



LOCKPORT REEFS AND “NEWBURG” PRODUCTION IN OHIO

Mark Neese
EMF Geoscience, Inc.

AREA OF STUDY



BASS ISLANDS DOLOMITE

A through G UNITS

SALINA GROUP

GUELPH DOLOMITE

GOAT ISLAND DOLOMITE

GASPORT DOLOMITE

LOCKPORT GROUP

ROCHESTER SHALE

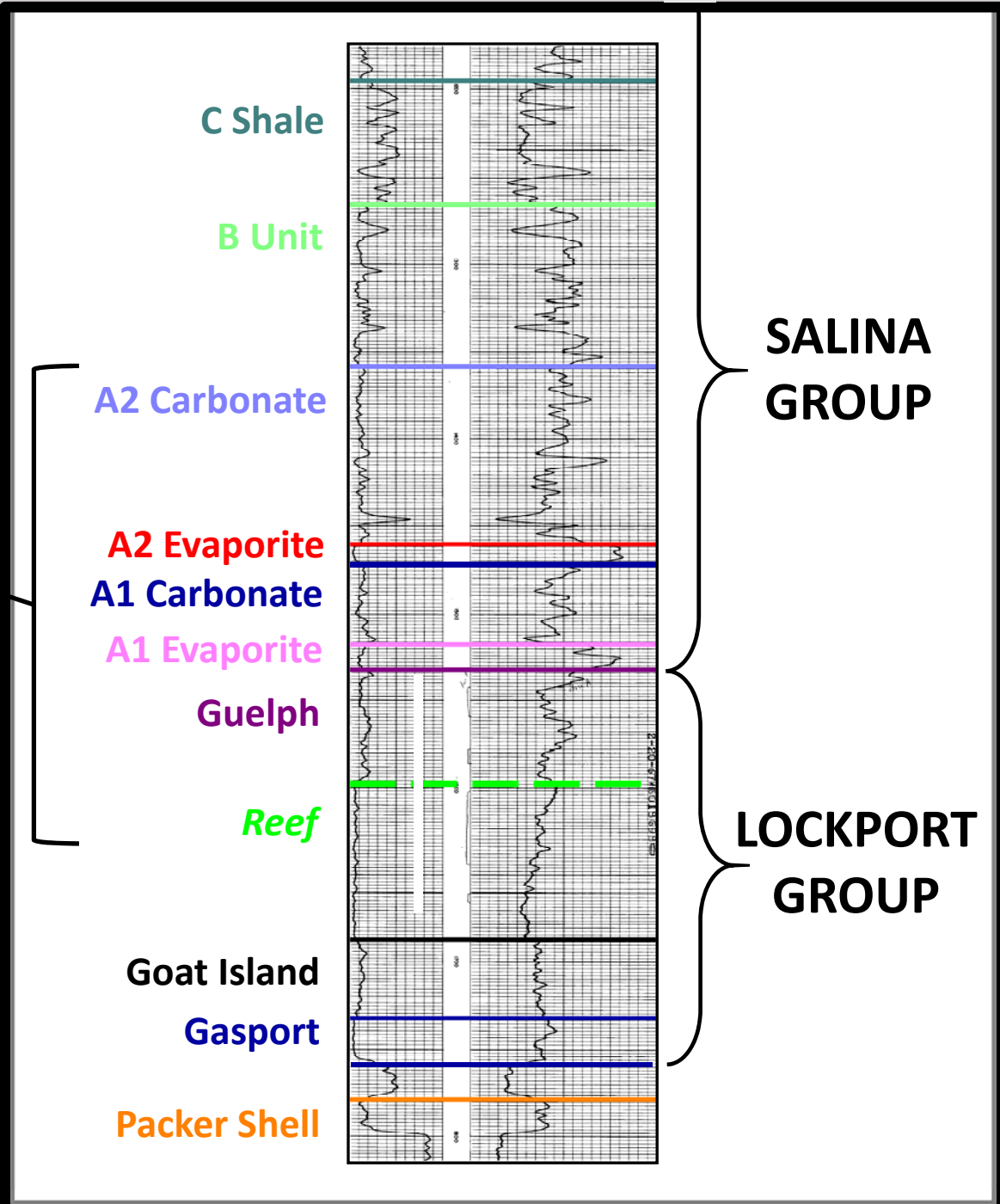
DAYTON FORMATION

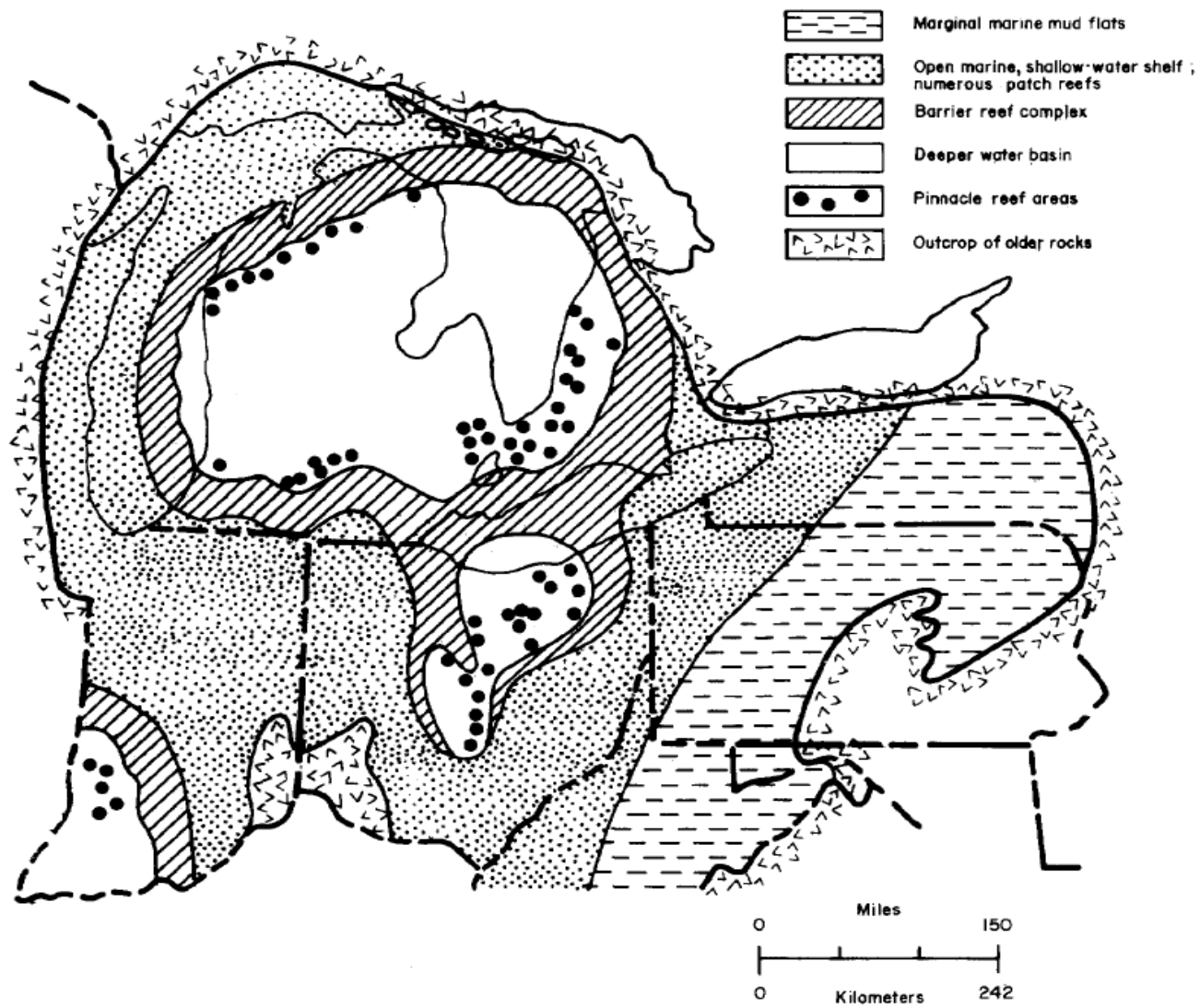
"PACKER SHELL"

CABOT HEAD FORMATION

BRASSFIELD FORMATION

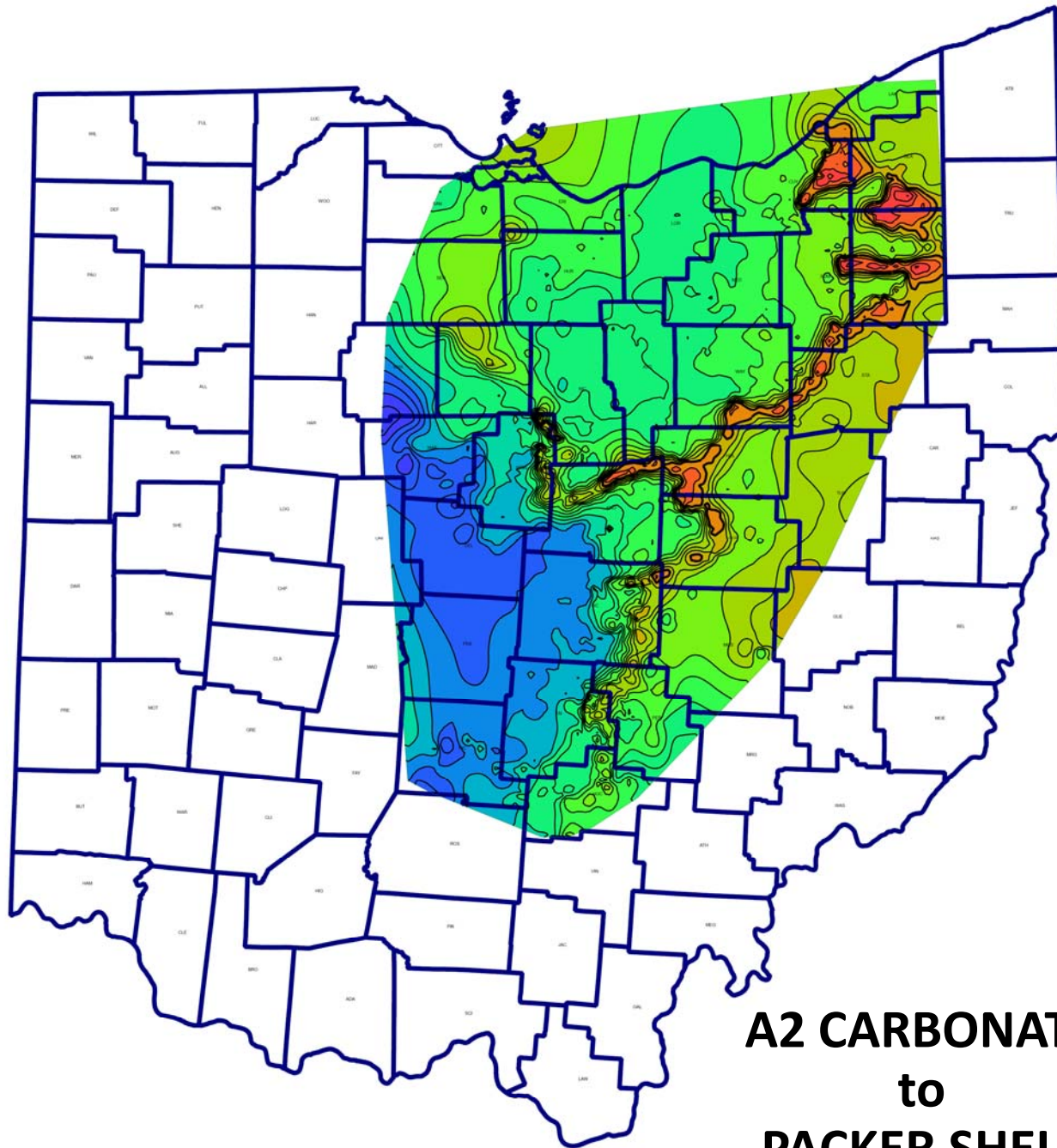
In Ohio, drillers' NEWBURG porosity zone can occur anywhere within the A2 Carbonate, the A1 Carbonate, the Guelph, or the Lockport.



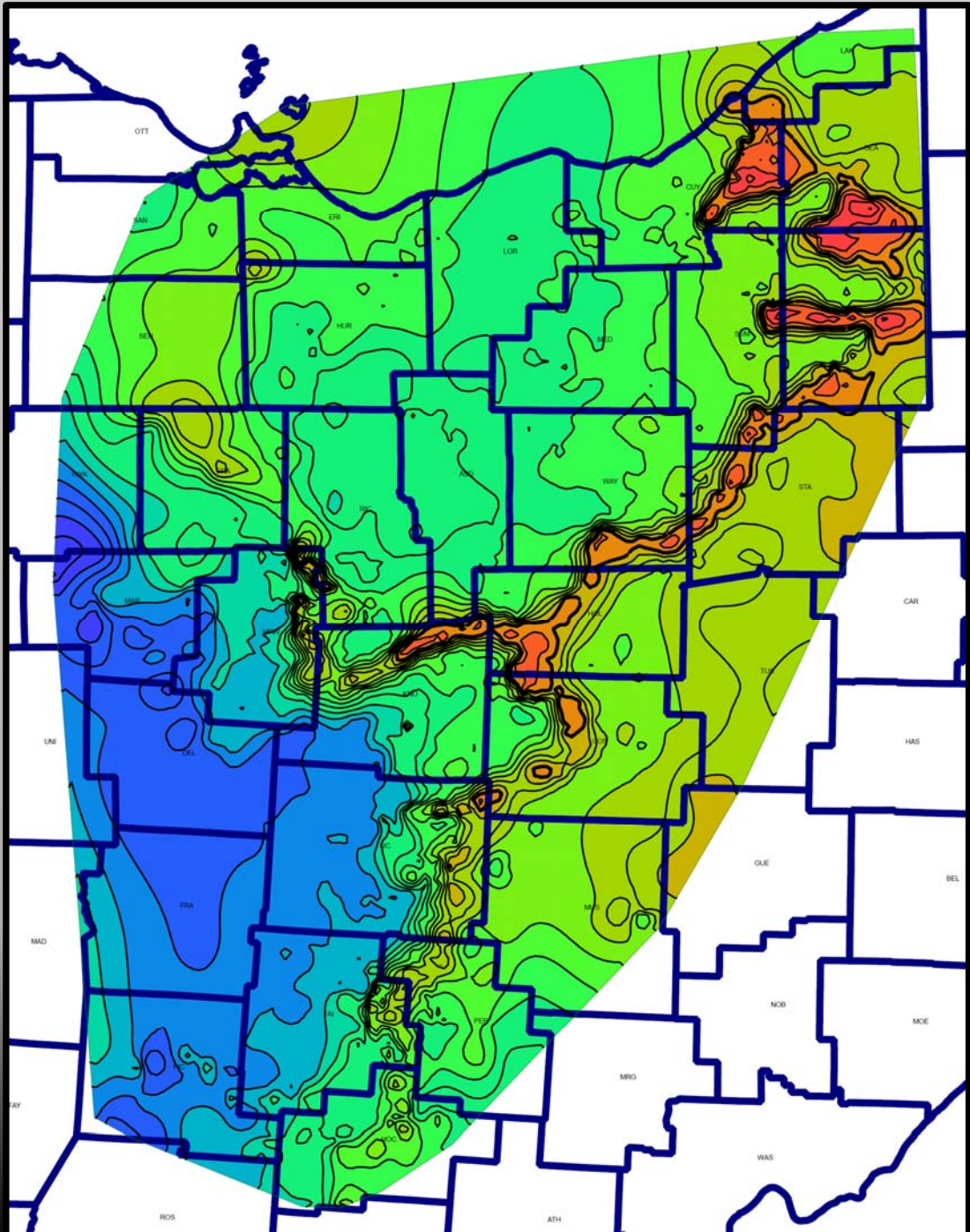


The American Association of Petroleum Geologists Bulletin
 V. 62, No. 9 (September 1978), P. 1607-1644, 18 Figs.

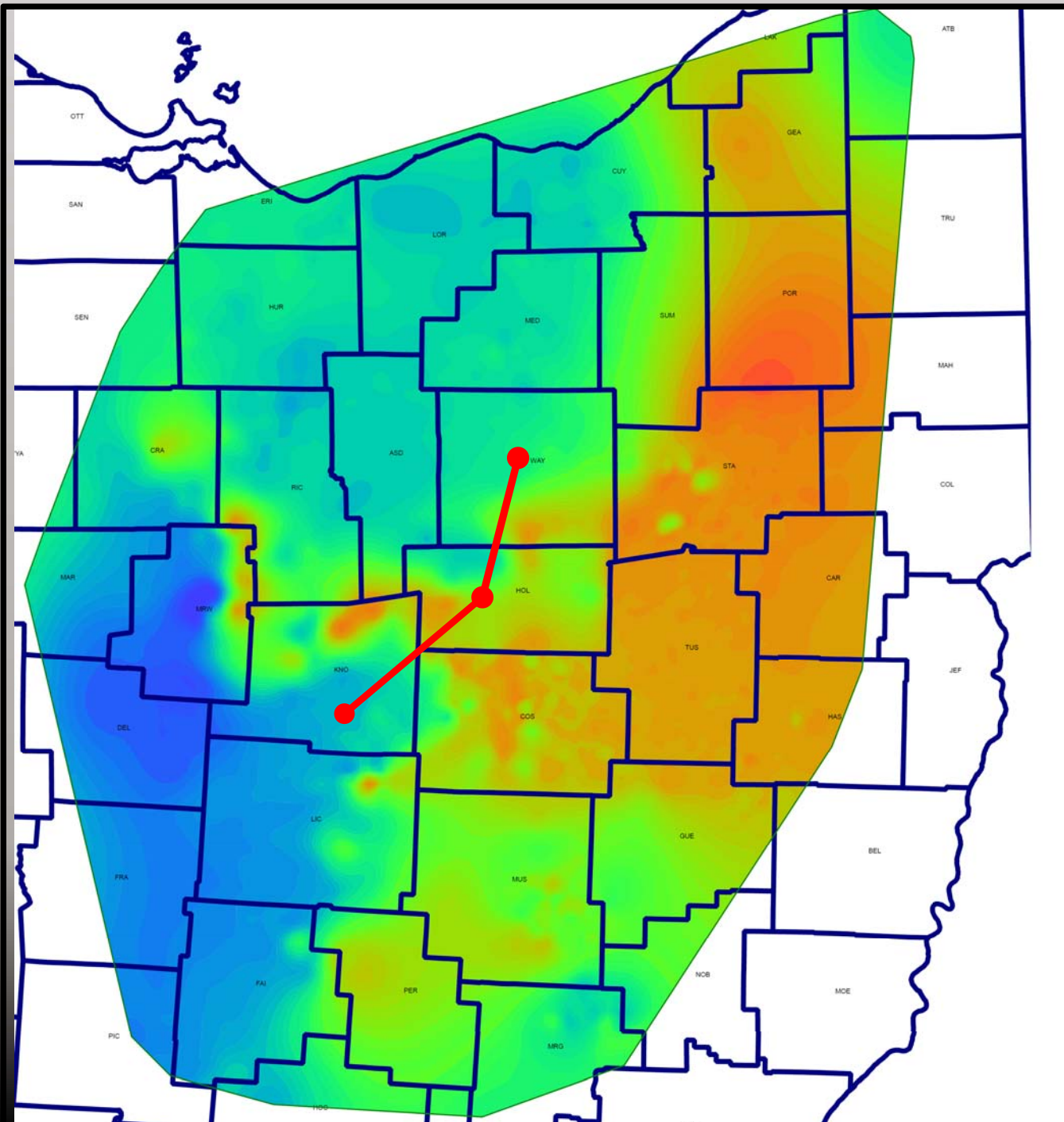
KENNETH J. MESOLELLA



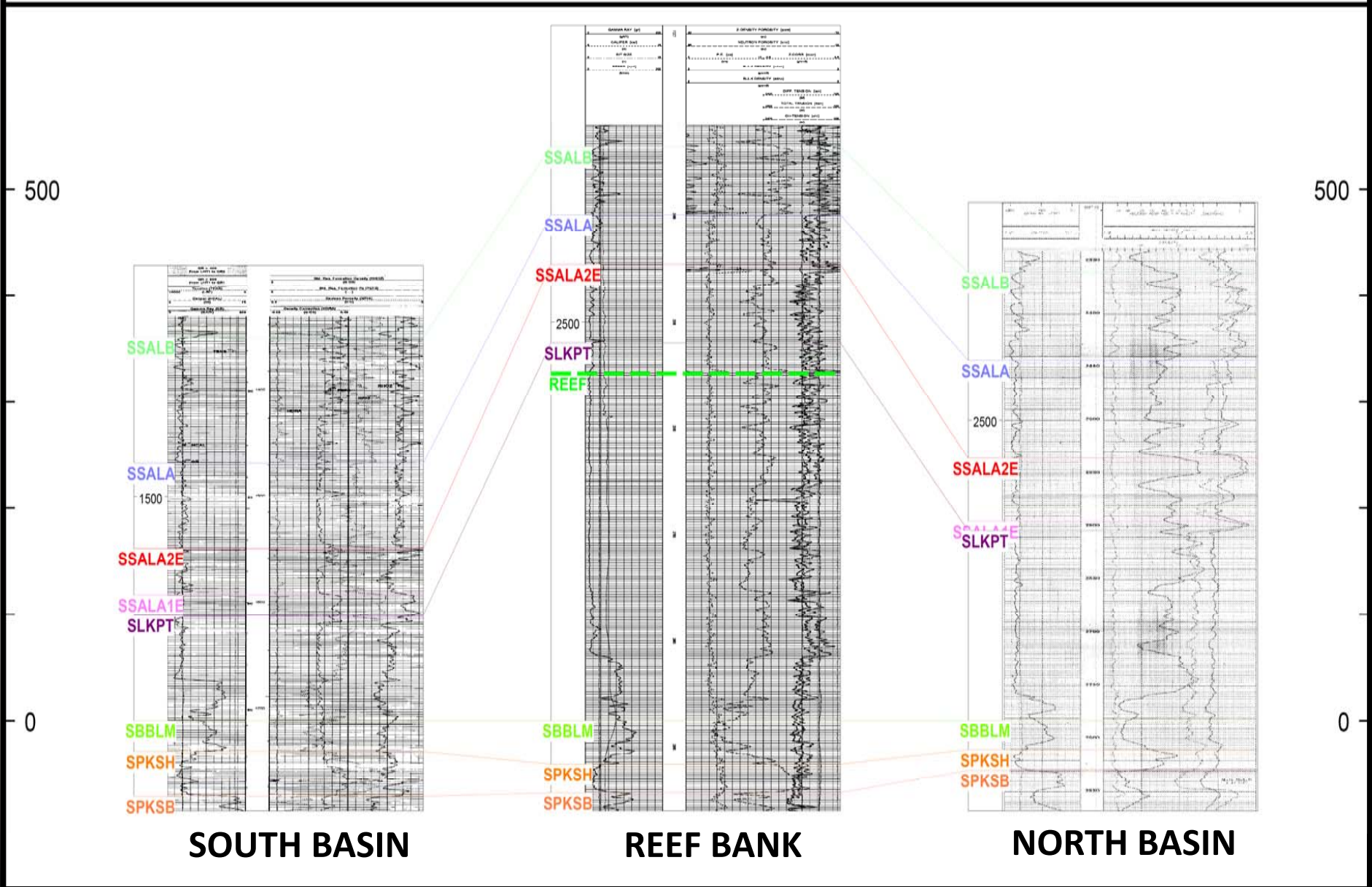
**A2 CARBONATE
to
PACKER SHELL**

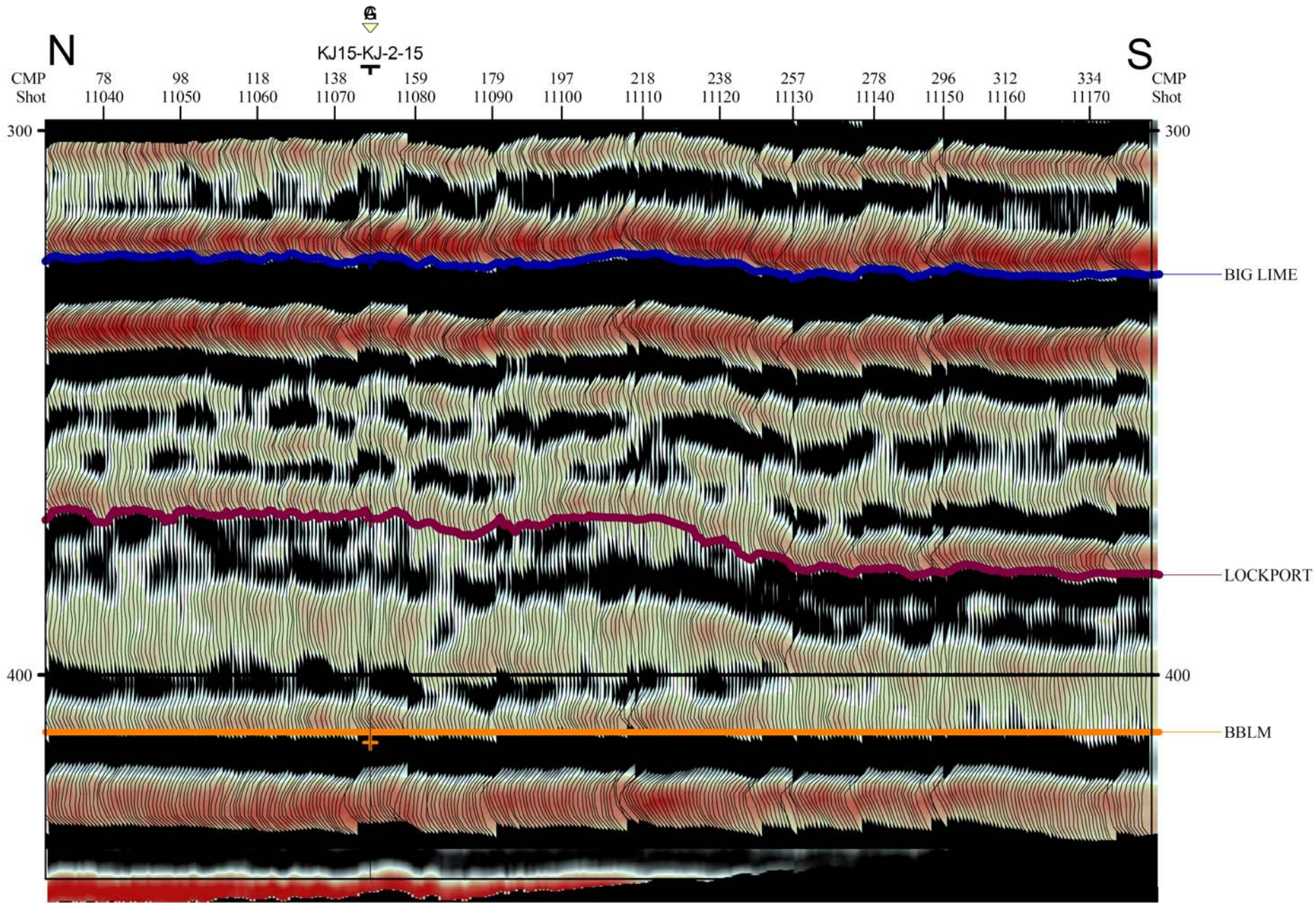


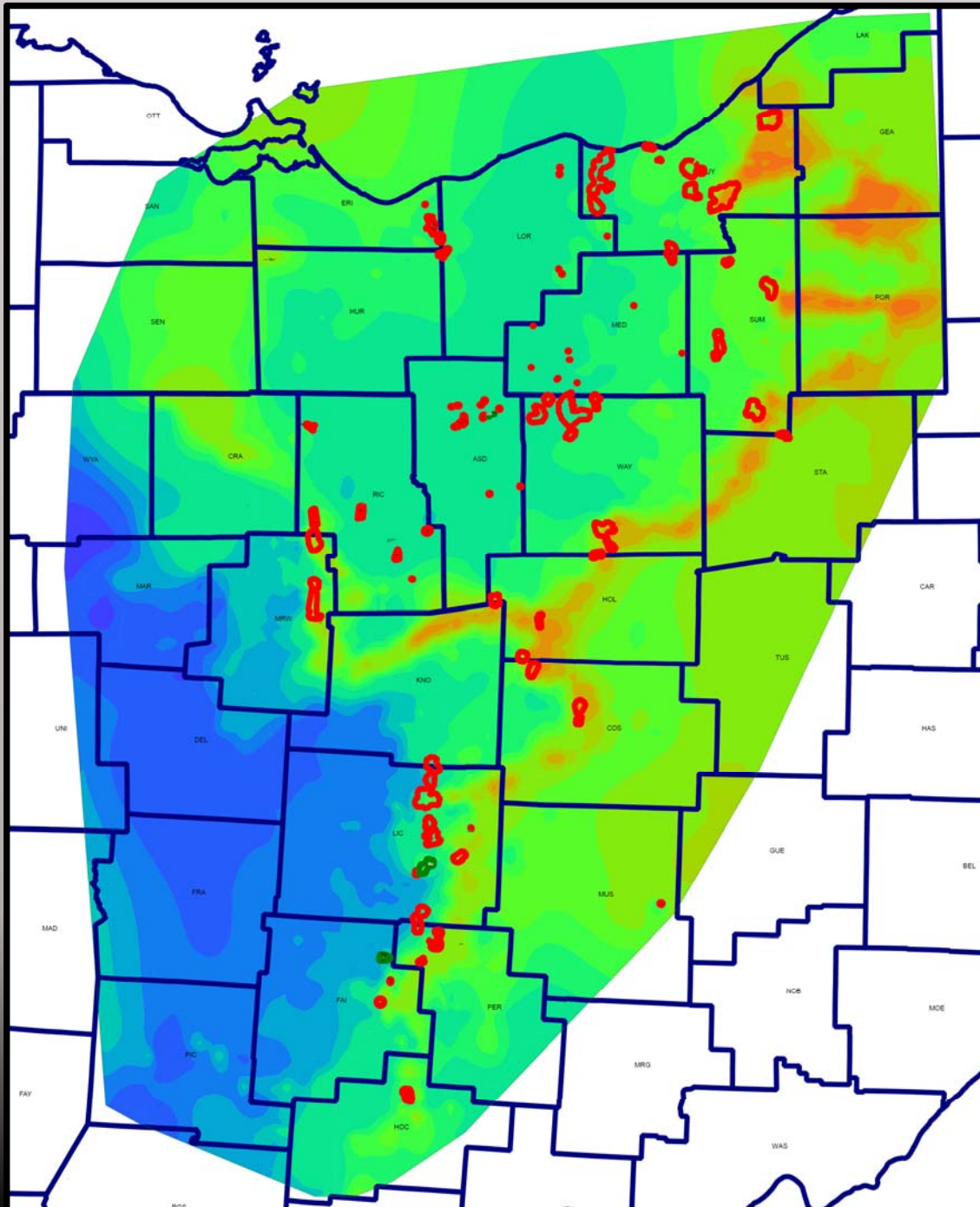
**A2 CARBONATE
to
PACKER SHELL**



**Thickness
of the
LOCKPORT
GROUP**





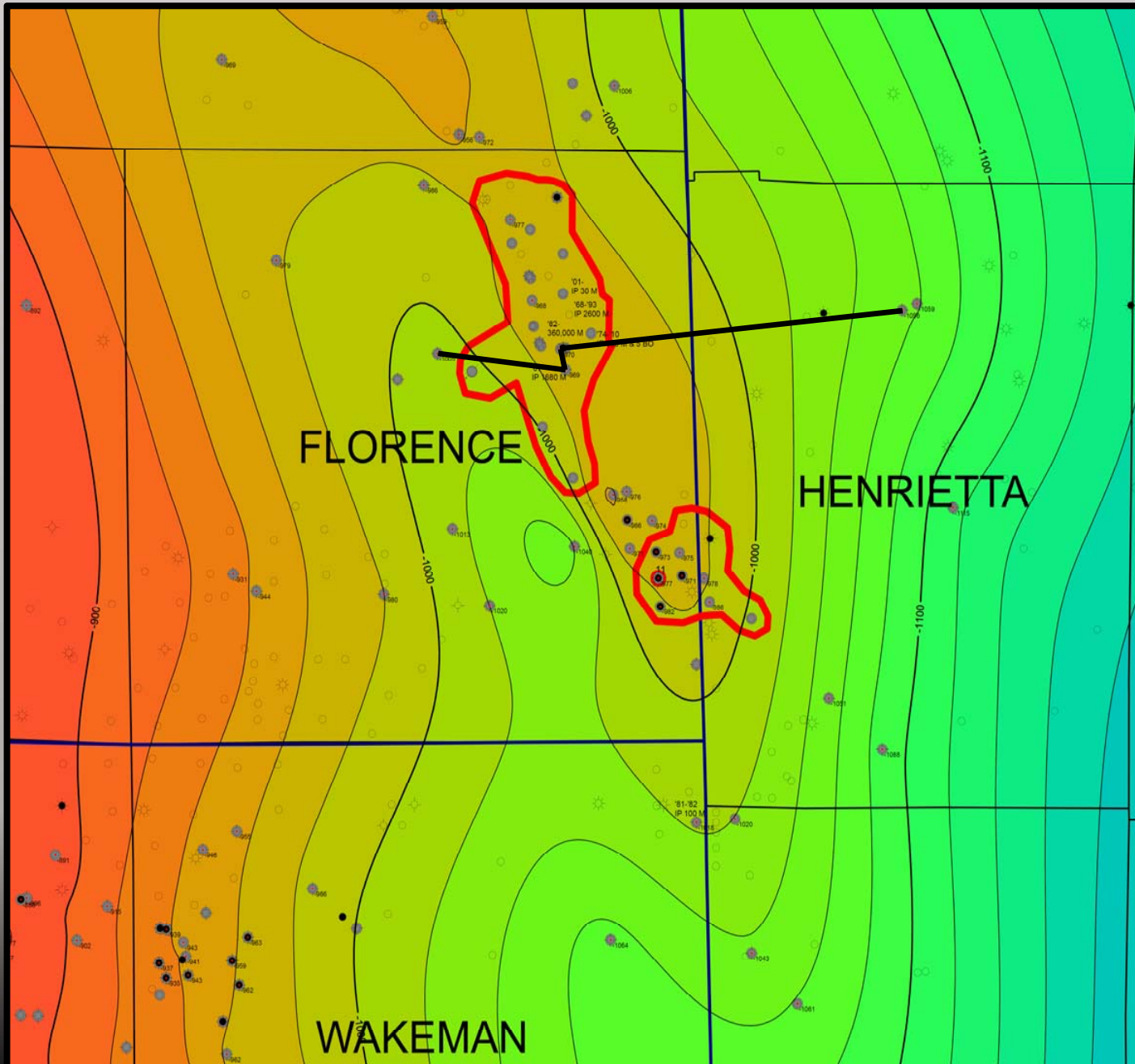


Newburg pools
outlined in red

**A2 CARBONATE
to
PACKER SHELL**

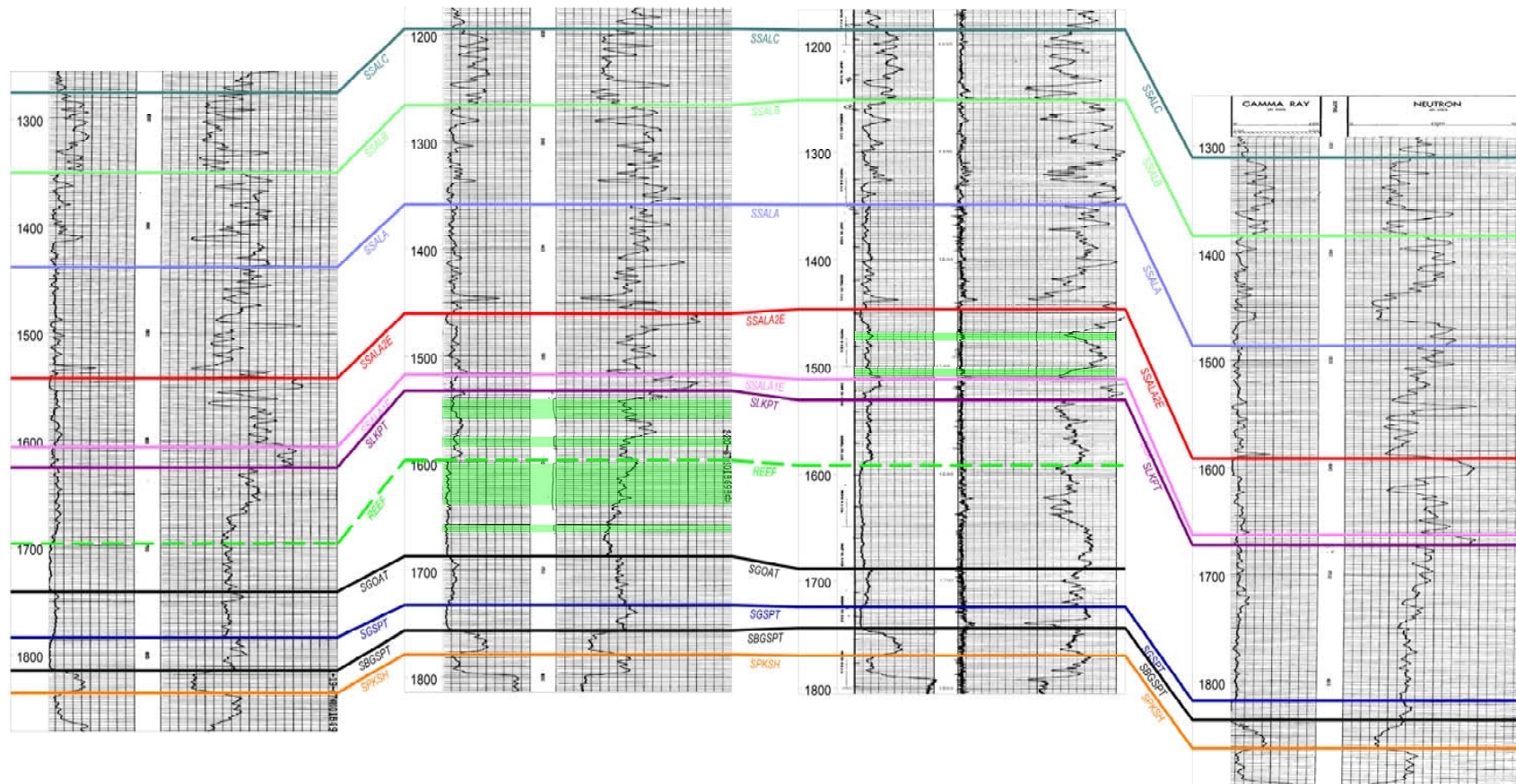
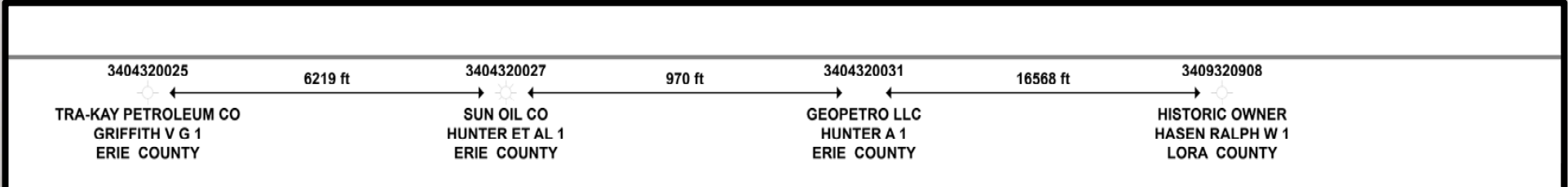
TRAPPING MECHANISMS

- **Anticlinal**
- **Fault trap**
- **Porosity within reef**
- **Drape over Gasport reef**
- **Porosity in the A Carbonate above Guelph reef**
- **Porosity in the A Carbonate within the reef bank**

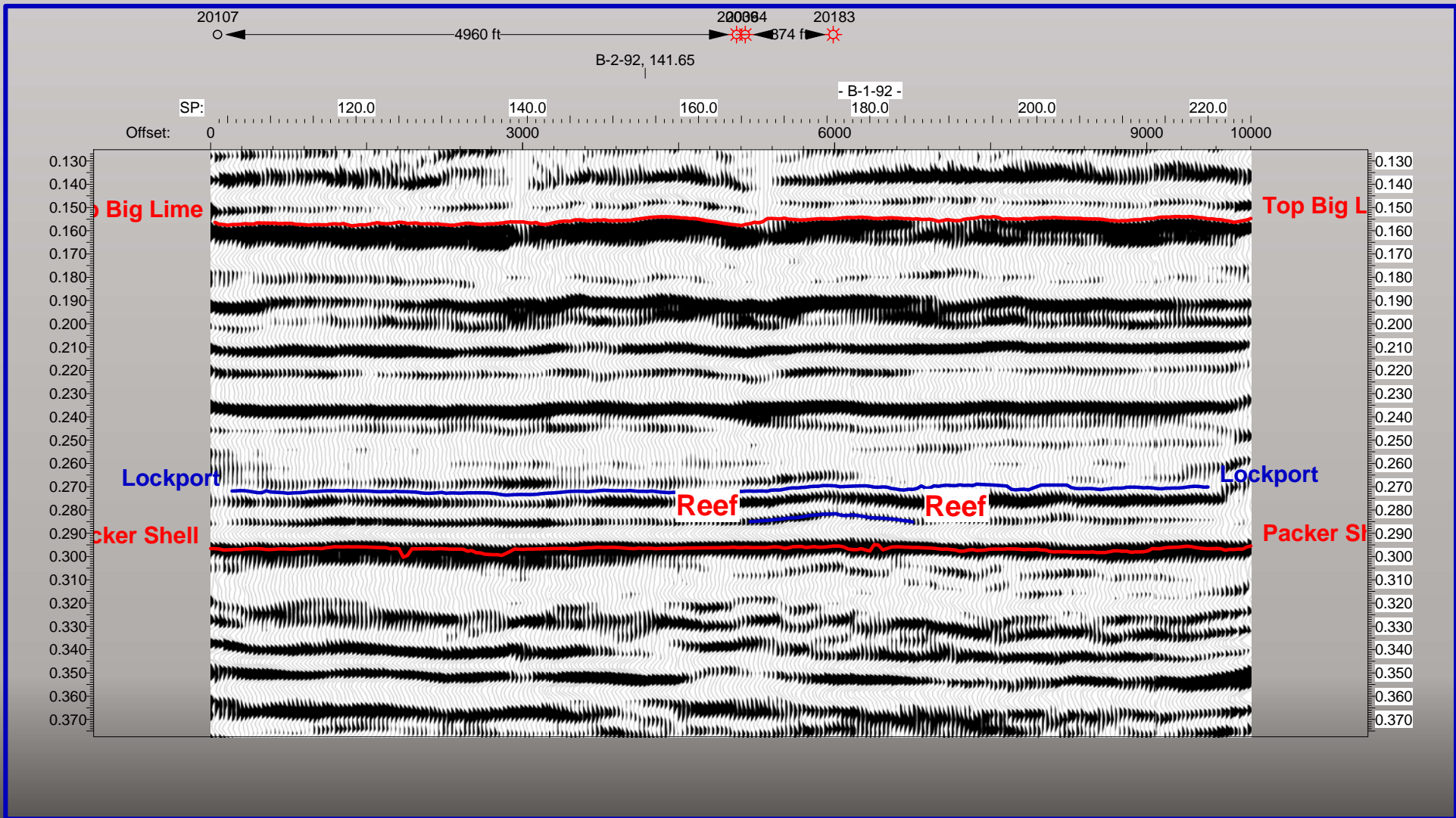


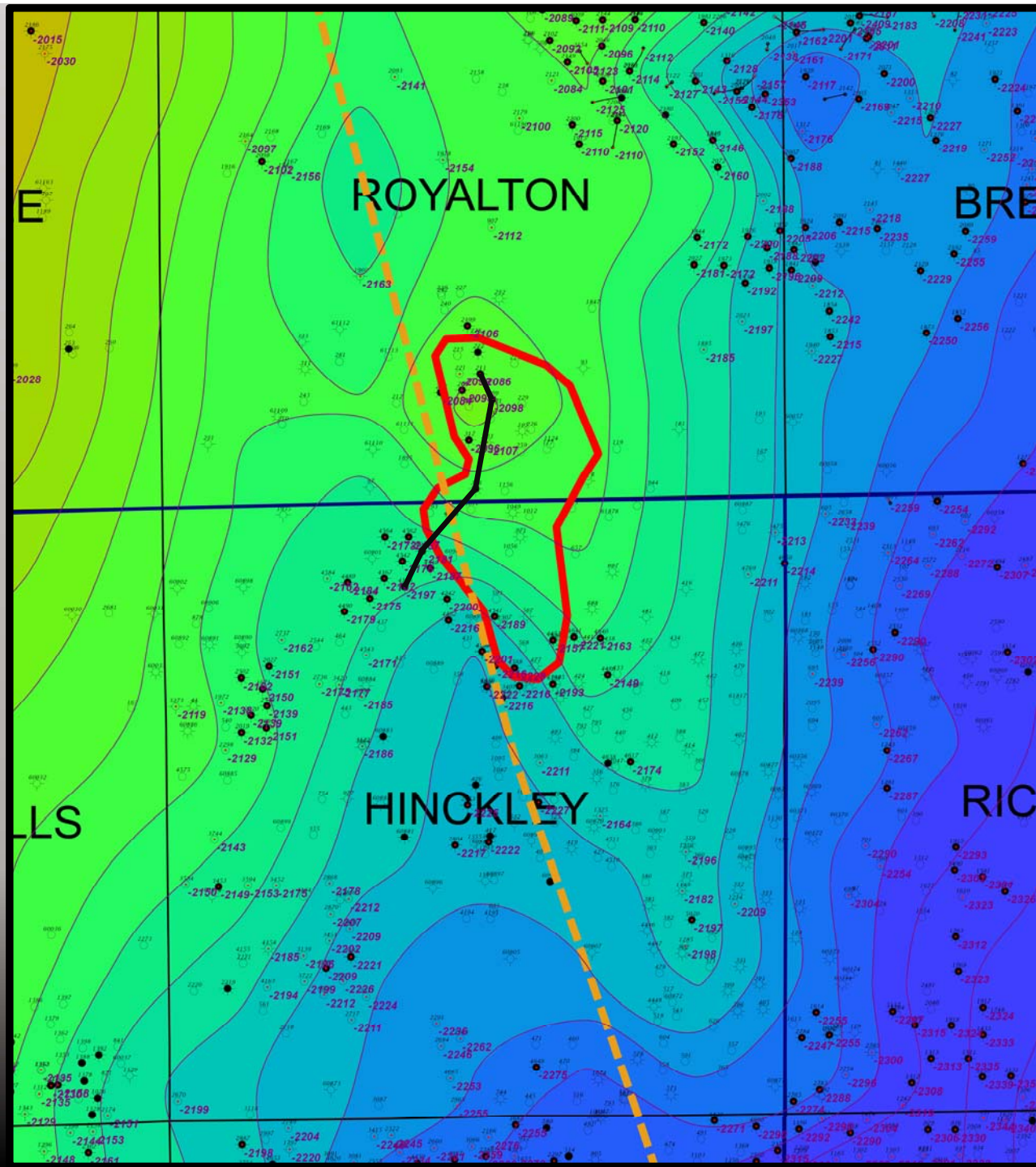
Example of structure influencing reef development in the Guelph

SPKSH structure reflects Knox structure in Sun Oil's Krysik Field



Production from the reef, the Guelph, and the A1 Carbonate





FAULT TRAP

**PACKER
SHELL
STRUCTURE**

3410324166 1780 ft 3410324241 3609 ft 3403520316 4019 ft 3403520209 1270 ft 3403520211

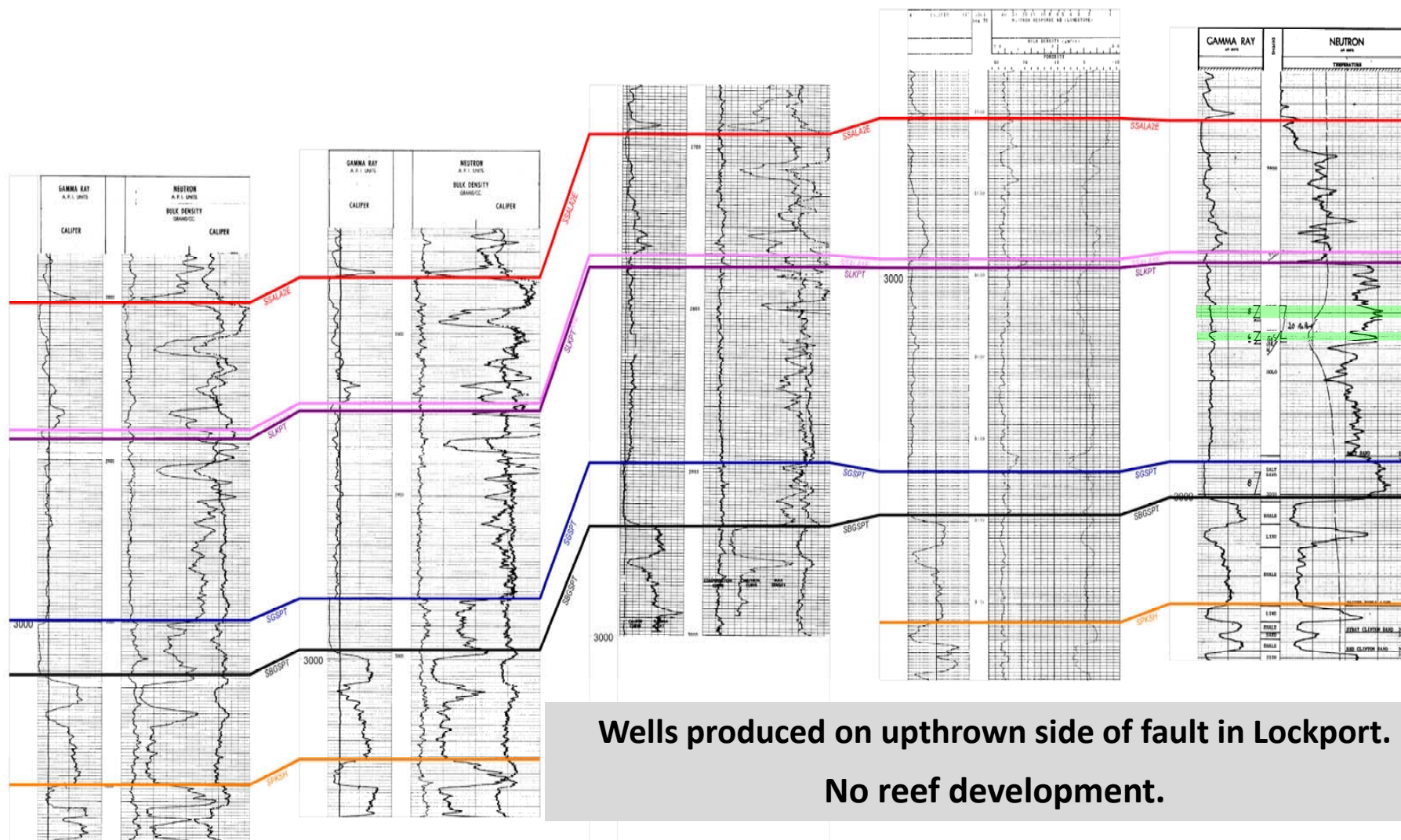
PINE TOP INC
HRUSKA 1
MEDI COUNTY

PINE TOP INC
FOX 1
MEDI COUNTY

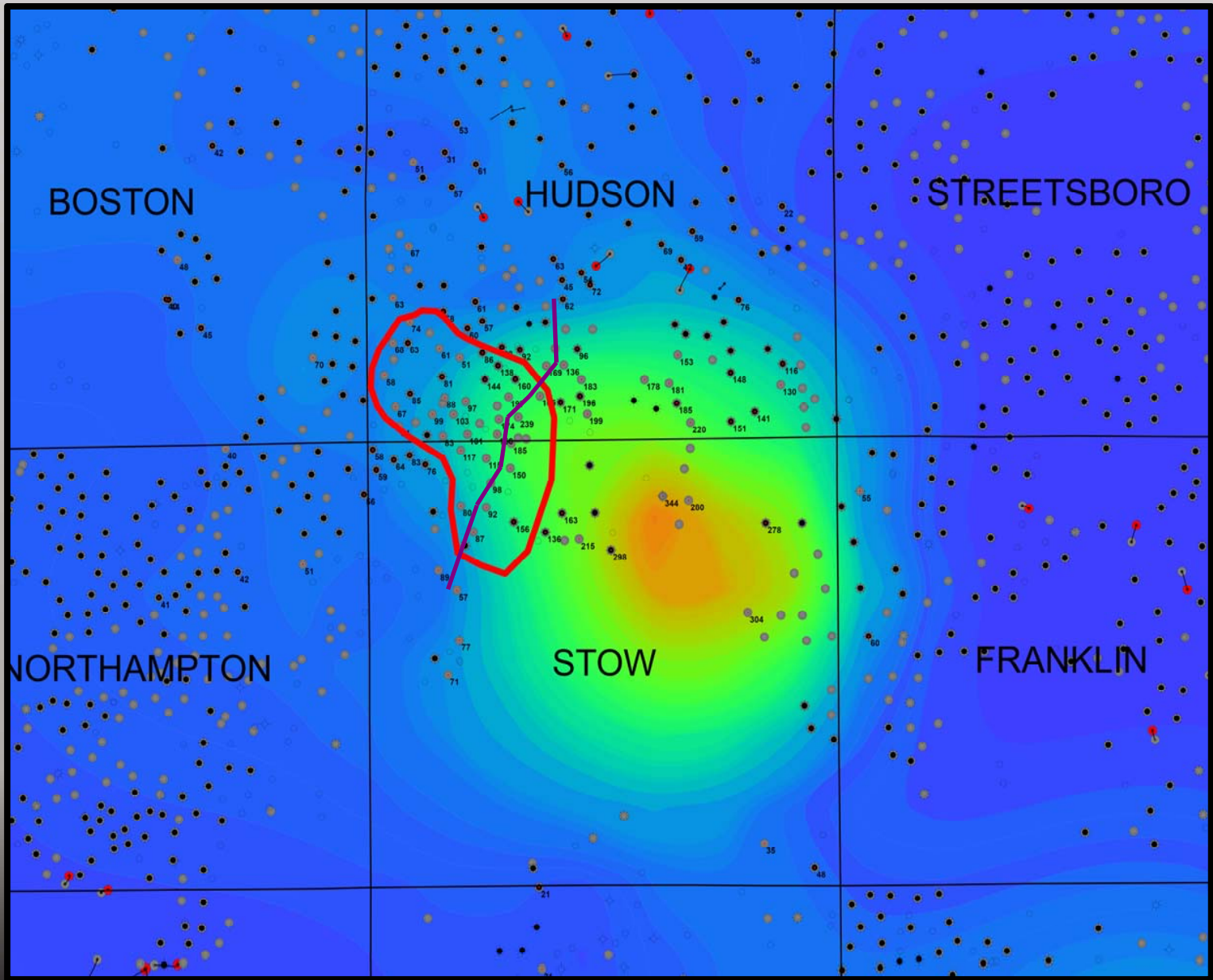
TWINOAKS OIL & GAS CO
TWINOAKS OIL & GAS CO 1
CUYA COUNTY

M & R INVESTMENTS OHIO LLC
HOSTICKE KATIE COMM 1
CUYA COUNTY

M & R INVESTMENTS OHIO LLC
GERDON RALPH C 1
CUYA COUNTY



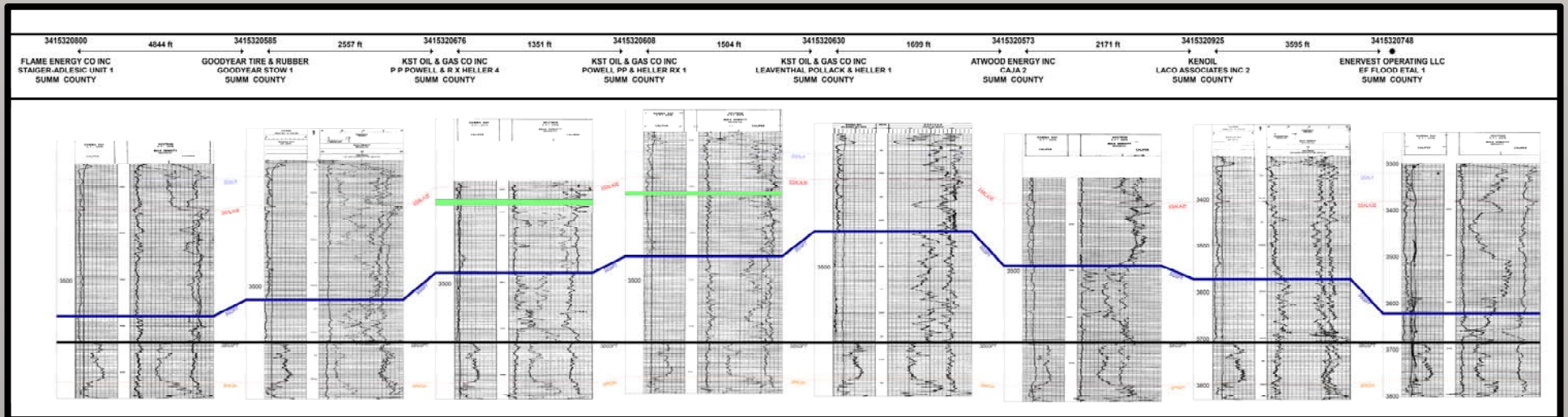
**Wells produced on upthrown side of fault in Lockport.
No reef development.**

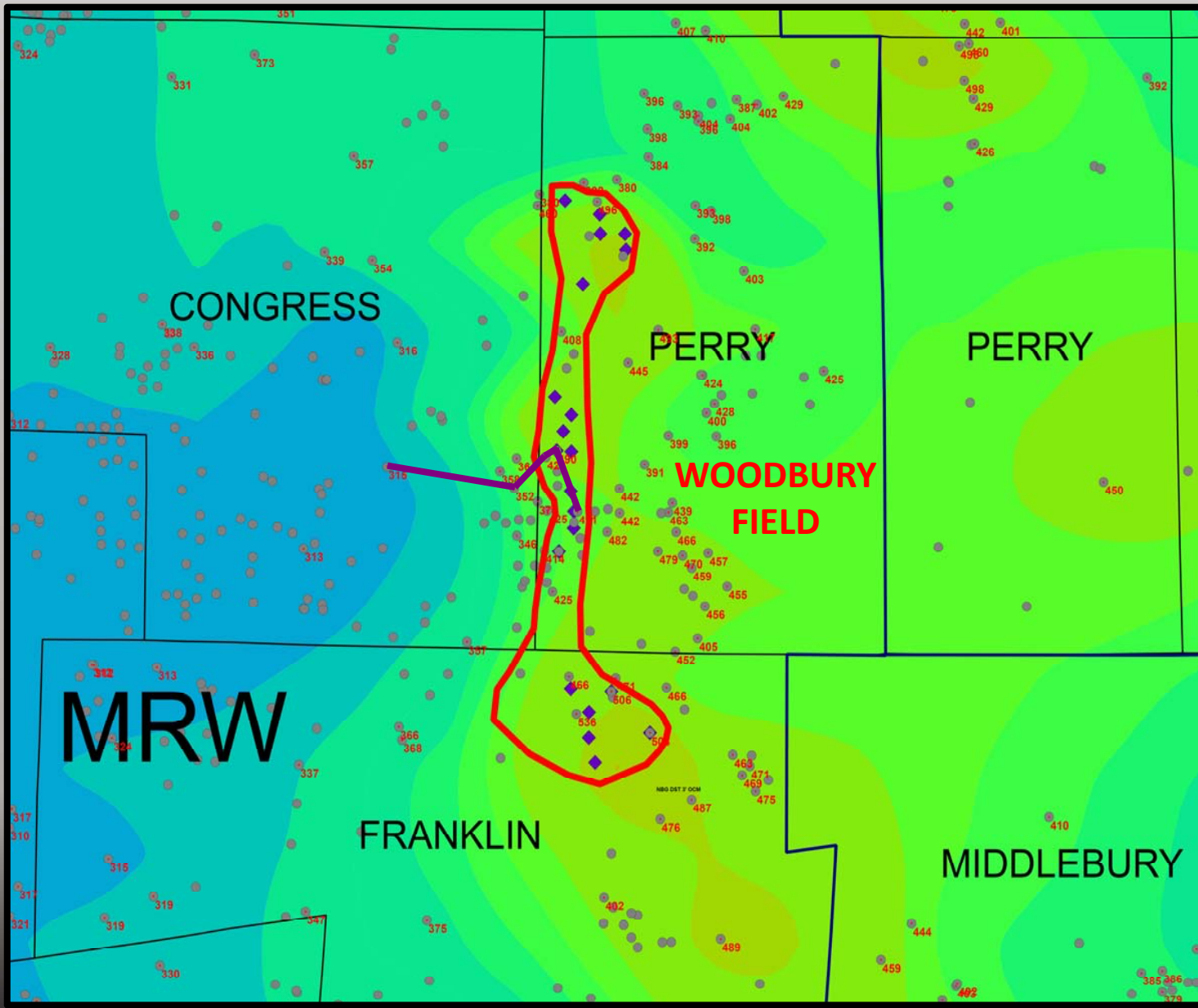


**NEWBURG
PRODUCTION
FROM A1
CARBONATE**

**GASPORT
ISOCHORE**

Wells produce from the A1 Carbonate along flank of underlying Gasport reef.



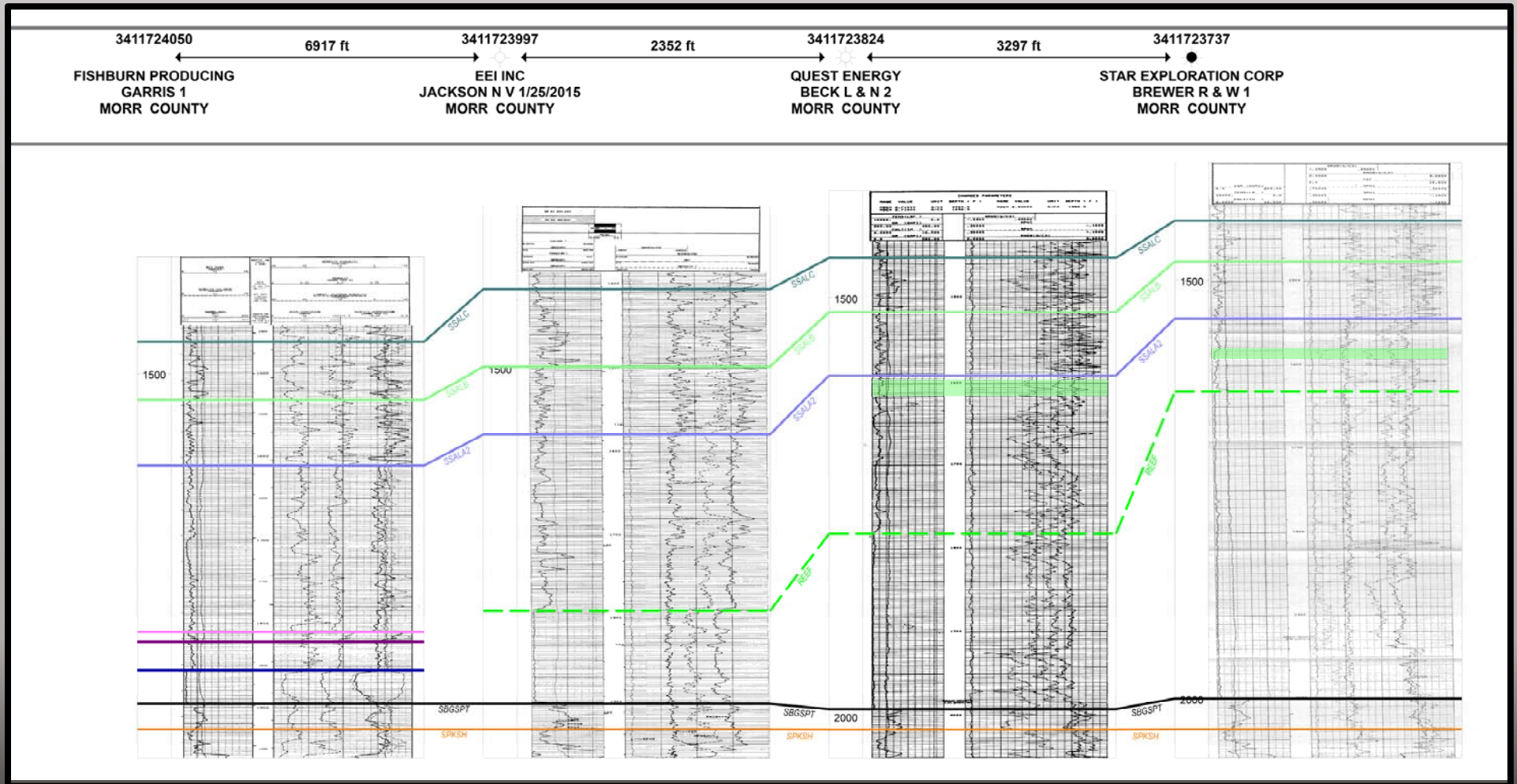


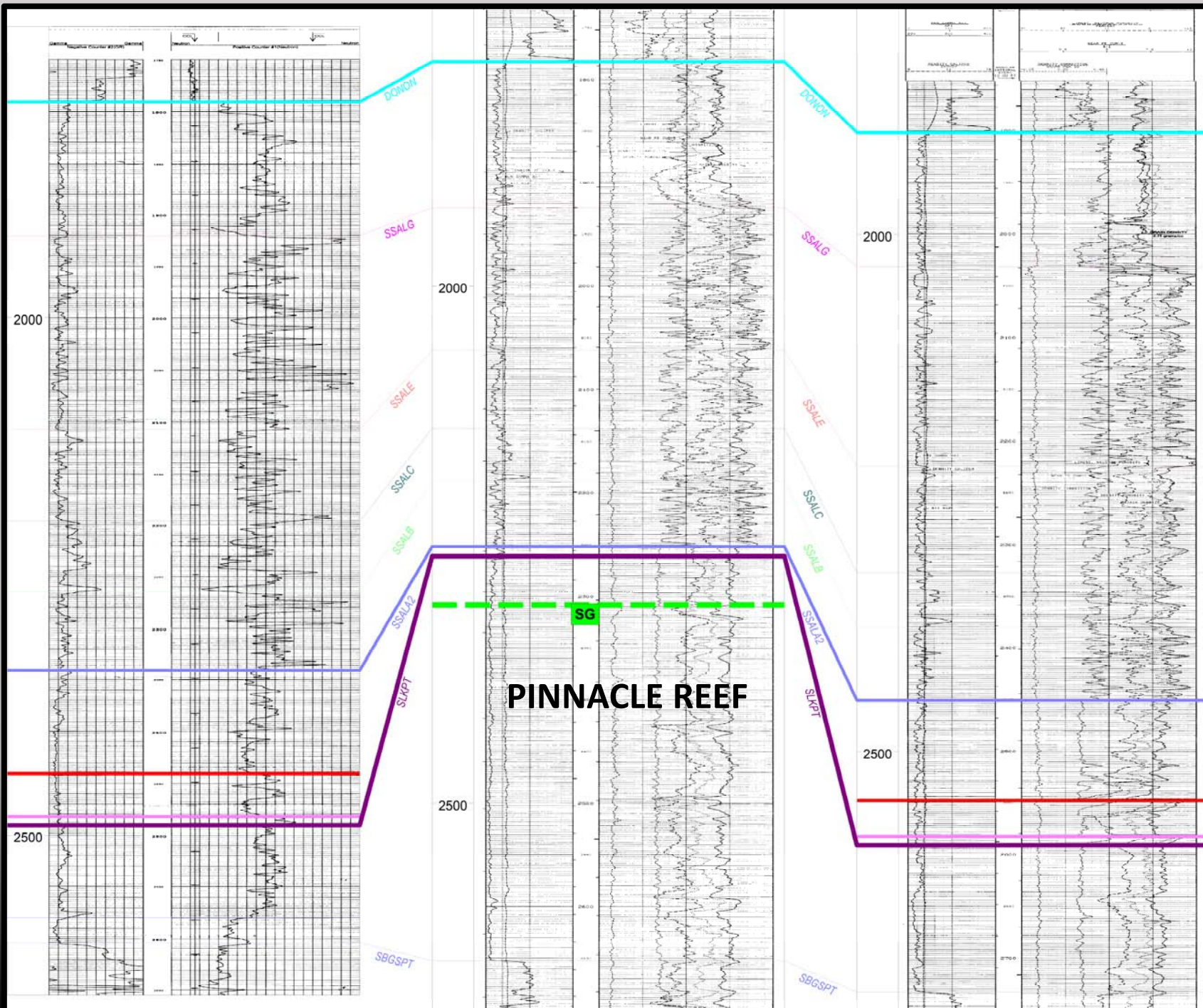
**NEWBURG
PRODUCTION
FROM A2
CARBONATE**

**STRUCTURAL
DRAPE OVER
CARBONATE
REEF BANK**

**A2
CARBONATE
to
PACKER
SHELL**

Wells produce from the A2 Carbonate along crest of carbonate reef bank.







= 40

4 =

