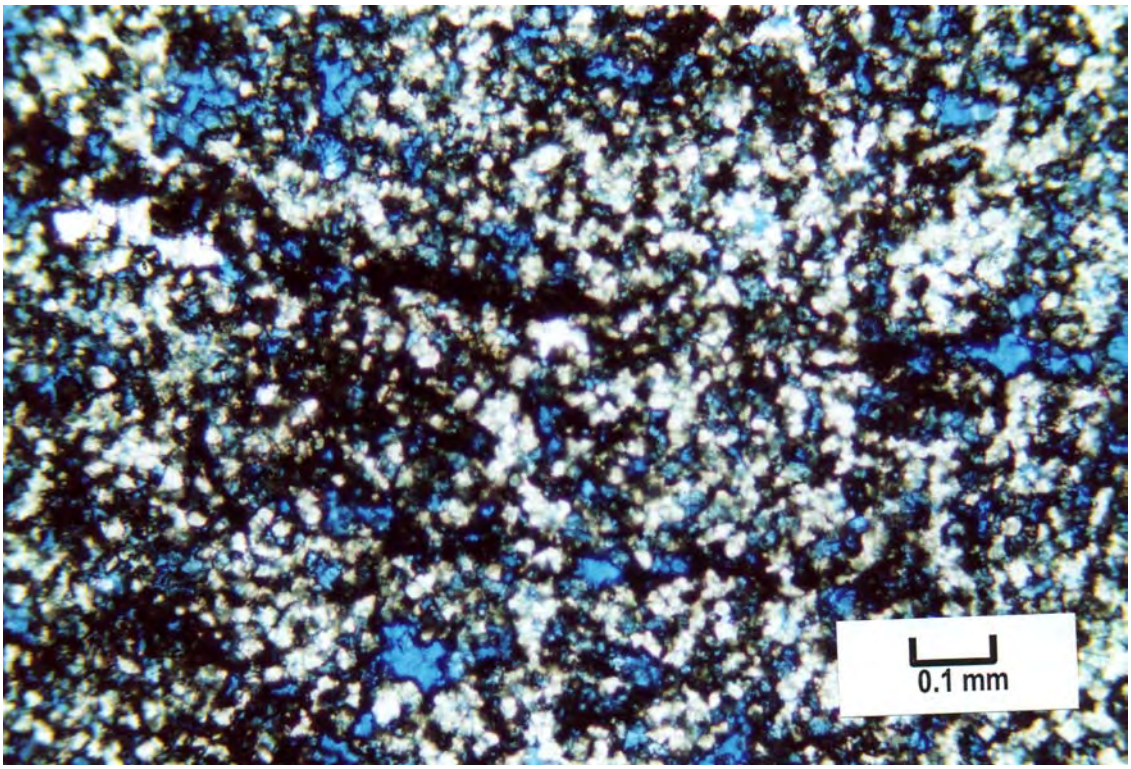

1.0 mm

CHEROKEE 22-14,
CHEROKEE FIELD

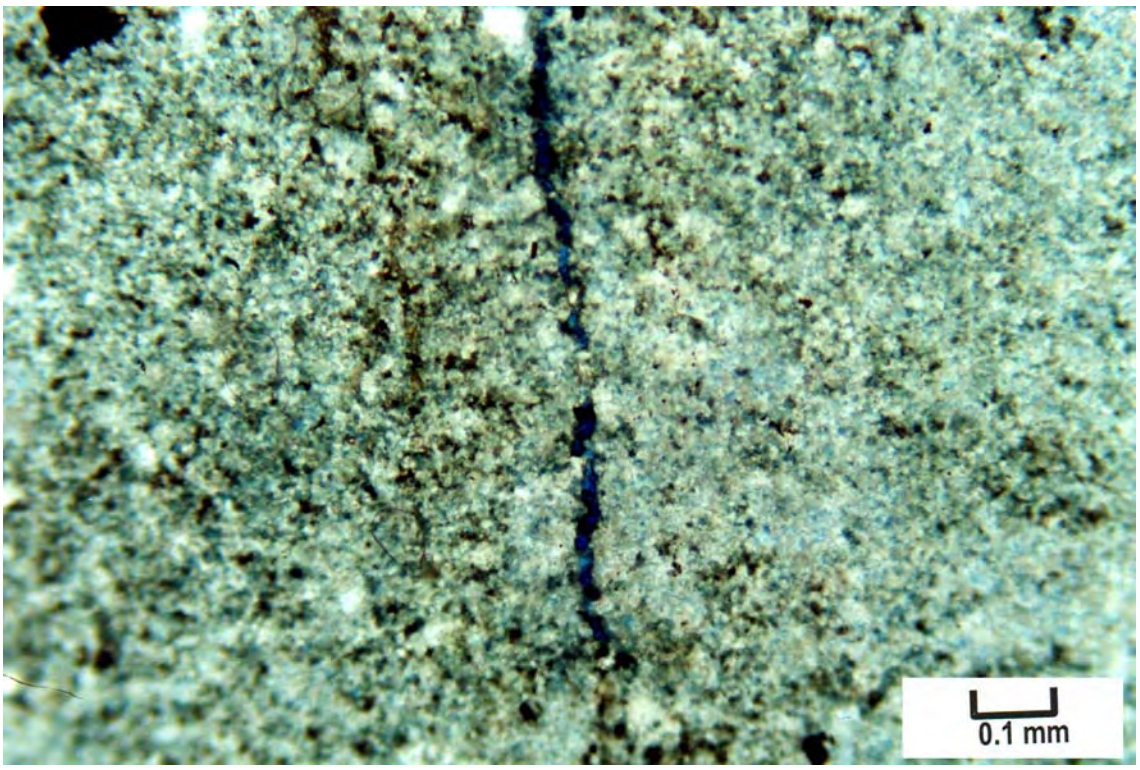
5,768.7 ft.

Plug:	⌀ - 22.9%, K – 215 md
Description:	dolomite; peloidal, packstone to grainstone, anhydrite replacement of grains and fossils, stylolitic, microporosity is late dissolution postdating stylolites, dissolution front probably early dolomite (hypersaline or mixing zone), shallow water, low sedimentation rate, high energy, hard pellet muds. There were two generations of oil migration – the first was cooked leaving pyrobitumen (solid, thermally altered [cooked out]) bridging micro-BC, then the second generation of oil migrated into the smaller pore throats.
Diagenetic events:	1) early dolomitization/dissolution of undolomitized grains (molds), 2) stylolitization (pressure solution), 3) late dissolution/microporosity development, 4) anhydrite replacement, 5) bitumen
Pore Types:	Mo, micro-BC (microporosity)



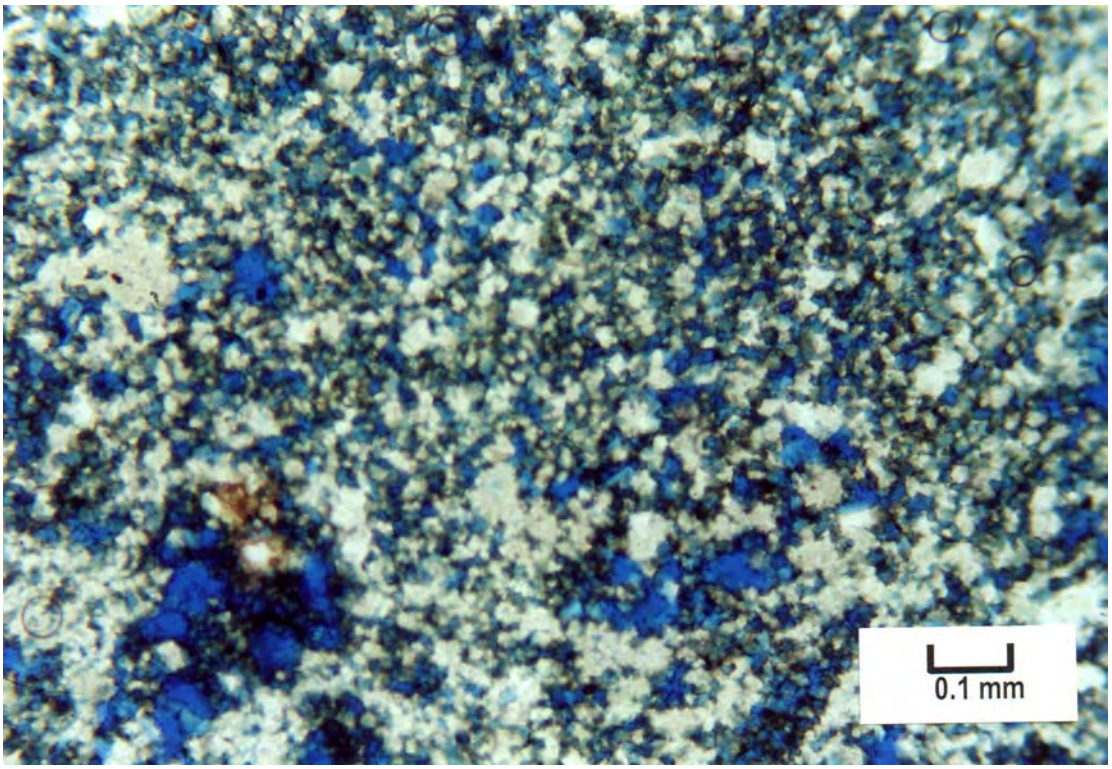
5,778.1 ft.

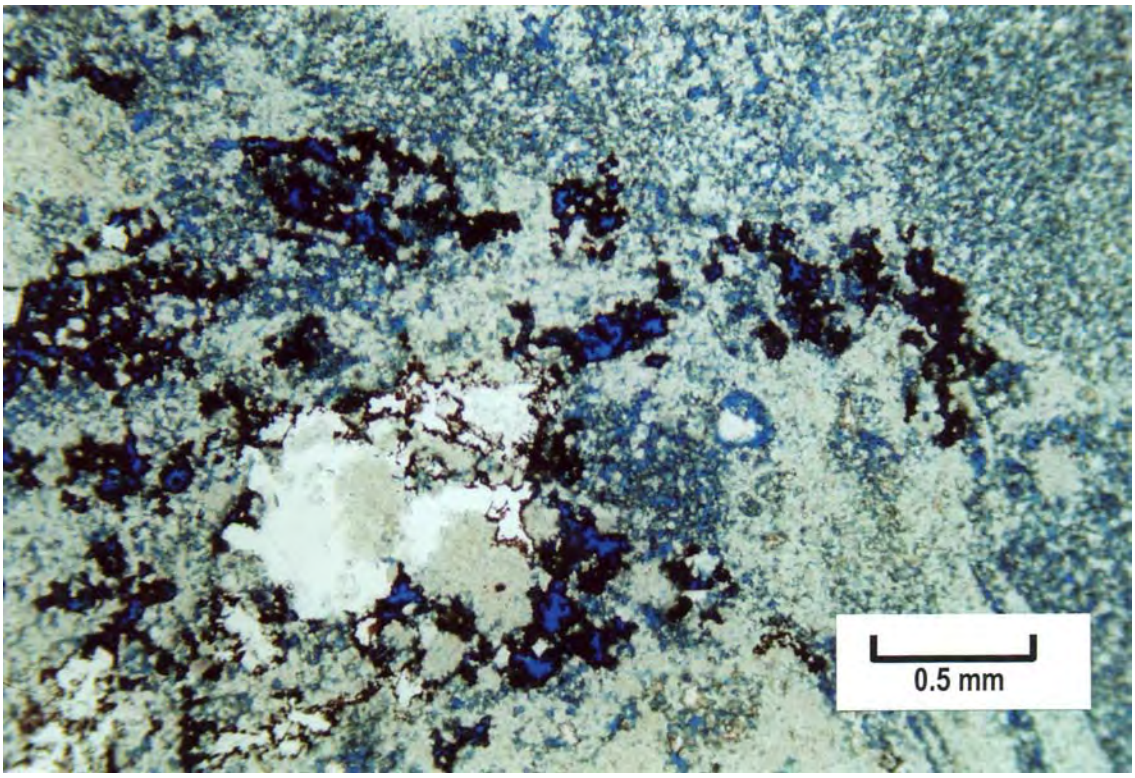
Plug :	⌀ - 15.4%, K – 1.4 md
Description:	dolomite, wackestone to mudstone, patchy microporosity (late solution event?), fractures (healed with anhydrite, open filled with bitumen), soft pellet mud facies, low energy, subtidal, accumulation fast, (check for source rock/kerogen).
Diagenetic events:	1) dolomitization, 2) late dissolution microporosity, 3) fracturing.
Pore Types:	micro-BC

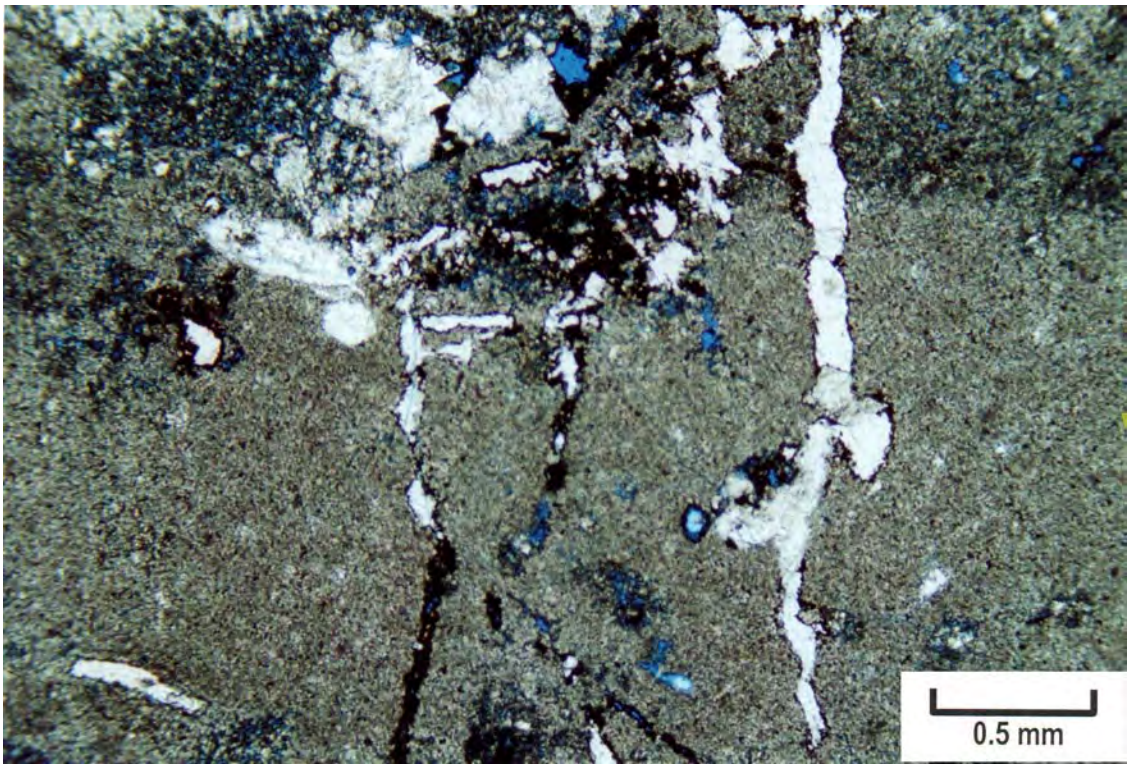


5,783.0 ft

Plug:	⌀ - 21.9%, K – 21.0 md
Description:	dolomite (tight), packstone to wackestone, with anhydrite replacement, peloids, crinoids, bryozoans, dissolution fronts with auto breccia fabric, some solution enlarged molds and channels, open marine, silicification with fibrous chert replacing anhydrite.
Diagenetic events:	1) early dolomitization, 2) late solution enlarged microporosity along dissolution fronts, 3) anhydrite replacement, 4) silicification, 5) bitumen plugging
Pore Types:	Mo, micro-BC, CH

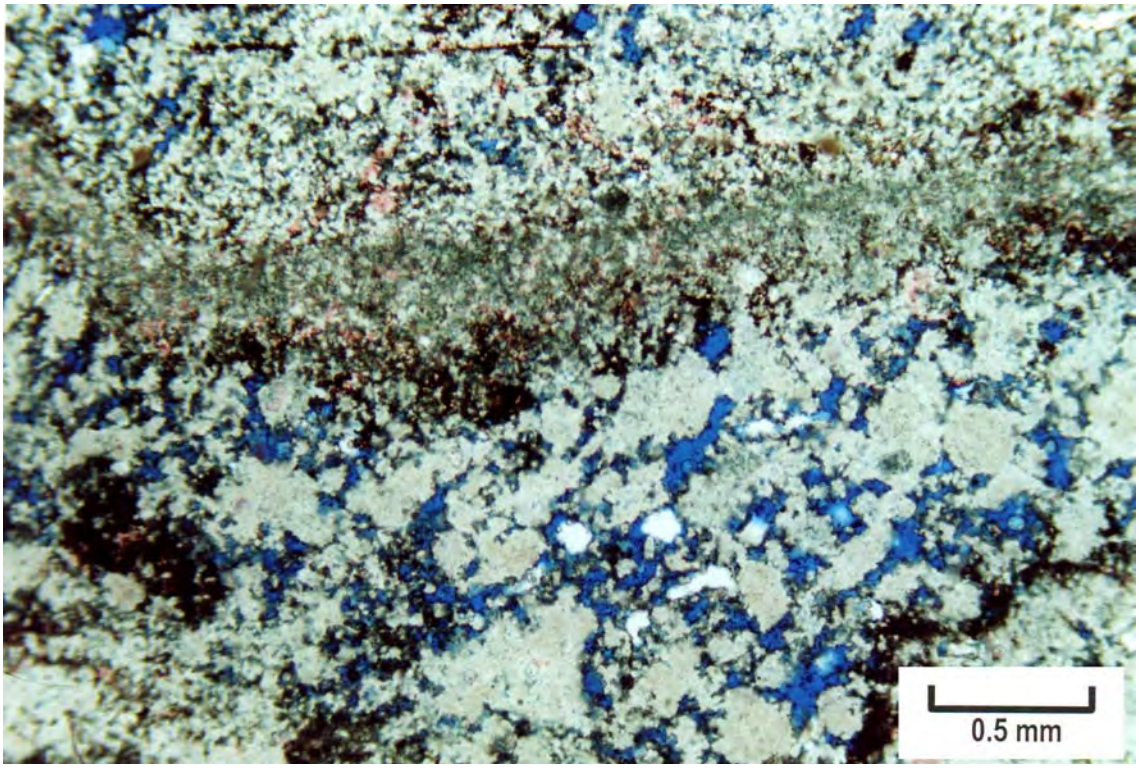



0.5 mm


0.5 mm

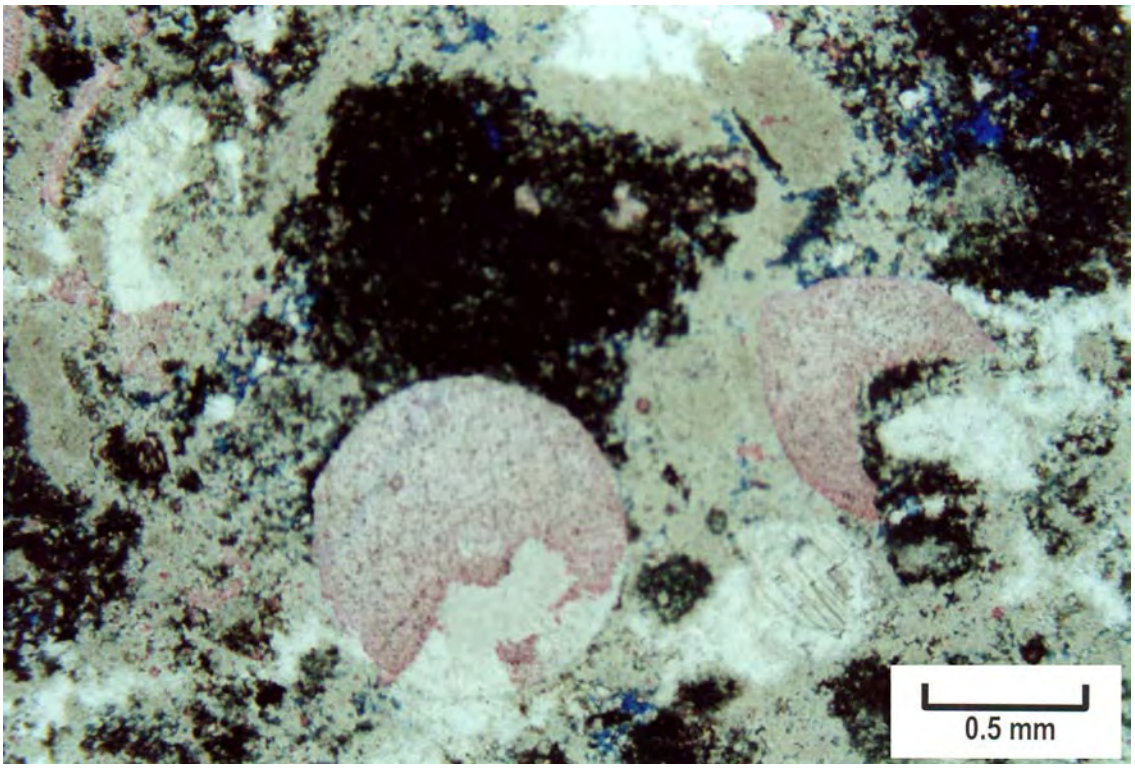
5,789.6 ft.

Plug :	⌀ - 15.5%, K - 7.4 md
Description:	calcareous dolomite, packstone to wackestone, peloidal, skeletal, open marine, solution fronts, pseudo-brecciation (similar to 5783.0 ft.), late burial patchy irregular porosity (carbon dioxide bearing fluids from depth possible cause of dissolution).
Diagenetic events:	1) early dolomitizations, 2) late dissolution, 3) late anhydrite plugging/replacement, 4) bitumen plugged?
Pore Types:	micro-BC, irregular CH, some open fractures



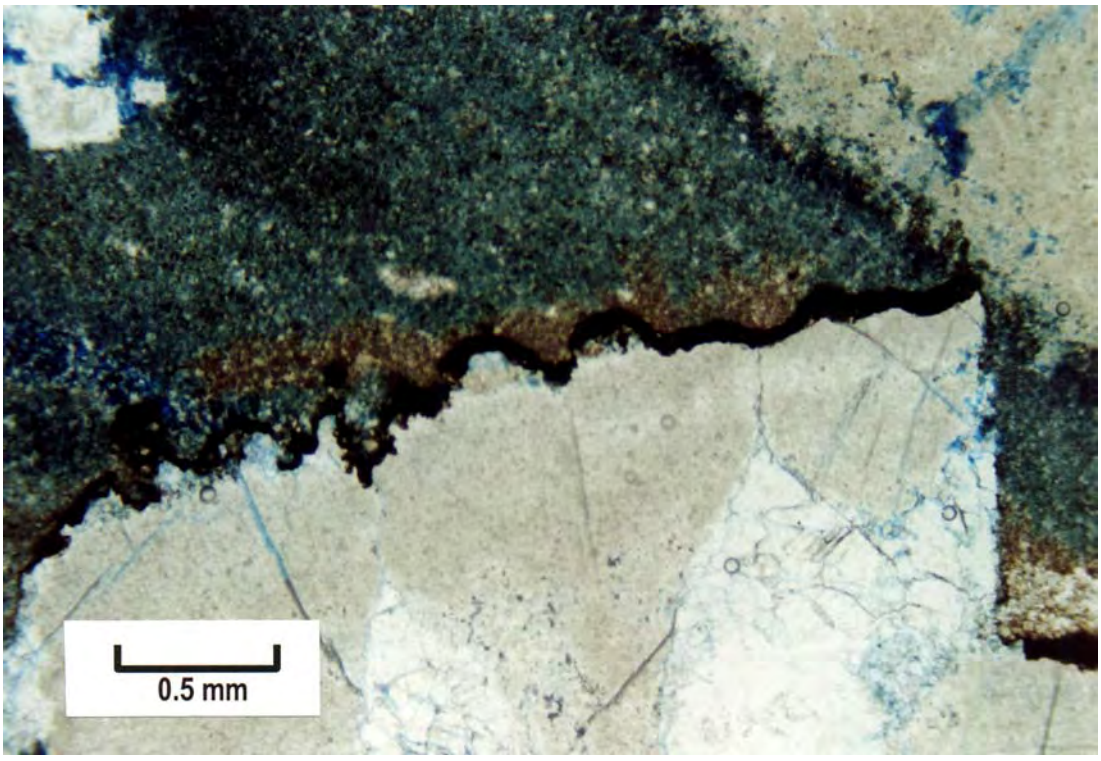
5,791.1 ft.

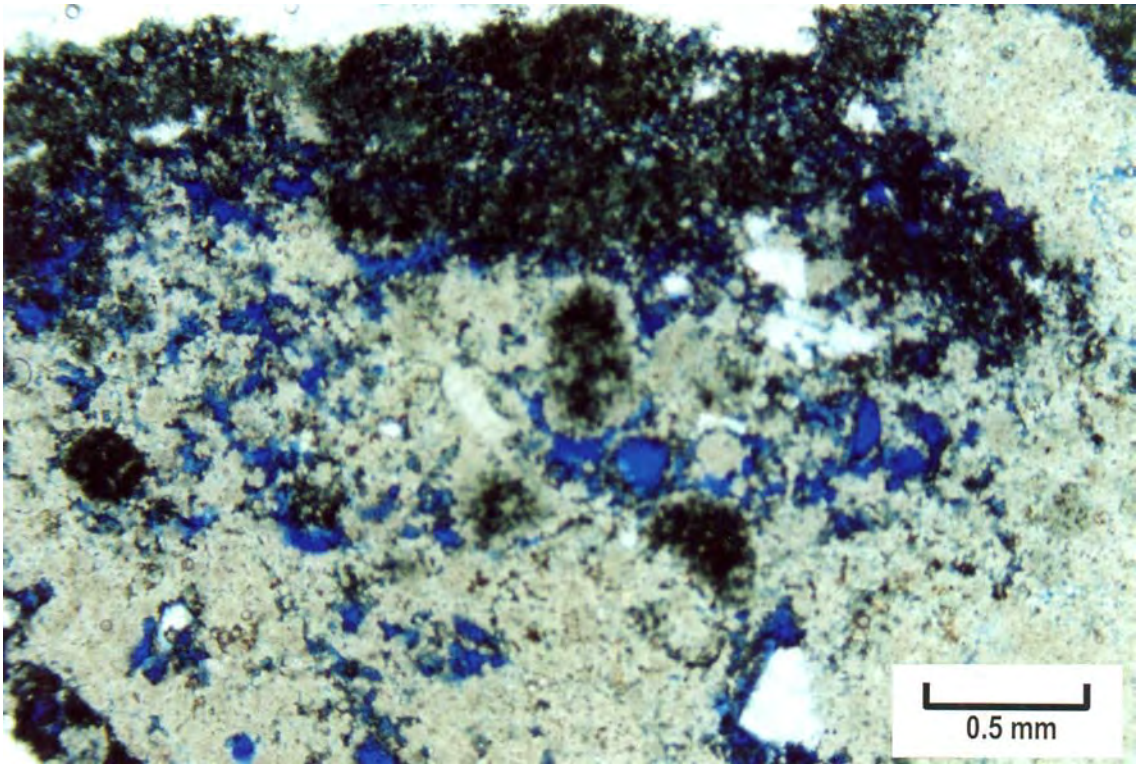
Plug:	⌀ - 14.1%, K – 3.1 md
Description:	calcareous dolomite, packstone to wackestone, crinoidal, patchy microporosity, and irregular solution enlarged channels, microporosity is impregnated with bitumen, pseudo brecciated (late dissolution feature, appears as phylloidal but not), similar to 5789.6 ft. but less in anhydrite and more bitumen.
Diagenetic events:	1) early dolomitization, 2) late dissolution, 3) late anhydrite plugging/replacement, 4) bitumen plugged.
Pore Types:	micro-BC, CH



5,801.3 ft.

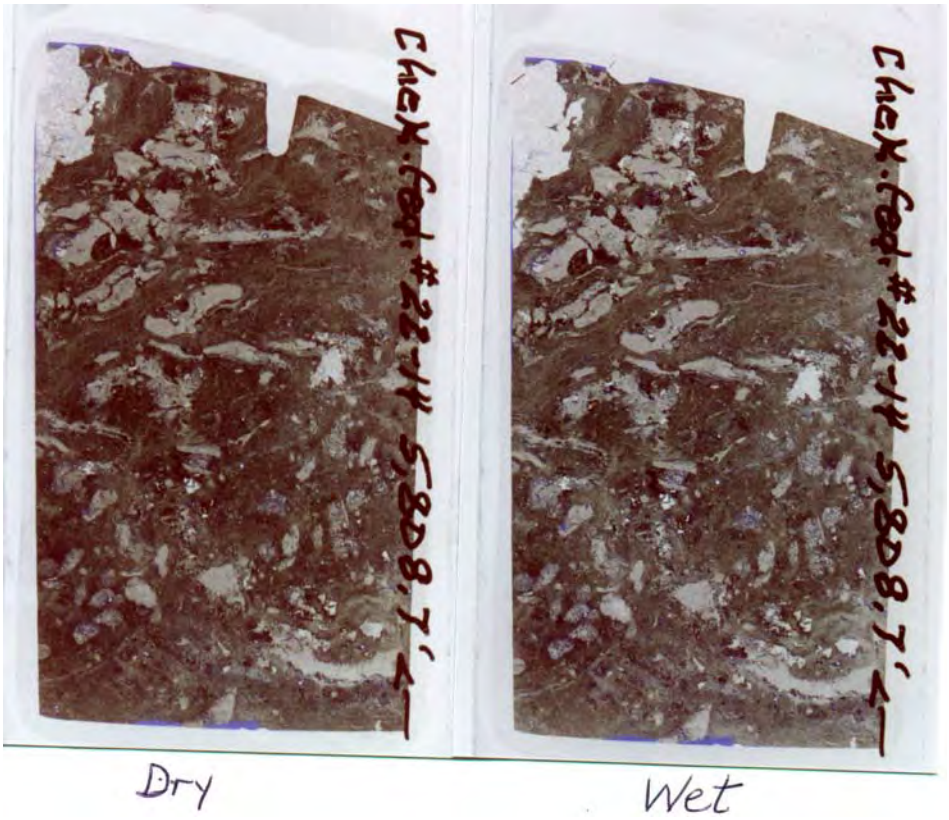
Plug:	⌀ - 18.4%, K – 8.3 md
Description:	dolomitic wackestone, stylolitic, solution front, patchy microporosity with intense bitumen plugging, pseudo brecciation, irregular channel pores, dark clay looking material is bitumen plugging, original fabric 50%, dissolution 50%, late microporosity and dissolution of carbonate by acid from: a) aggressive hydrothermal solutions from depth, b) carbon dioxide escaping from the Mississippian Leadville Limestone, and c) decarboxylation of organic matter.
Diagenetic events:	1) early dolomitization, 2) stylolitization, 3) late dissolution, 4) bitumen plugging
Pore Types:	micro-BC, CH




0.5 mm

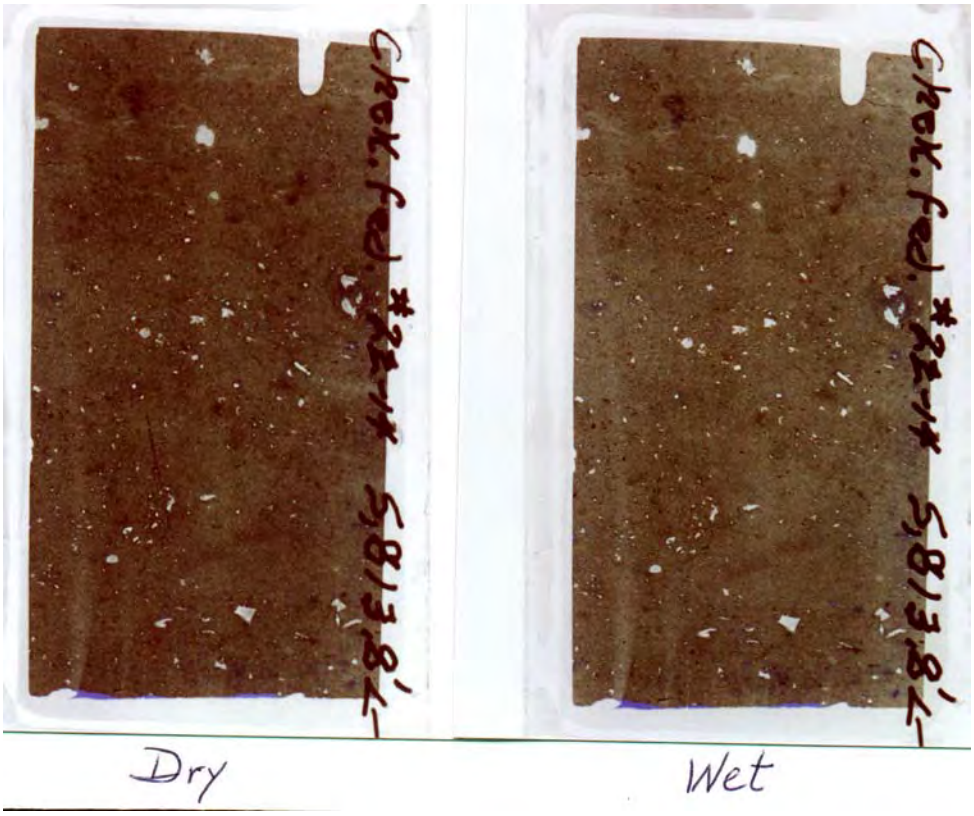
5,808.7 ft.

Plug:	⌀ - 18.6%, K – 5.1 md
Description:	dolomite, wackestone to mudstone, pseudo brecciation (not clay rich), solution fronts, irregular microporosity and channels, corroded pseudo clasts of tight original dolomite (solution reflux).
Diagenetic events:	1) early dolomitization (seepage reflux from hypersaline brines), 2) stylolitization from compaction and pressure solution, 3) late dissolution to form microporosity and channel pores, 4) anhydrite plugging and replacement, some silica, 5) bitumen plugging.
Pore Types:	micro-BC, CH



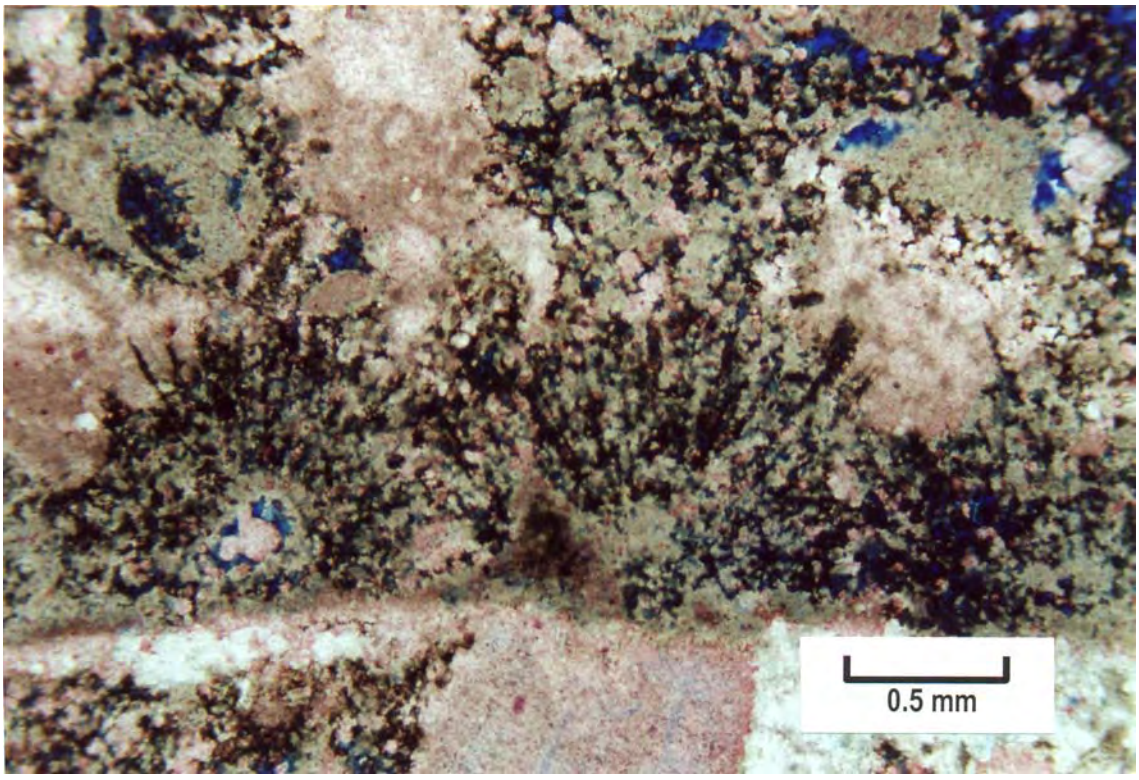
5,813.8 ft.

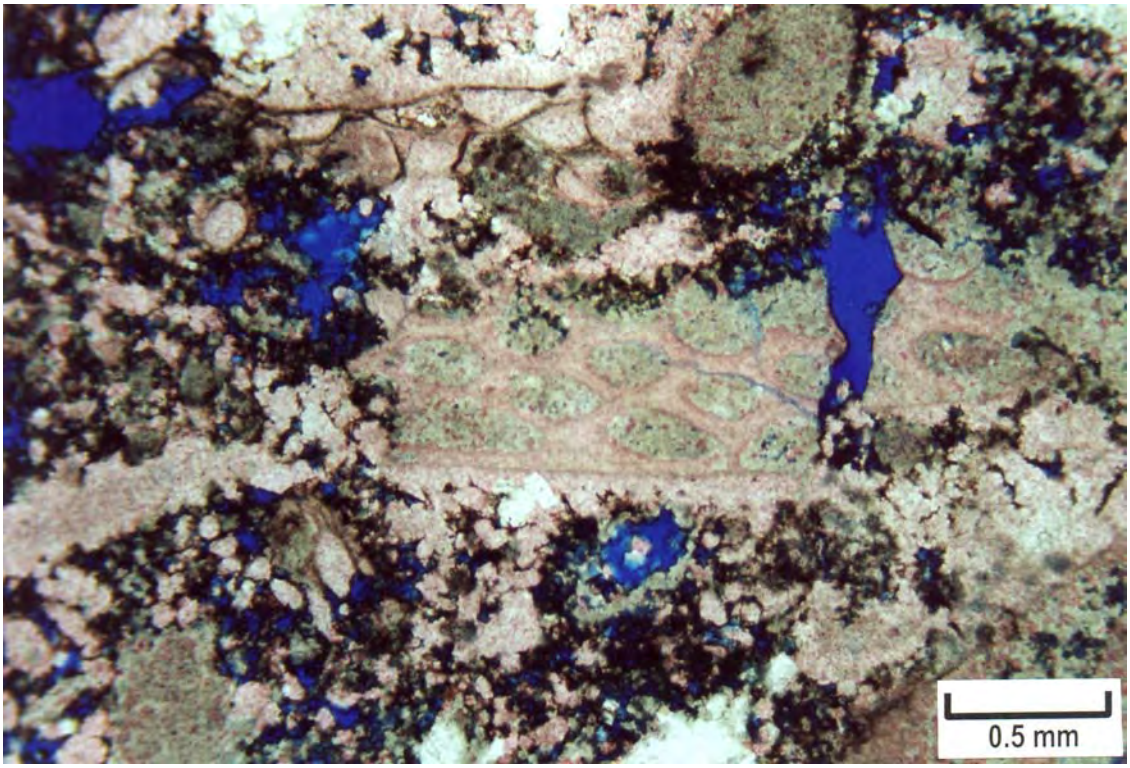
Plug:	⌀ - 19.8%, K – 3.5 md
Description:	dolomite, wackestone to packstone, uniform microporosity (90% with outlying signatures) bitumen plugging, a few channel pores and solution enlarged fractures, pseudo clasts of original dolomite.
Diagenetic events:	1) early dolomitization, 2) late dissolution to form microporosity and channel pores, 3) bitumen plugging.
Pore Types:	micro-BC, CH



5,821.2 ft.

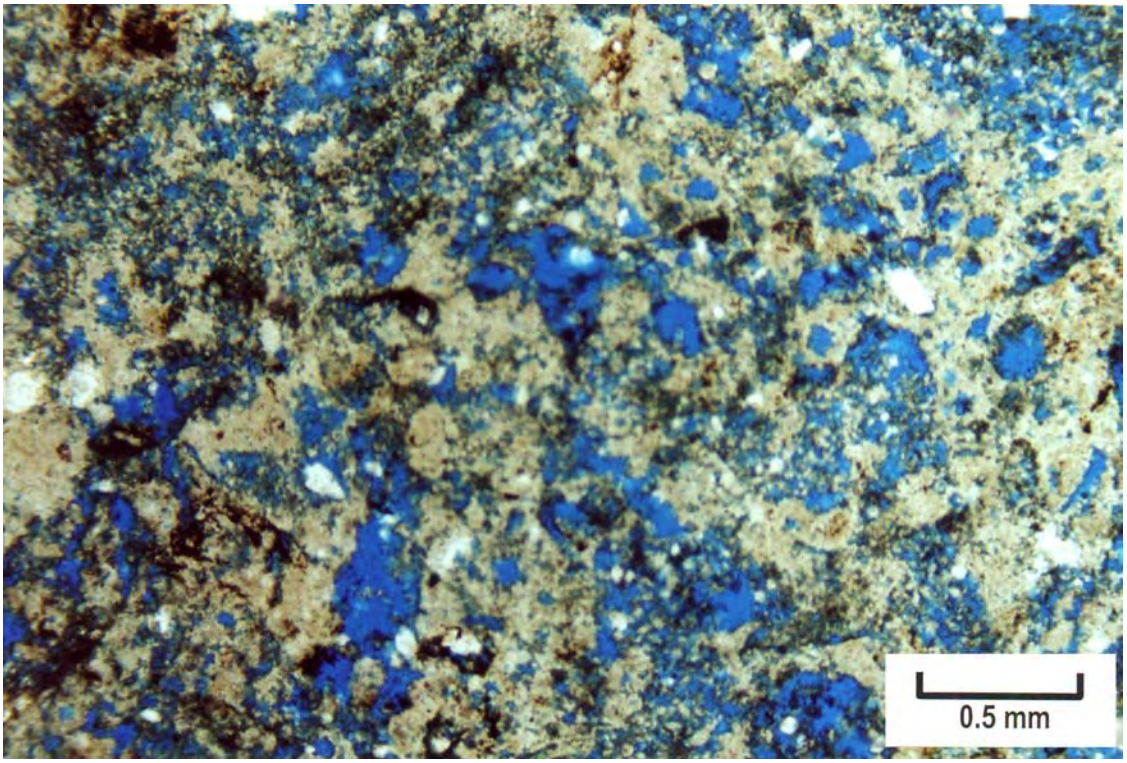
Plug:	⌀ - 8.5%, K – 0.79 md
Description:	dolomitic limestone, phylloidal bafflestone, encrusting forams, fibrous fans of magnesium calcite cement (early marine) along phylloid plates, corroded dissolution porosity in limestone with late anhydrite and bitumen plugging.
Diagenetic events:	1) limestone with primary porosity, 2) early marine cement, 3) partial early dolomitization (pre-burial), 4) stylolites, 5) late dissolution, 6) anhydrite plugging, 7) bitumen plugging.
Pore Types:	Mo, micro-BC, CH, vugs

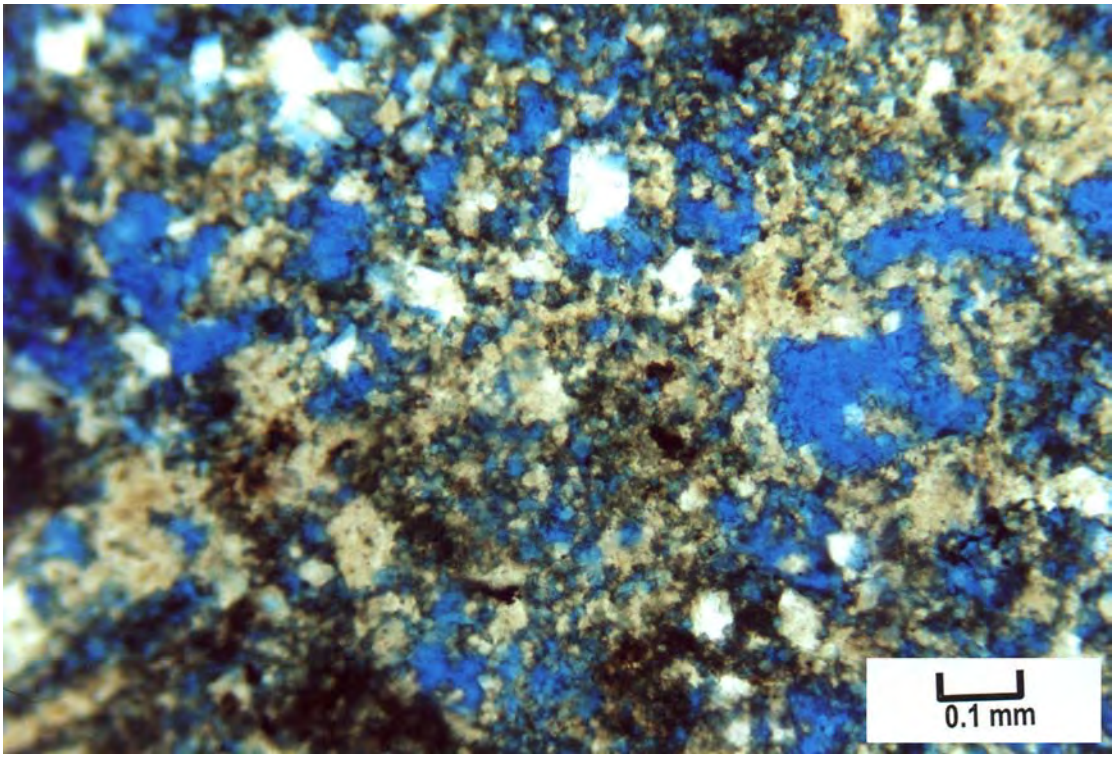



0.5 mm

5,827.7 ft.

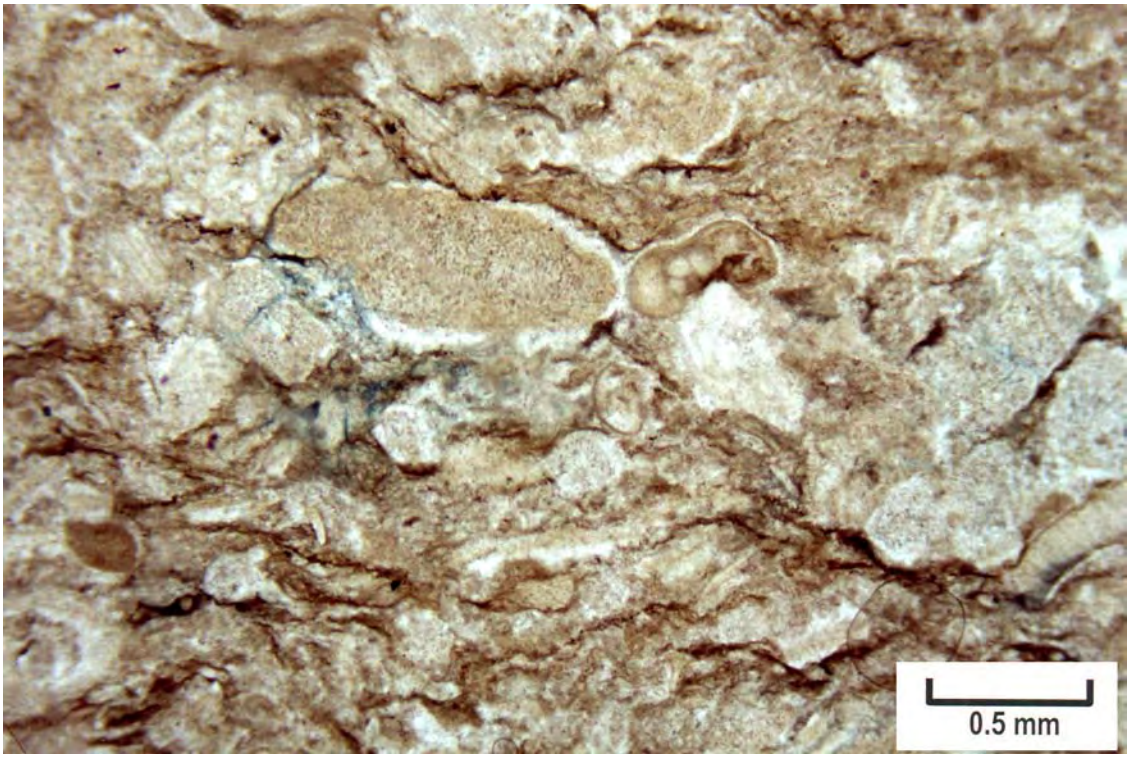
Plug:	⌀ - 17.1%, K – N.D. (2 to 7 md)
Description:	dolomite, wackestone to packstone, corroded dissolution fronts, anhydrite and bitumen plugging.
Diagenetic events:	1) early dolomitization, 2) late dissolution to form microporosity and channel pores, 3) anhydrite plugging, 4) bitumen plugging.
Pore Types:	Mo, micro-BC, CH




0.1 mm

5,830.6 ft.

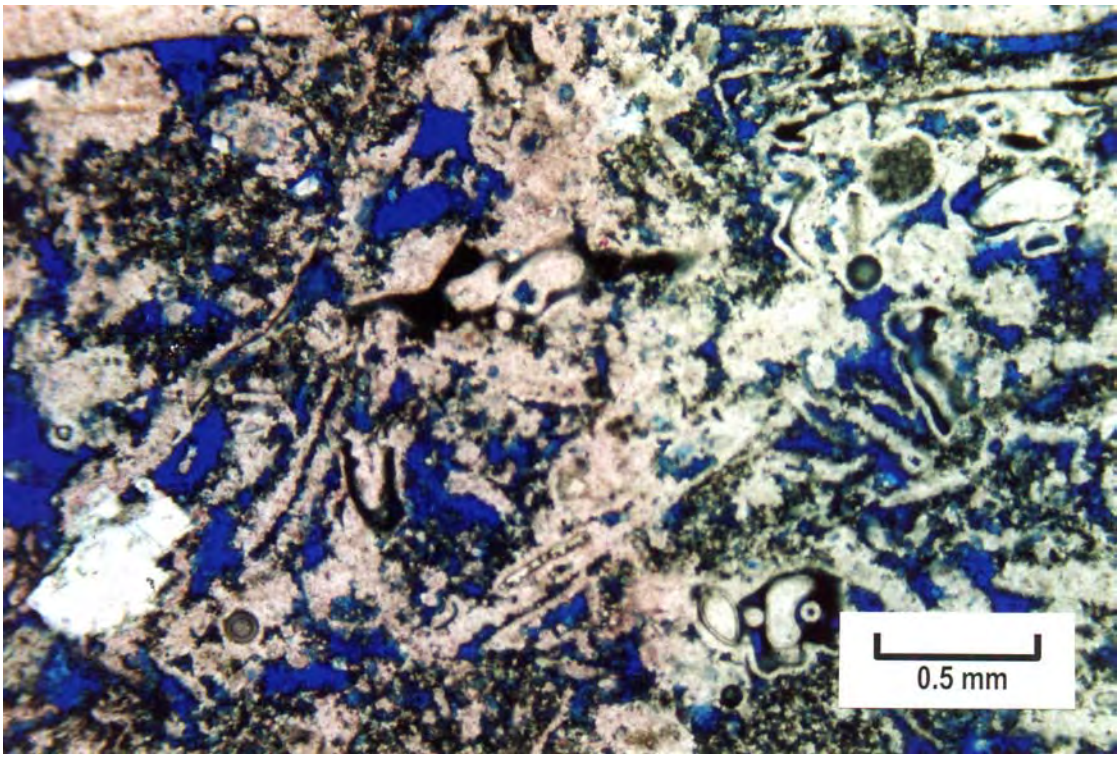
Plug:	⌀ - 2.3%, K – 0.04 md
Description:	fossiliferous limestone, packstone to grainstone, bryozoans, brachiopods, crinoids, coated grains, bethonic forams, fusilinids, open marine facies, compaction stylolites, slightly dolomitic (< 10%) (post stylolites), no dissolution or microporosity.
Diagenetic events:	1) some dolomitization, 2) late anhydrite plugging.
Pore Types:	tight

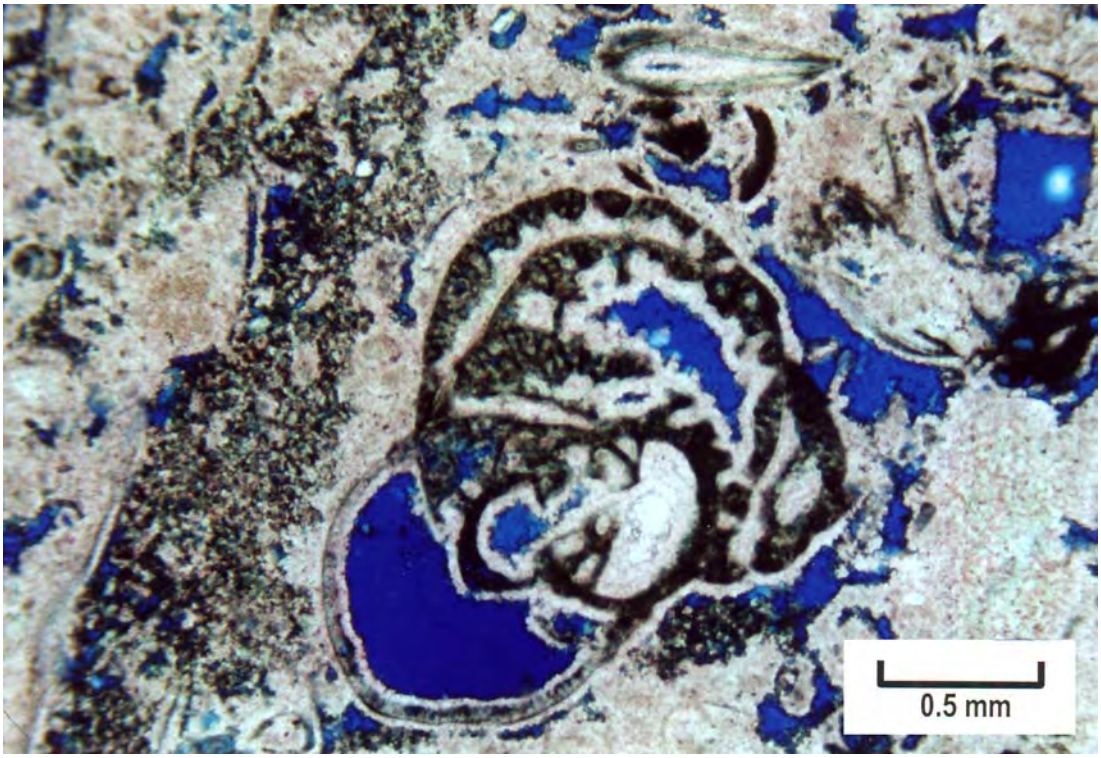

0.5 mm


0.5 mm

5,833.4 ft.

Plug:	⌀ - 14.7%, K – 4.7 md
Description:	skeletal limestone, grainstone, primary porosity, some mixing zone cement, early dissolution molds (some etched later) and dog-toothed spar (meteoric cement), some late patchy dissolution and microporosity, some pseudo-brecciation along dissolution fronts, solution-enlarged fractures, bitumen plugging, a few channel pores and solution enlarged fractures, pseudo clasts of original dolomite.
Diagenetic events:	1) early dissolution, 2) mixing zone dolomitization, 3) dog-tooth sparry cement, 4) late dissolution to form microporosity, 5) late anhydrite plugging, 6) bitumen plugging.
Pore Types:	BP, WP, Mo, micro-BC, FR

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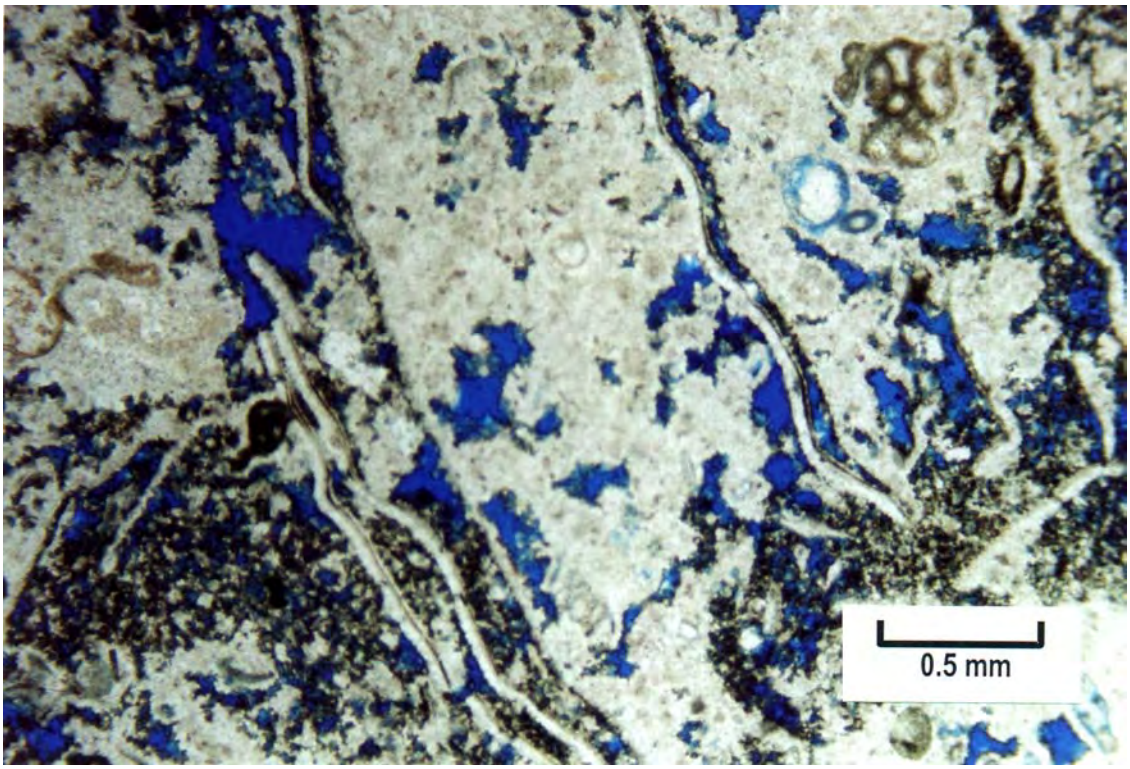
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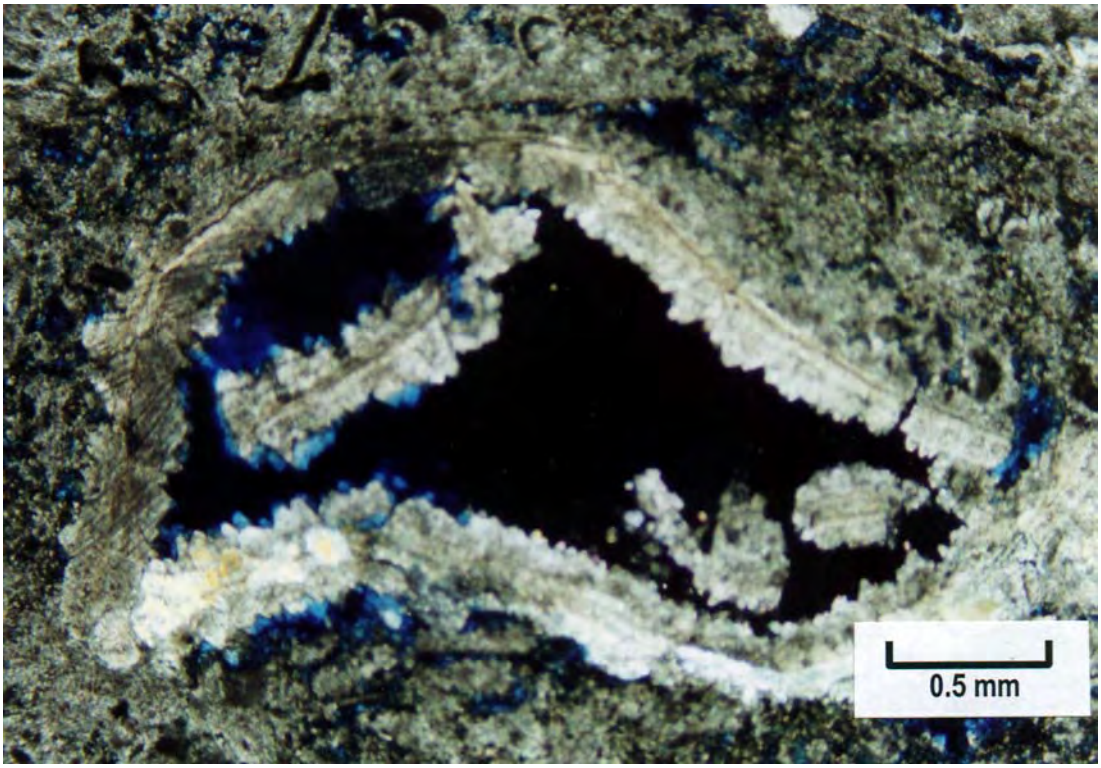
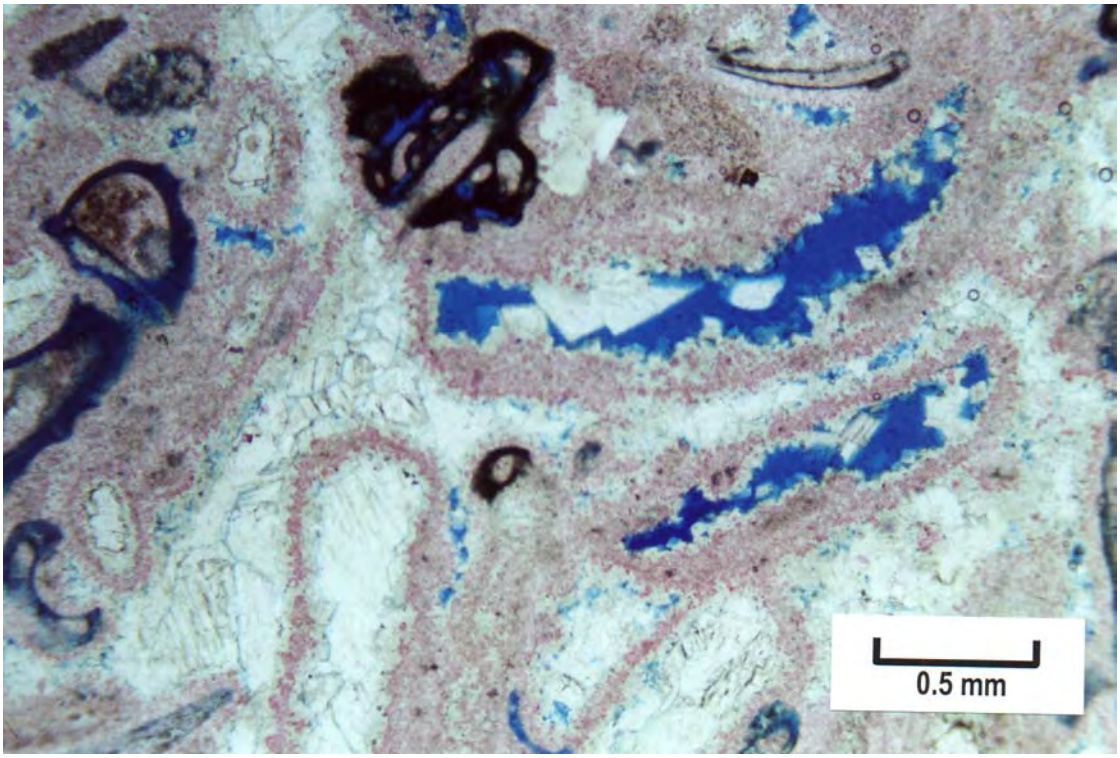
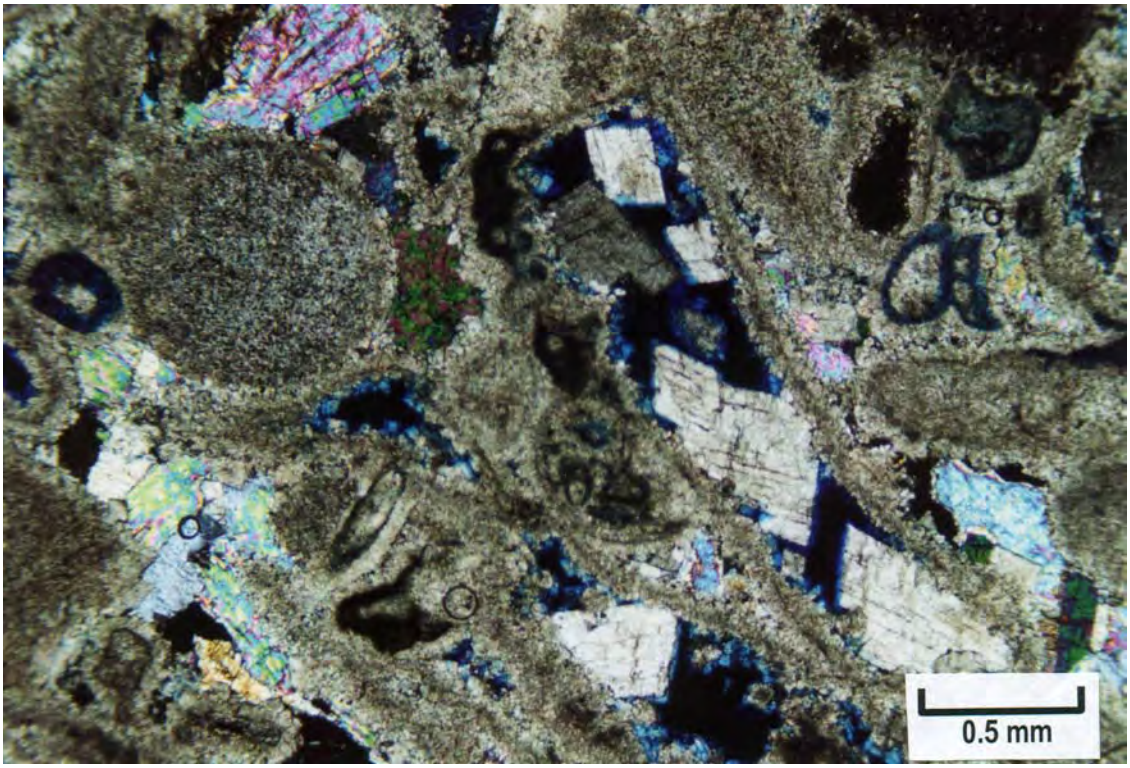

0.5 mm

5,836.8 ft.

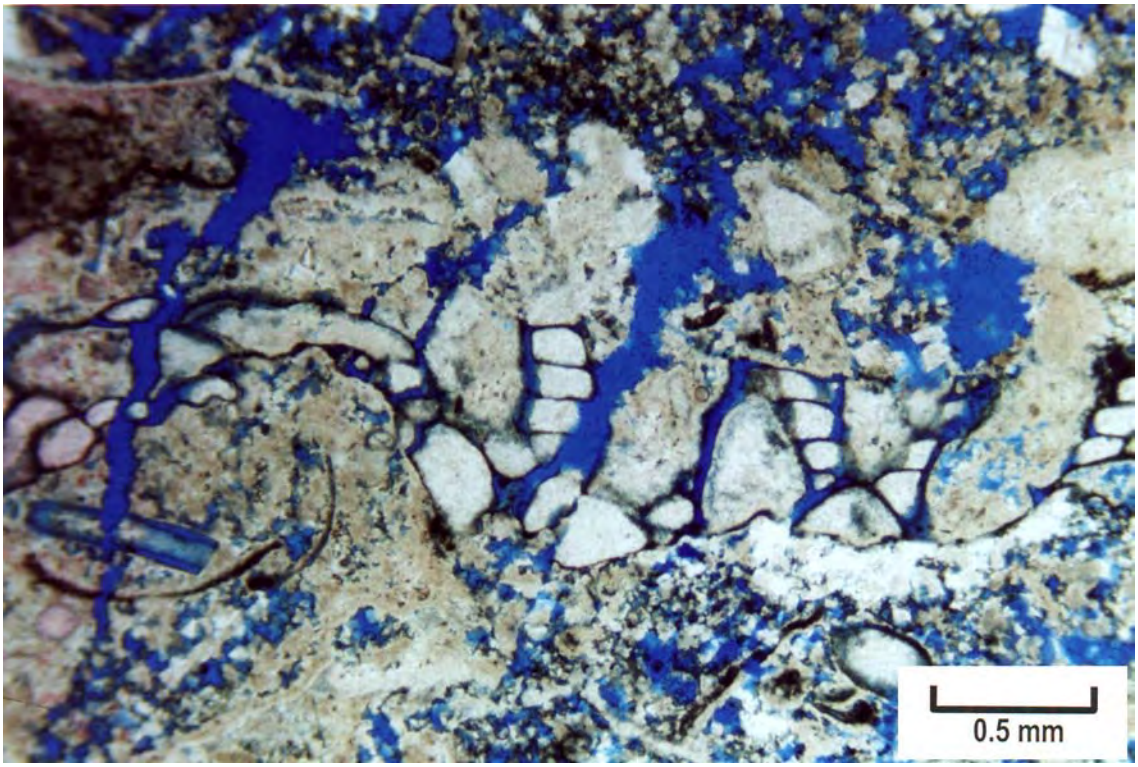
Plug:	⌀ - 9%, K – 2.3 md
Description:	skeletal phylloid-algal limestone, bafflestone/grainstone, bryozoans, algal plates, echinoderms, interparticle and early moldic porosity with anhydrite plugging early pore space, minimal microporosity, some early syntaxial cements and minor late coarse rhombic dolomite cements growing in molds, no bitumen.
Diagenetic events:	1) early syntaxial cement, 2) early dissolution, 3) late dolomite cementation in pores, and 4) anhydrite plugging.
Pore Types:	BP, Mo, some micro-BC




0.5 mm

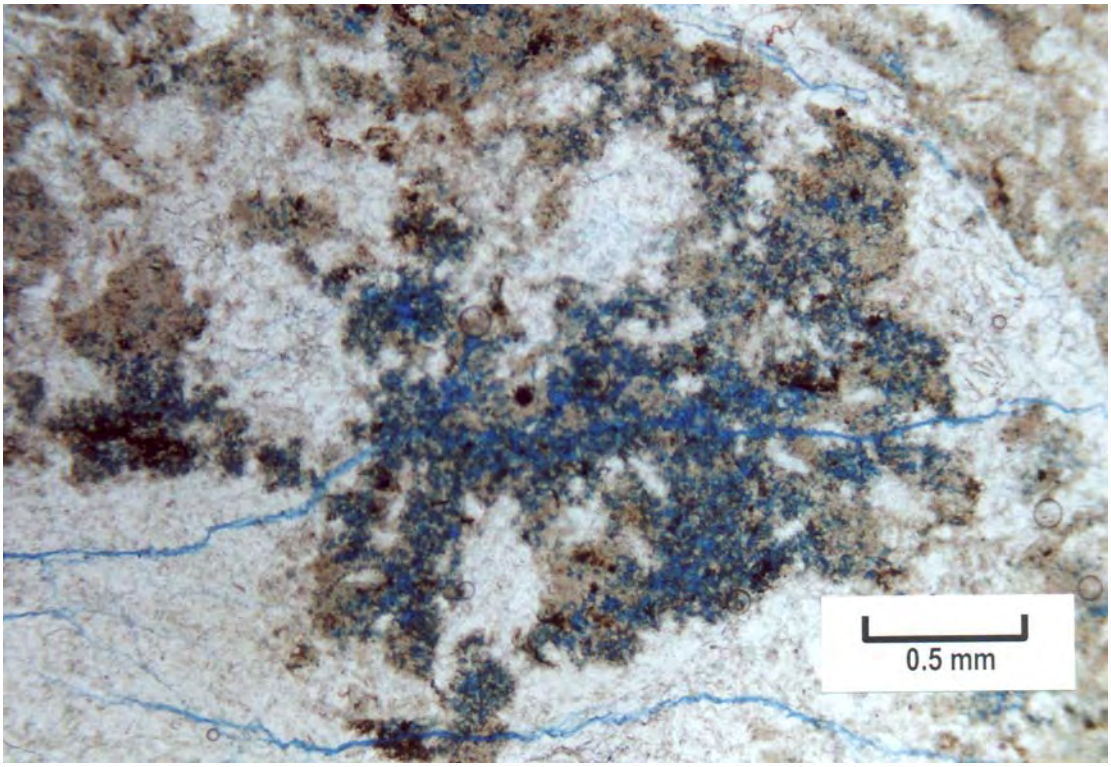
5,849.7 ft.

Plug:	⌀ - 6.1%, K – 1.4 md
Description:	phylloid algal limestone, bafflestone, forams (*Tetrataxis*) around phylloid algal plates, dissolution forming microporosity and channel pores, and solution-enlarged open fractures, and late anhydrite plugging, some bitumen around microporosity.
Diagenetic events:	1) late dissolution to form microporosity, 2) late anhydrite plugging, 3) bitumen plugging.
Pore Types:	BP, SH, Mo, micro-BC, CH, FR



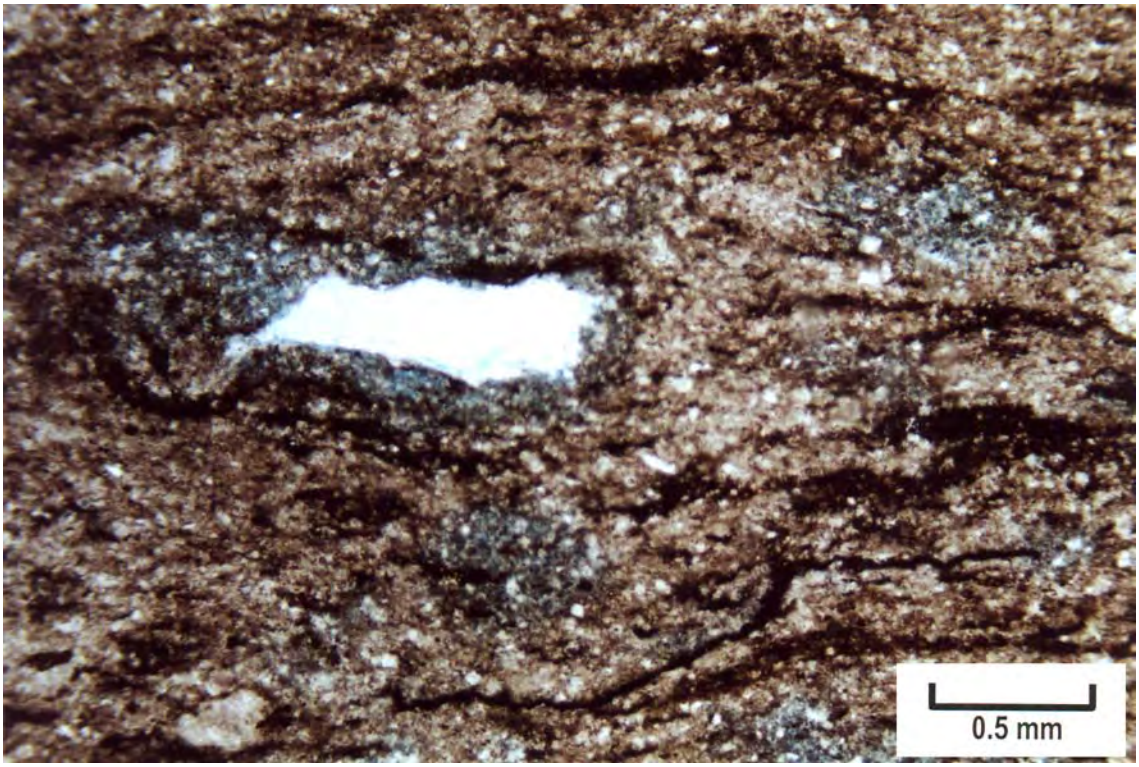
5,857.4 ft.

Plug:	⌀ - 7.2%, K – 1.6 md
Description:	skeletal dolomite, wackestone, crinoids, solution, enlarged microfractures, late dissolution microporosity and channel pores, had high porosity but was reduced by much anhydrite plugging and replacement, minor bitumen.
Diagenetic events:	1) early mixing zone dolomitization, 2) late dissolution, and 3) late anhydrite plugging
Pore Types:	Mo, micro-BC, CH, micro-FR



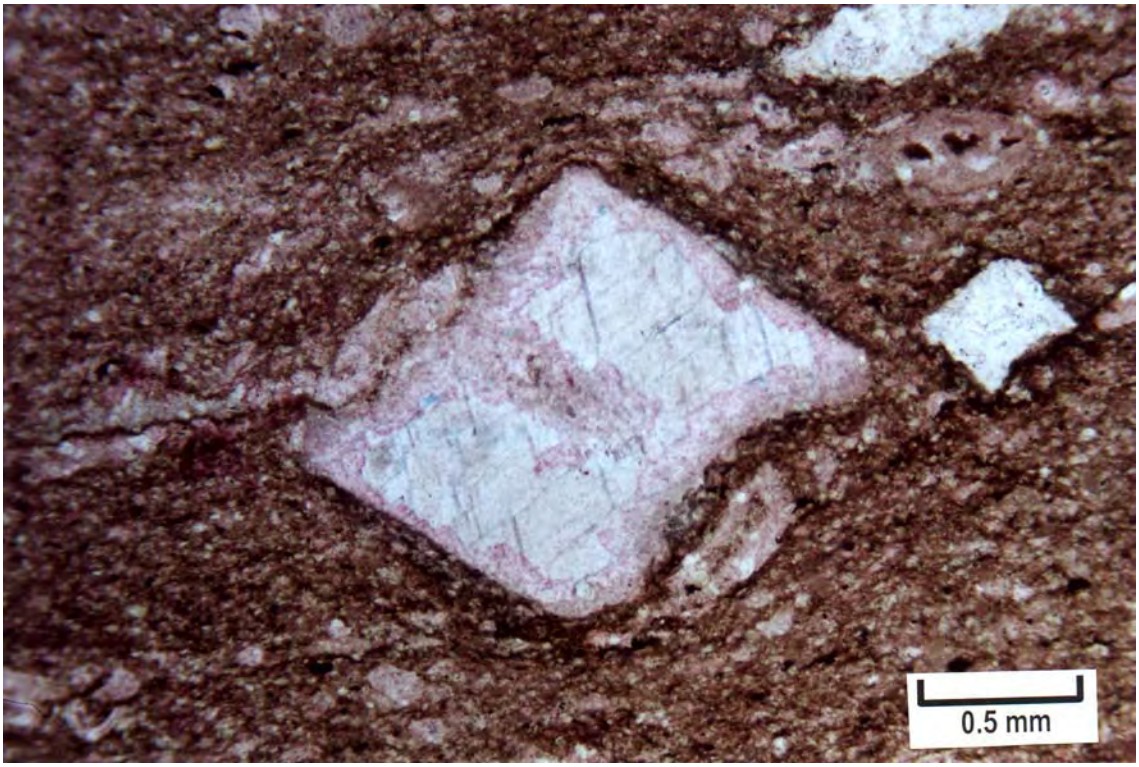
5,864.1 ft.

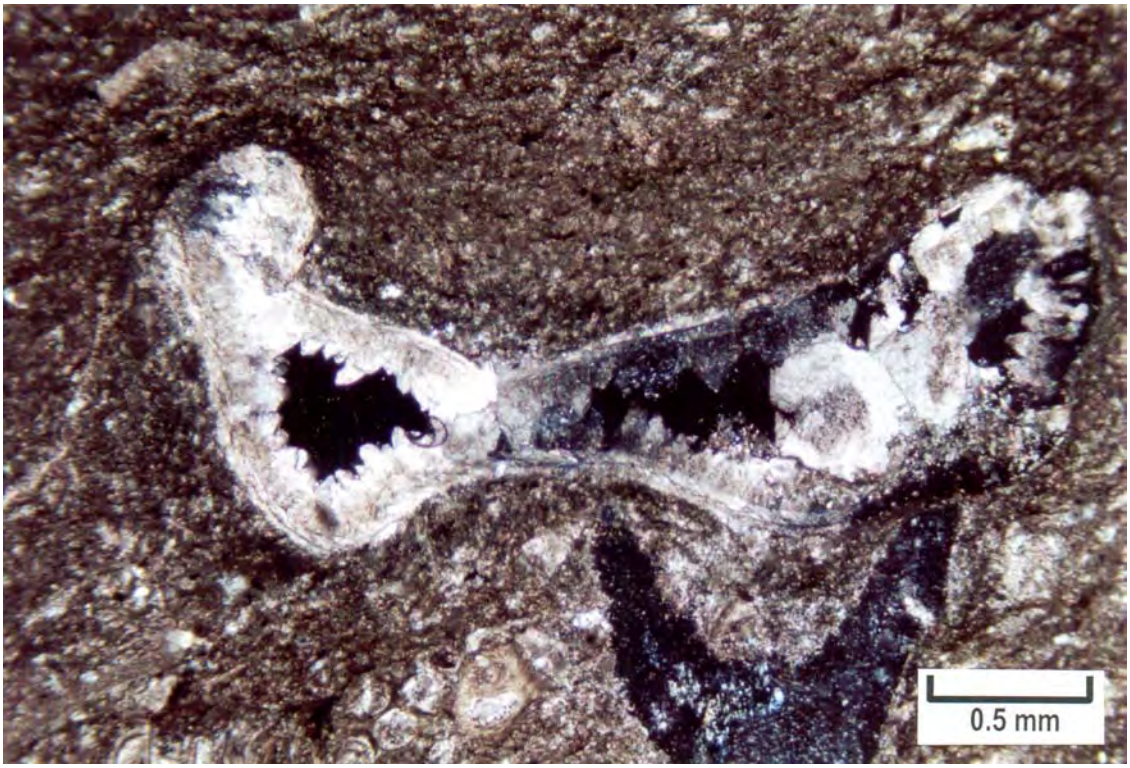
Plug:	⌀ - 11.2%, K – 0.1 md
Description:	dolomite with quartz silt and sponge spicules, late dissolution and formation of microporosity following wispy seams of stylolites.
Diagenetic events:	1) early mixing zone dolomitization, 2) late dissolution to form microporosity, 3) stylolitization
Pore Types:	micro-BC



5,870.3 ft.

Plug:	⌀ - 4.4%, K – 0.02 md
Description:	crinoidal wackestone, late-burial diagenesis.
Diagenetic events:	1) late calcite spar, 2) ferroan dolomite within crinoids, 3) non-ferroan saddle dolomite, 4) silicification (chert).
Pore Types:	Mo?

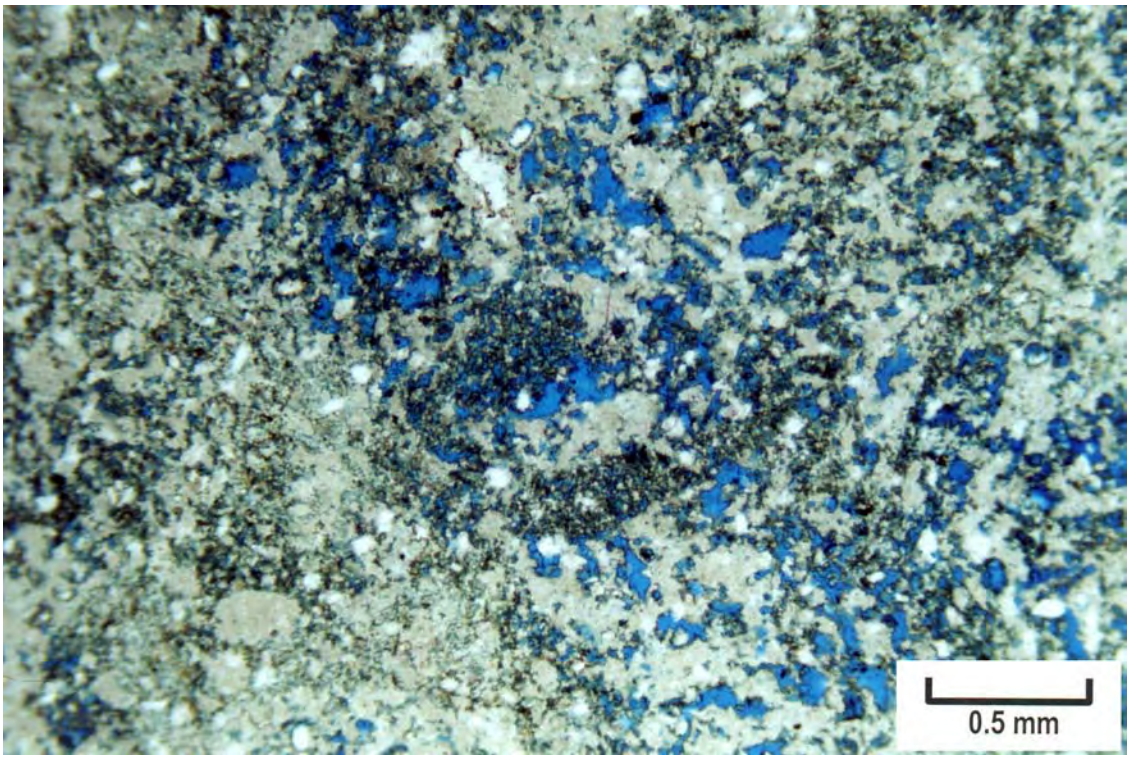


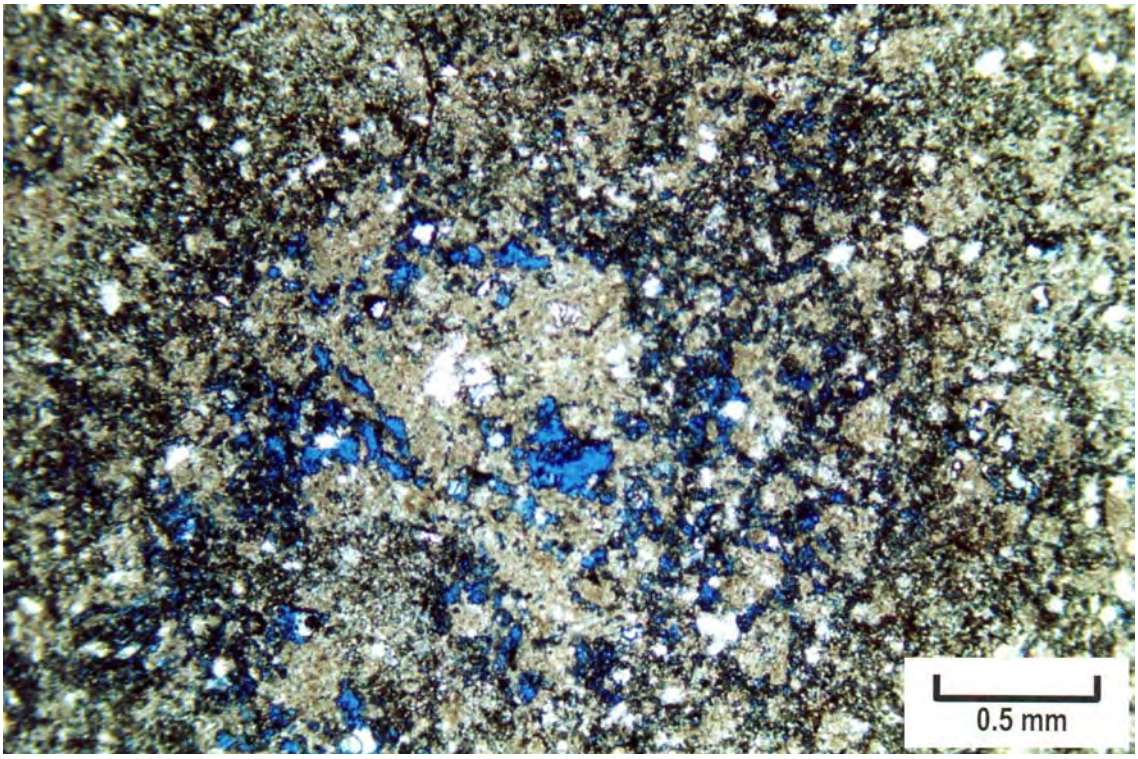

0.5 mm

CHEROKEE 33-14,
CHEROKEE FIELD

5,773.9 ft.

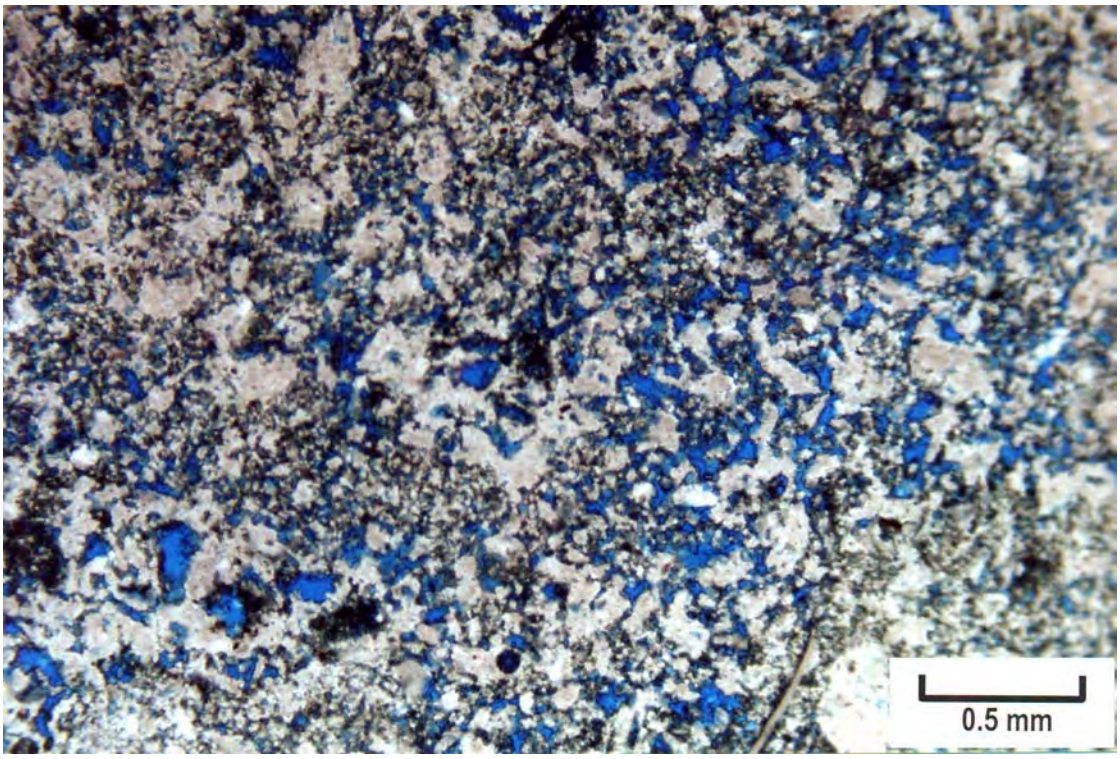
Plug:	⌀ - 19.1%, K – 11 md
Description:	dolomite; packstone to wackestone, pseudo-brecciation and pseudoclasts (islands of matrix), intense dissolution with solution enlargement of molds to create channels, some anhydrite replacement (10%), and bitumen.
Diagenetic events:	1) early dolomitization, 2) dissolution/moldic porosity development, 3) extensive microporosity development, 4) anhydrite replacement, 5) bitumen in micropores
Pore Types:	Mo, CH, micro-BC

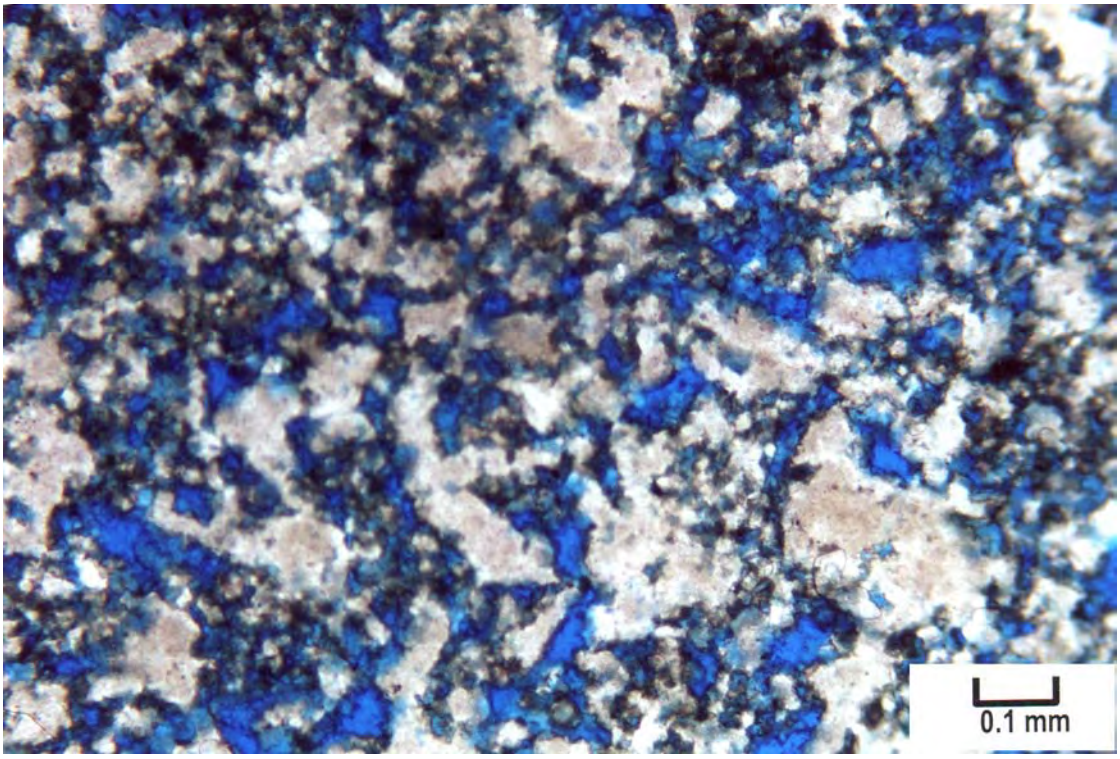



0.5 mm

5,777.5 ft.

Plug:	⌀ - 21.9%, K – 37 md
Description:	dolomite; packstone to wackestone, patchy pseudo-brecciation with a swirly solution front, heavily modified by dissolution creating late molds, vugs, channels, and microporosity, patchy anhydrite replacement, and a great amount of bitumen.
Diagenetic events:	1) early dolomitization, 2) dissolution/moldic porosity development, 3) extensive microporosity development, 4) anhydrite replacement, 5) bitumen.
Pore Types:	Mo, CH, vugs, micro-BC

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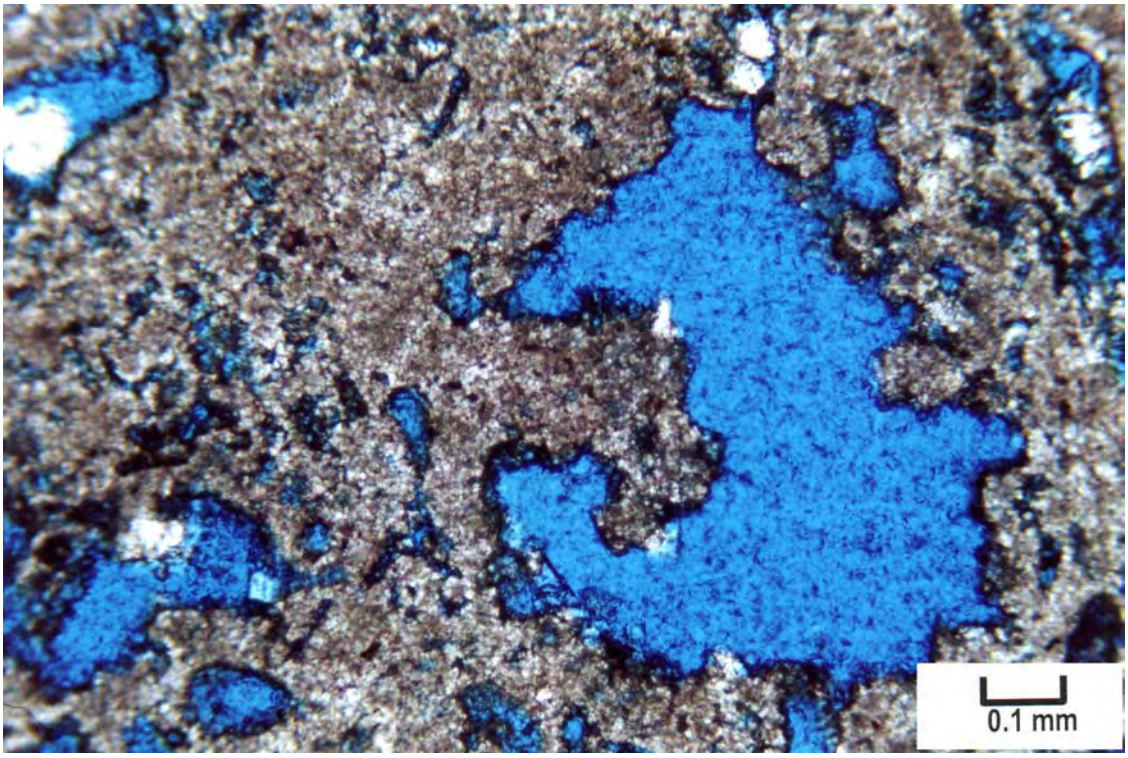
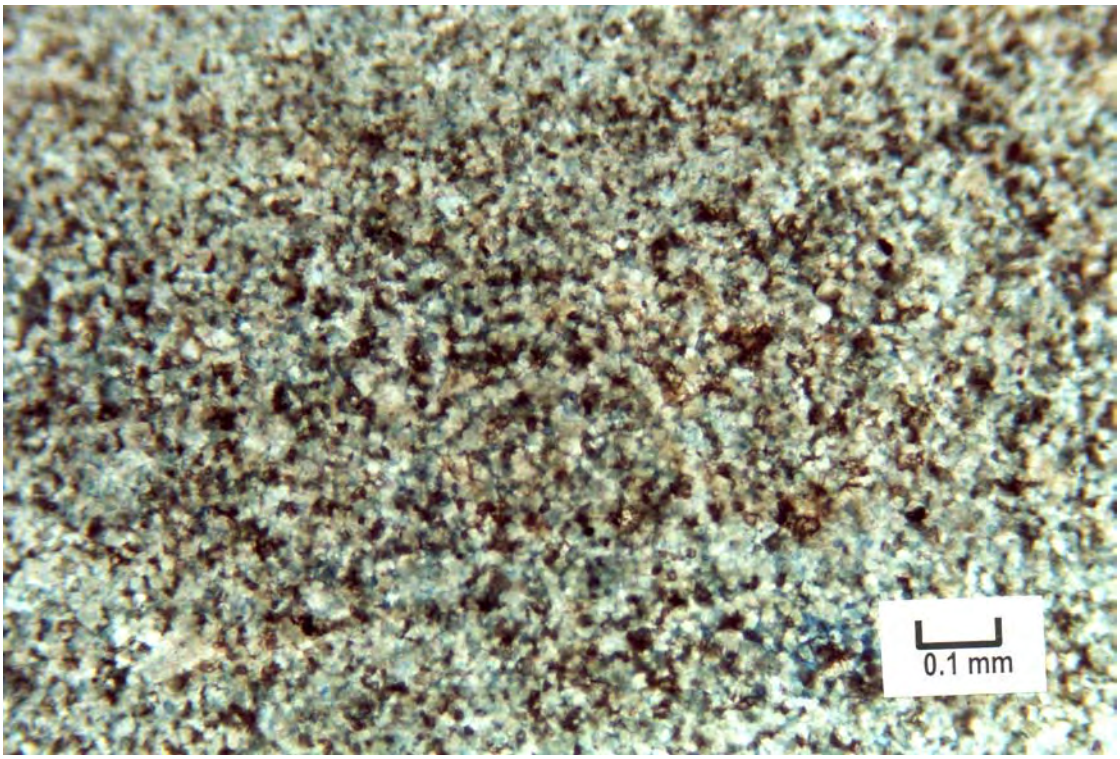
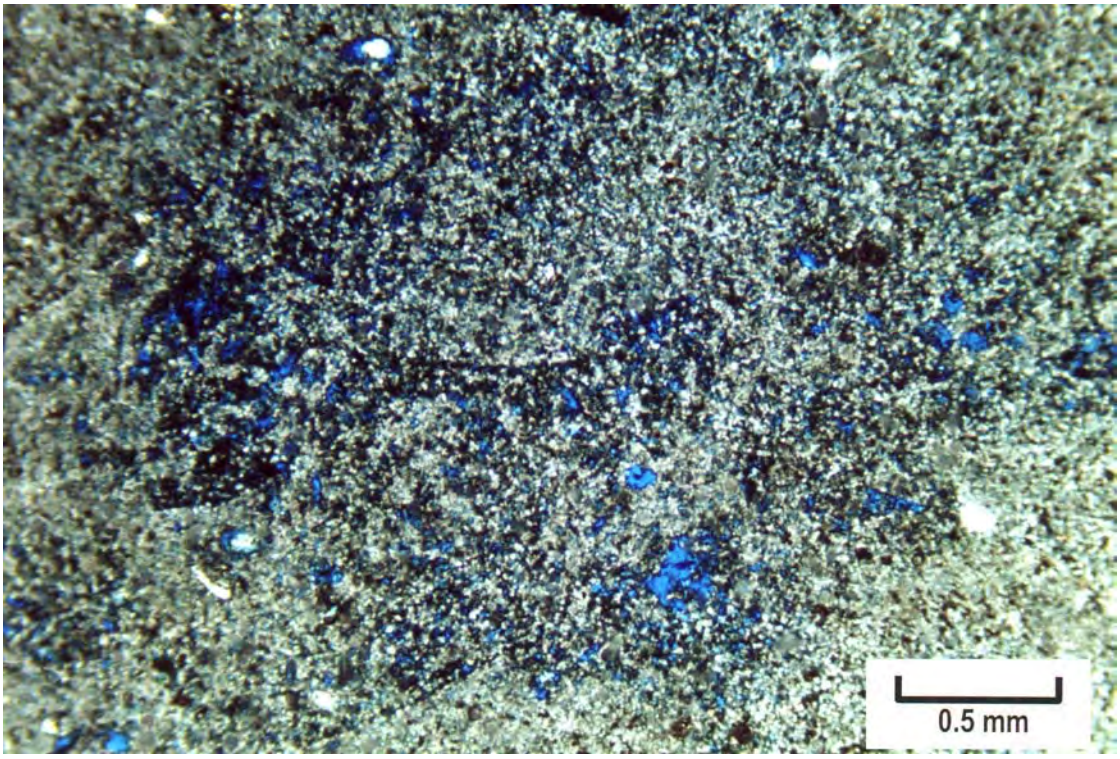

0.1 mm

5,781.2 ft.

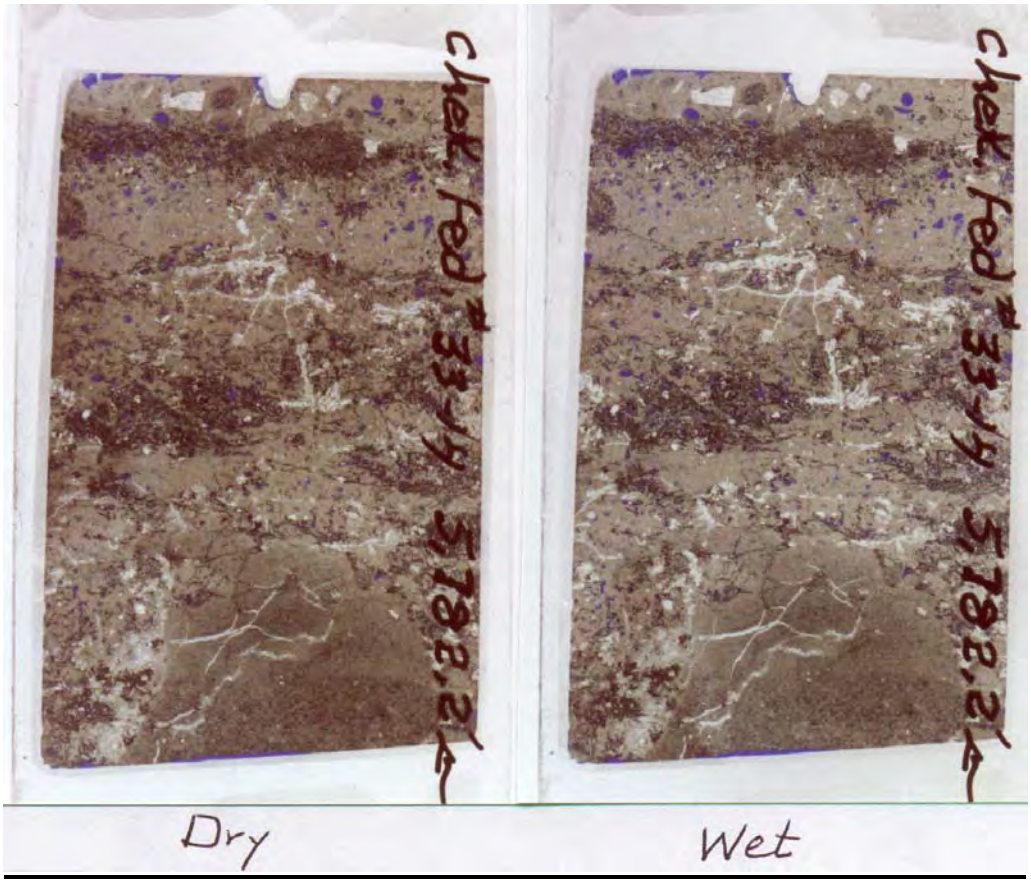
Plug:	⌀ - 23.6%, K – 103 md
Description:	micritic dolomite; mudstone to wackestone, completely altered by late-stage dissolution, some late anhydrite replacement, and a great amount of bitumen.
Diagenetic events:	1) early dolomitization, 2) dissolution/moldic porosity development, 3) extensive dissolution and microporosity development, 4) anhydrite replacement, 5) bitumen.
Pore Types:	micro-BC

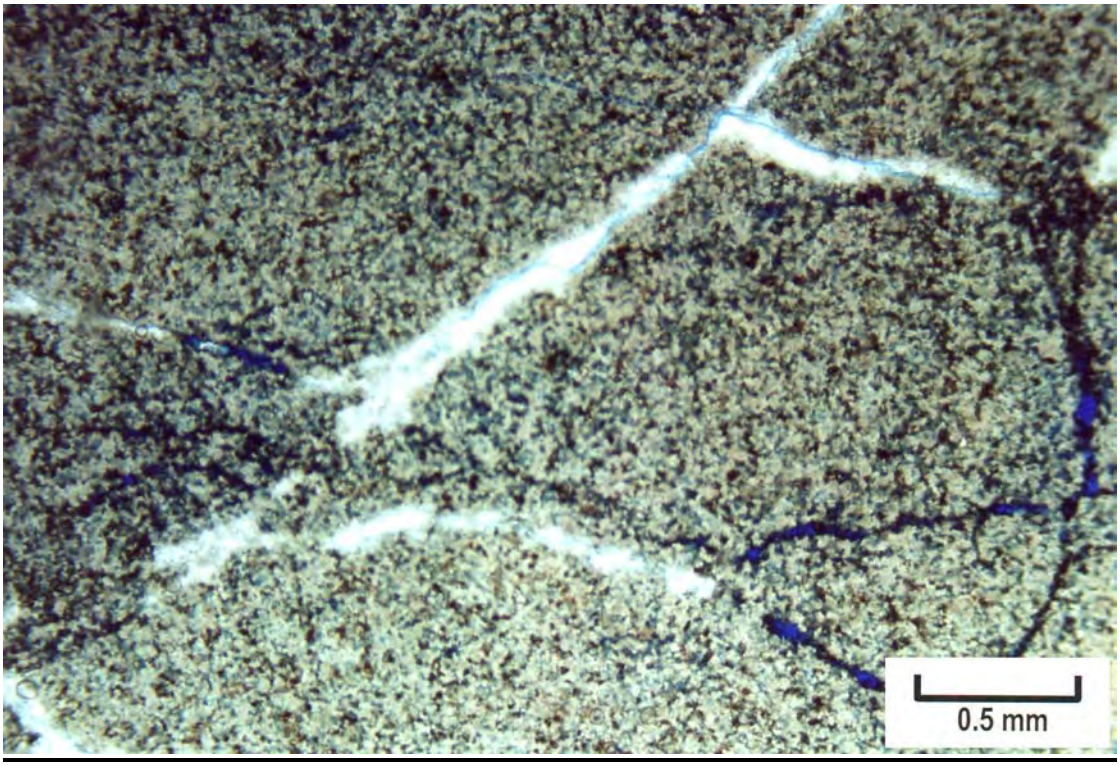



0.5 mm

5,782.2 ft.

Plug:	⌀ - 17.4%, K – 18 md
Description:	dolomite; wackestone to packstone, pseudo-brecciation, completely altered by late-stage dissolution, solution-enlarged fractures and channels in dense dolomite, some late anhydrite replacement, and a great amount of bitumen.
Diagenetic events:	1) early dolomitization, 2) dissolution/moldic porosity development, 3) extensive dissolution and microporosity development, 4) anhydrite replacement, 5) bitumen.
Pore Types:	FR, CH, micro-BC




0.5 mm

5,797.3 ft.

Plug:	⌀ - 1.5%, K – 0.22 md
Description:	dolomite; grainstone, ooids, peloidal, encrusting forams, algal plates, stylolites, some early marine micritic cement on algal plates, late-stage solution front yielding channel pores and microporosity, late anhydrite plugging and healed fractures, and bitumen.
Diagenetic events:	1) early-marine micritic cements, 2) early dolomitization 3) extensive dissolution and microporosity development, 4) anhydrite replacement, 5) bitumen.
Pore Types:	a few CH, micro-BC