

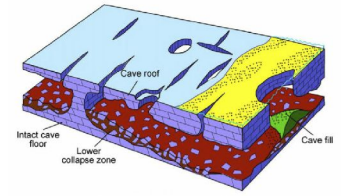
Strata Geological Services




Geologist: Wm Feathergail Wilson PG 21

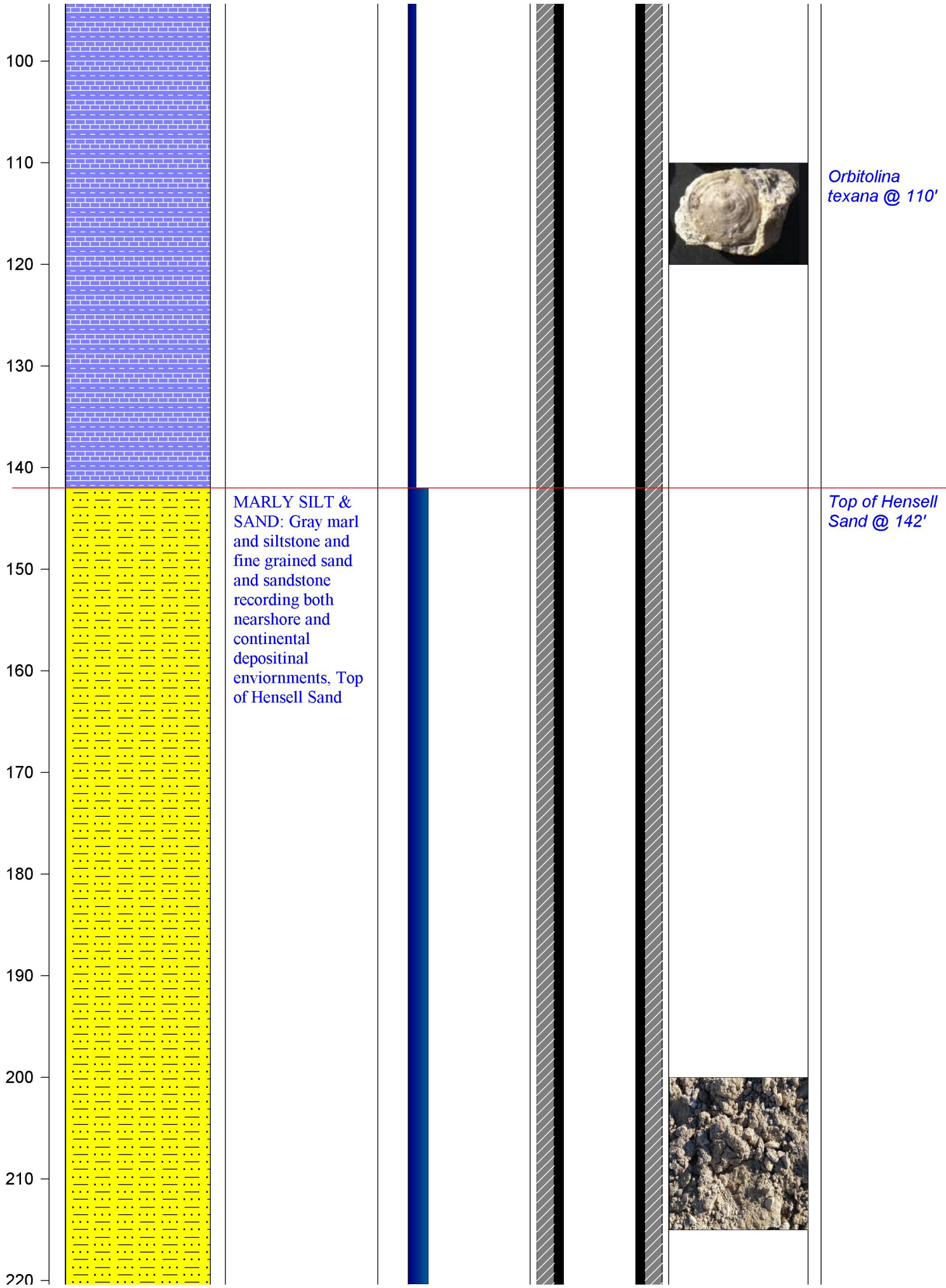
Strata Geological Services



Headwaters MW-19
 Total Depth 1520'
 Lat 30.019947
 Long -99.112220
 Elevation 1,651
 Completed 07-10-2020



Depth	Lithology	Description	% Porosity	Construction	Microphoto	Comment
0		SOIL: Gray				
0-38		MARL: Cream oxidized marl and thin nodular biomicrite beds to 38'. Gray marl below: Top of Upper Glen Rose Mbr				36" hole -24" steel surface casing to 40'
38-50						14" steel casing 0-614" Marl @ 38' -50% CaCO3 -50% clay
50-60		MARL & LIMESTONE INTERBEDS: Gray-tan dolomitic micrite, biomicrite, biosparite: Top of Lower Glen Rose Mbr				Top of Lower Glen Rose Mbr @ 50" Corbula bed
60-90						1st attempt @ logging @ TD was plagued by bridges & fallen rocks indicating fractures - went back to bottom and filled the hole with mud to log to TD
90-1520						



100

110

120

130

140

150

160

170

180

190

200

210

220

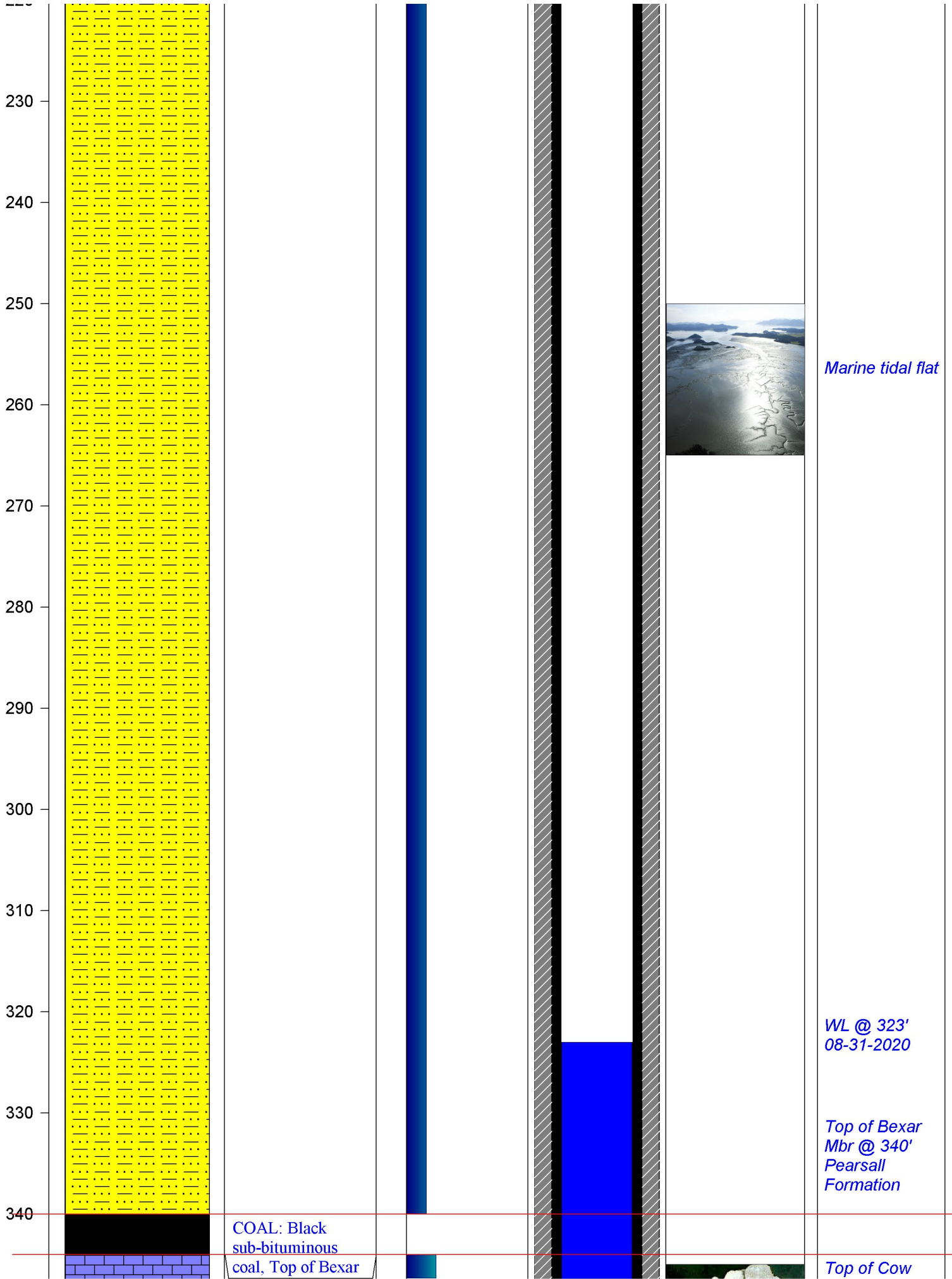
MARLY SILT & SAND: Gray marl and siltstone and fine grained sand and sandstone recording both nearshore and continental depositinal enviornments, Top of Hensell Sand

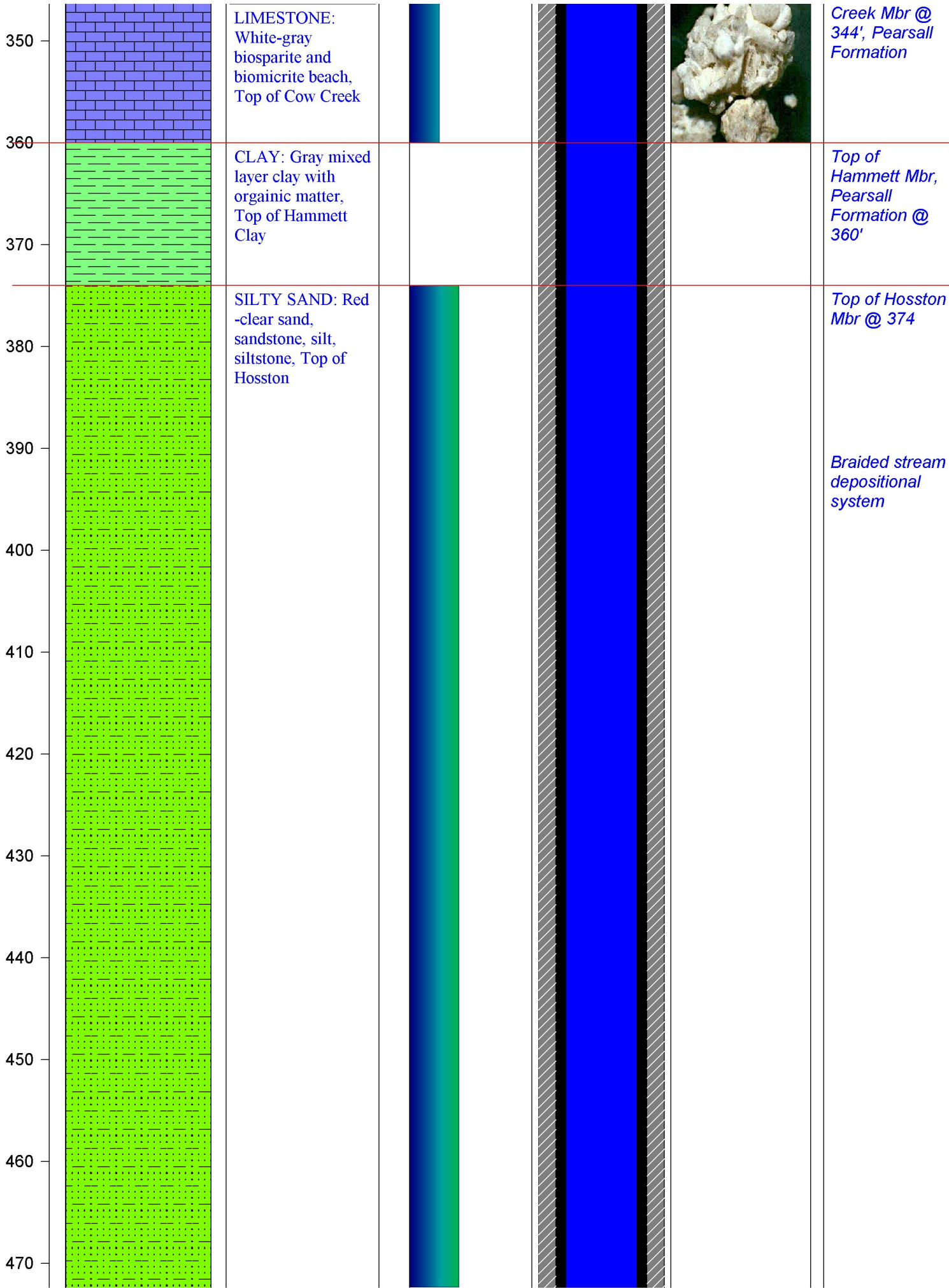


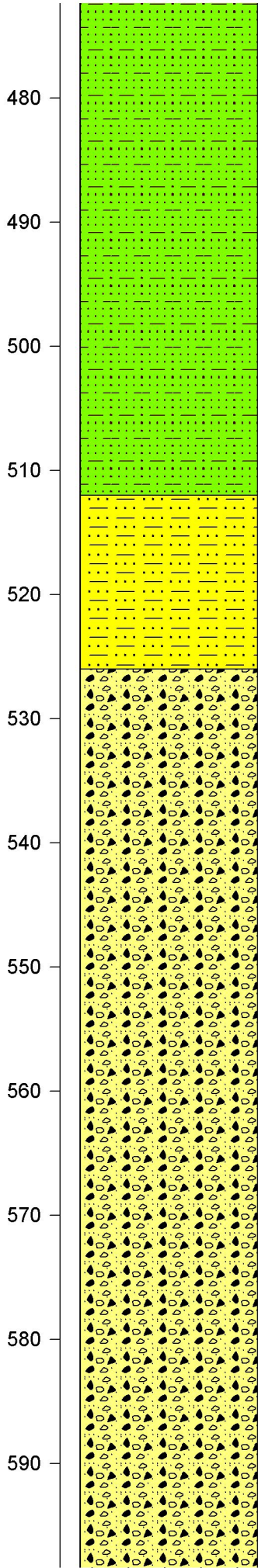
Orbitolina texana @ 110'



Top of Hensell Sand @ 142'

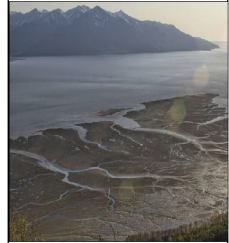
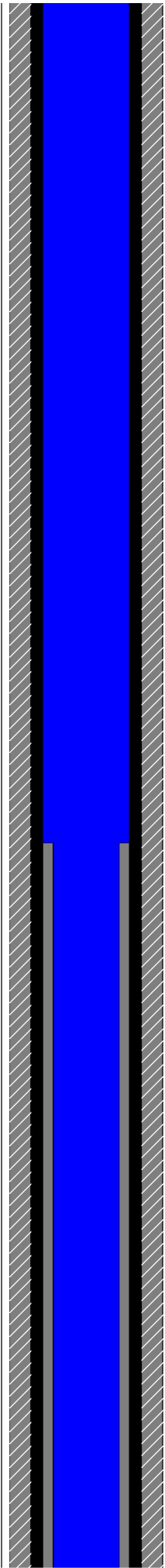




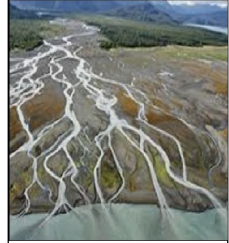


MARLY SILT &
SAND: Gray
marine silty clay

SAND &
GRAVEL: Red -
clear sand, gravel,
silt, sandstone

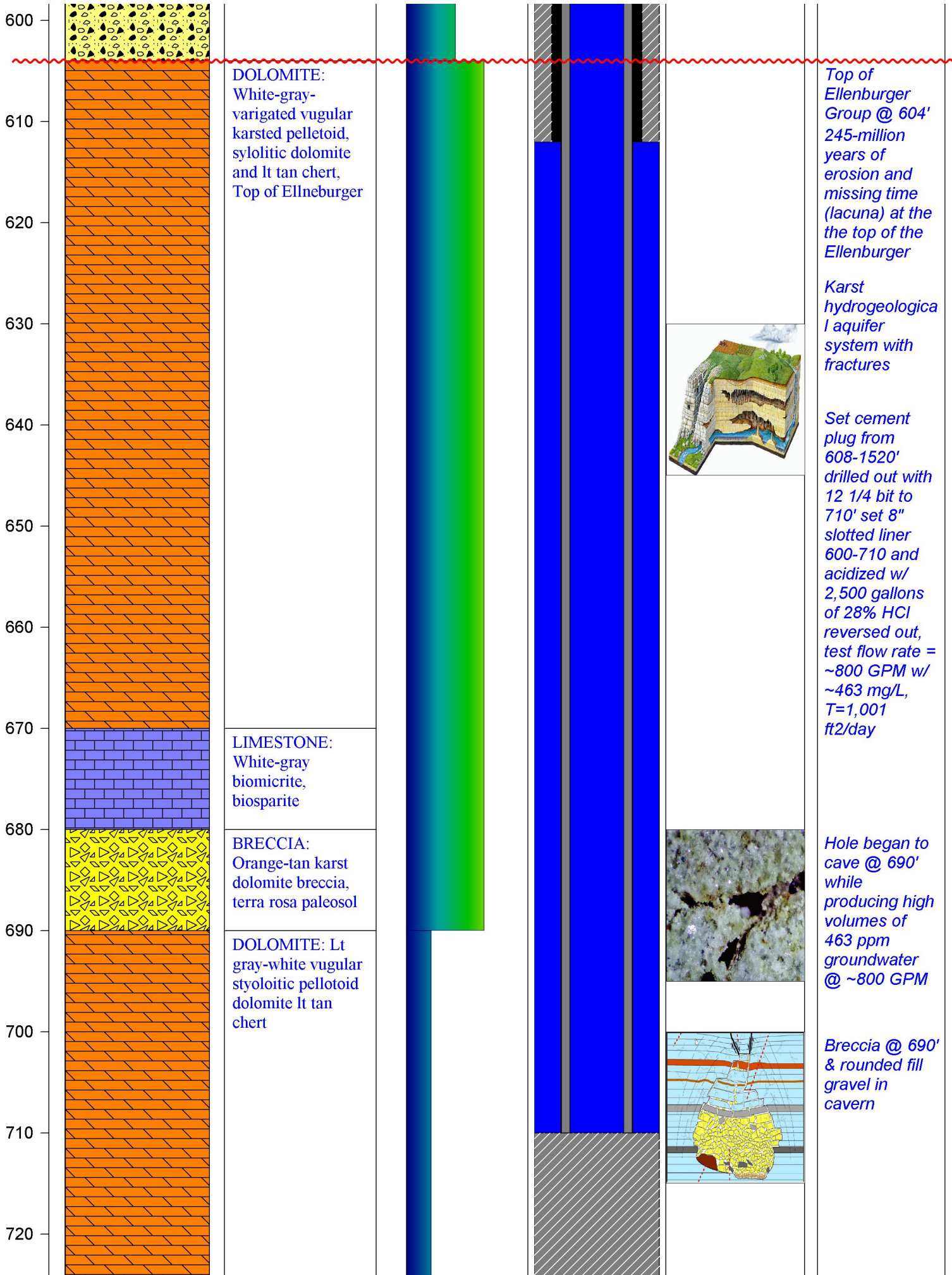


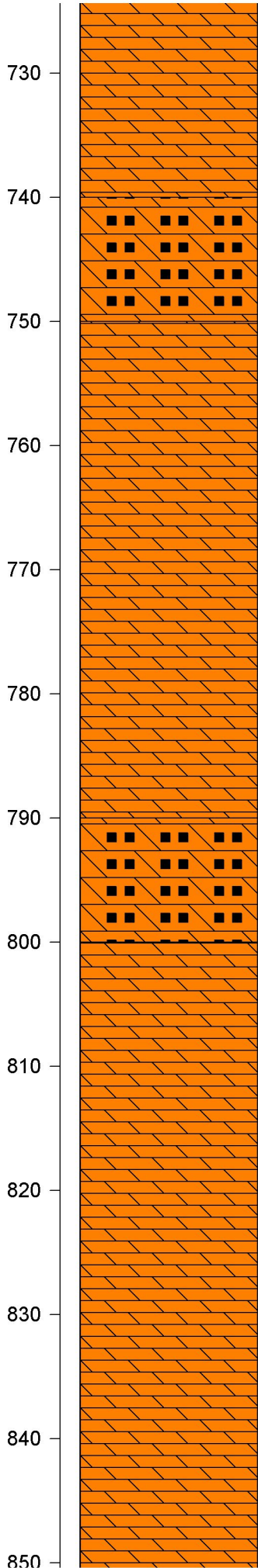
*Marine
nearshore
estuary*



*Braided stream
depositional
system*

*Base of
Cretaceous
System @ 604'*



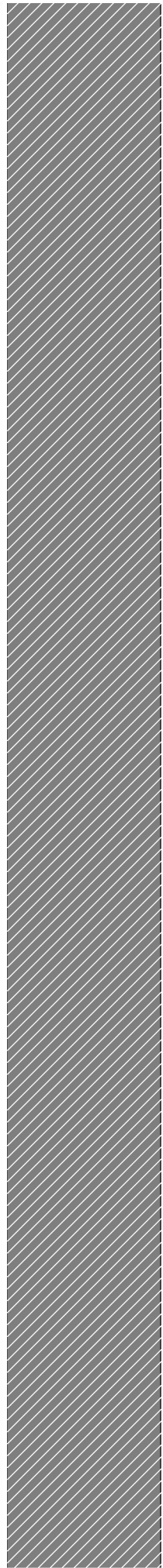


BLACK
DOLOMITE:
Black pelleotoid
dolomite

DOLOMITE: Lt
gray-white vugular
styoloitic pelletoid
dolomite lt tan
chert

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dolomite

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chert



*Ordovician
CO2 induced
greenhouse
gas heat lasted
for 41.6 million
years from ~
488-446 million
years BP*



*Shallow water
carbonate
shoals*

850

840

830

820

810

800

790

780

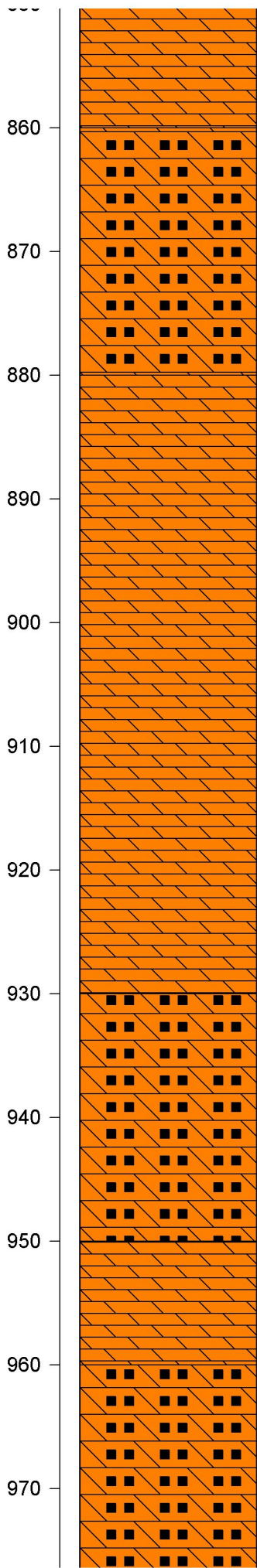
770

760

750

740

730



BLACK
DOLOMITE:
Black pelleotoid
dolomite

DOLOMITE: Lt
gray-white
stylotitic pelletoid
dolomite tan chert

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styoloitic pelletoid
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TOC= 0.29%

Dolomitization of carbonate shoals and tidal flats began in very shallow sabhka evaporative conditions during a high temperature geological period throughout the deposition of the vast Ellenburger carbonate continental basin. Deeper waters escaped this transformation and were left as limestones.

