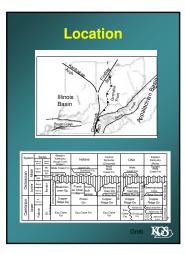
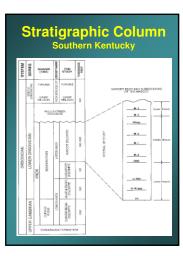


Acknowledgements

- Industry
 Mining Companies
 Oil and Gas Companies
 Consultants

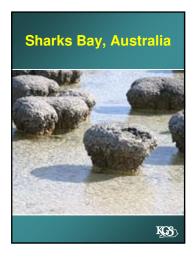


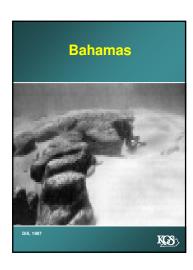


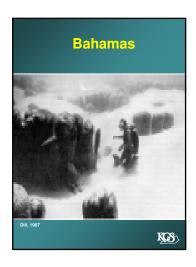
Knox Lithology

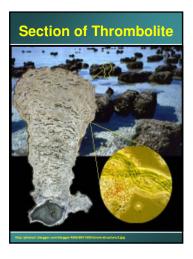
- The Knox is a repetitive sequence of shallow water carbonate rocks consisting of subtidal algal dominated bioclastic calcarenites containing abundant collities and quartz sand
- The shallow ocean was hypersaline containing oolite shoals, algal colonies, tidal channels, intertidal lagoons, and supratidal evaporite
- Organosedimentary structures: Thrombolite colonies formed in deep subtidal environments. Other algal features formed in intertidal and supratidal environments.
- Diagenesis consisted of multiple episodes of dolomitization, silicification, fracturing, mineralization, and the post Knox unconformity.
- Hydrothermal dolomites (HTD) and base meta mineralization occurred as a late stage event creating coarse grained HTD and permeable pathways.



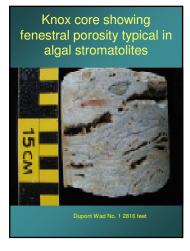




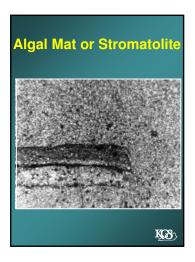


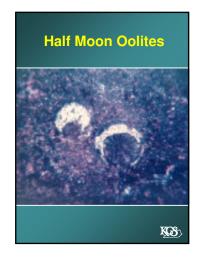


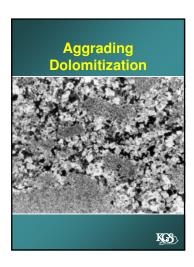
Algal Stromatolite-Knox Dolomite Cumberland County, Ky 2000 foot depth, upper Knox Cotted line represents sphalerite mineralization				
4 pt.		* * * * * * * * * * * * * * * * * * * *	11	A LANGE OF THE PARTY OF THE PAR
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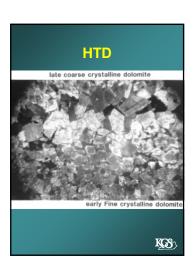


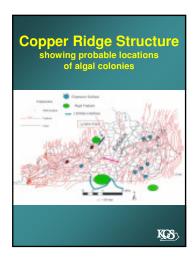


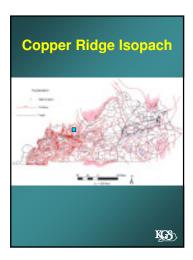










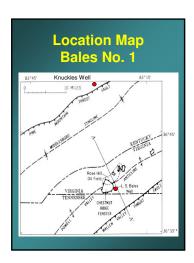


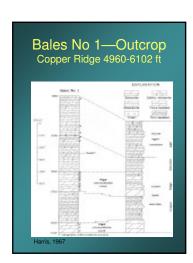
Cross Section Correlations

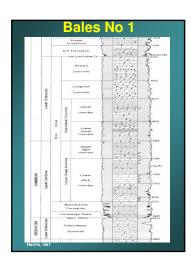
- Southern Kentucky
- Eastern Kentucky
- West central Kentucky

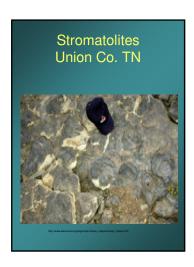
KG5

Cross Section Locations

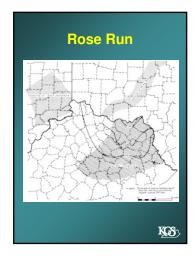


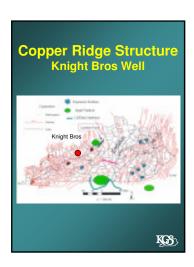


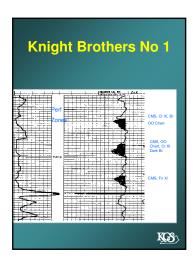


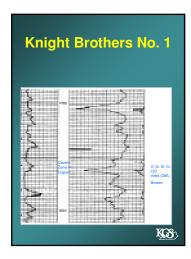


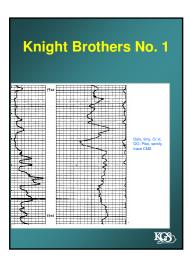
	nd Gap Area des No 1
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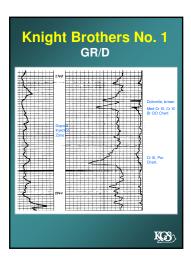


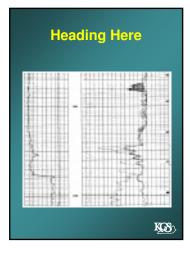












Porosity

Primary

High Energy environment

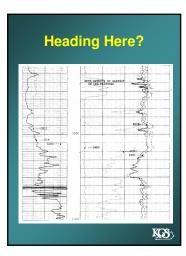
 Thrombolites, oolitic shoals, tidal channels

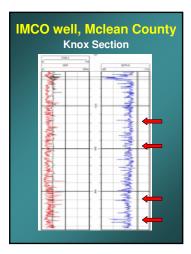
Secondary

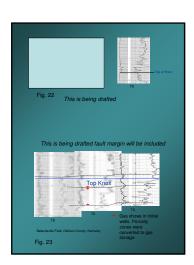
Chert and Silica Fractures

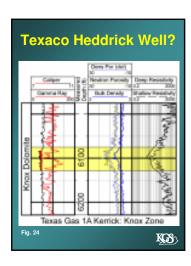
• Coarse Grained (HTD) dolomite

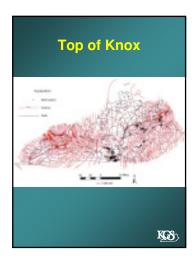


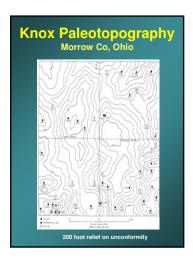


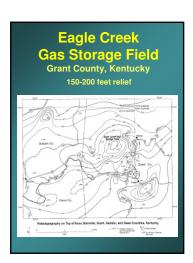


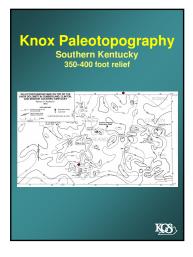


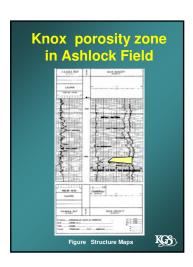


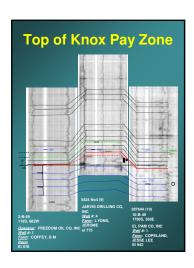


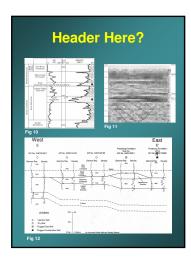


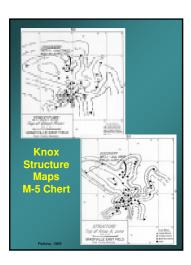


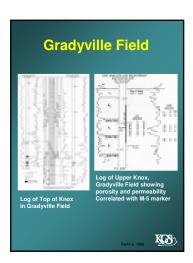


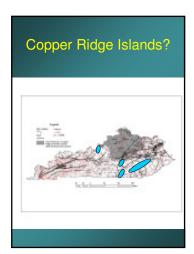












Conclusions and more research

- Complex Knox diagenesis
 Islae stage dolomitization HTD
 Unconformity and weathering zones
 Positive structures controlled algal colonies during Cambrian
 Thrombolitic algal zones focus of fluid flow and cavern development
 Massive chert zones were focus of fracturing and fluid flow
 Coarse Crystalline Dolomite (Algal Zones) associated with chert zones
 Algal/Cavern zones correlatable

