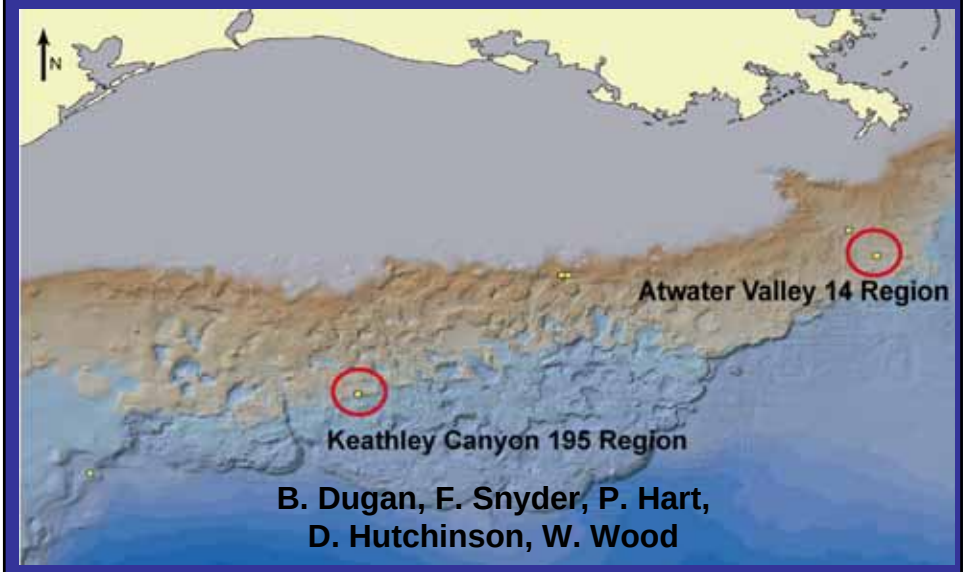
Seismic-Based JIP Site Suggestions



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D. Hutchinson, W. Wood

USGS

01 October 2003

Objective: to understand formation, concentration, and distribution of hydrate in the northern GOM

- geological variability
- geological expression
- physical/chemical properties
- composition
- geophysical indicators

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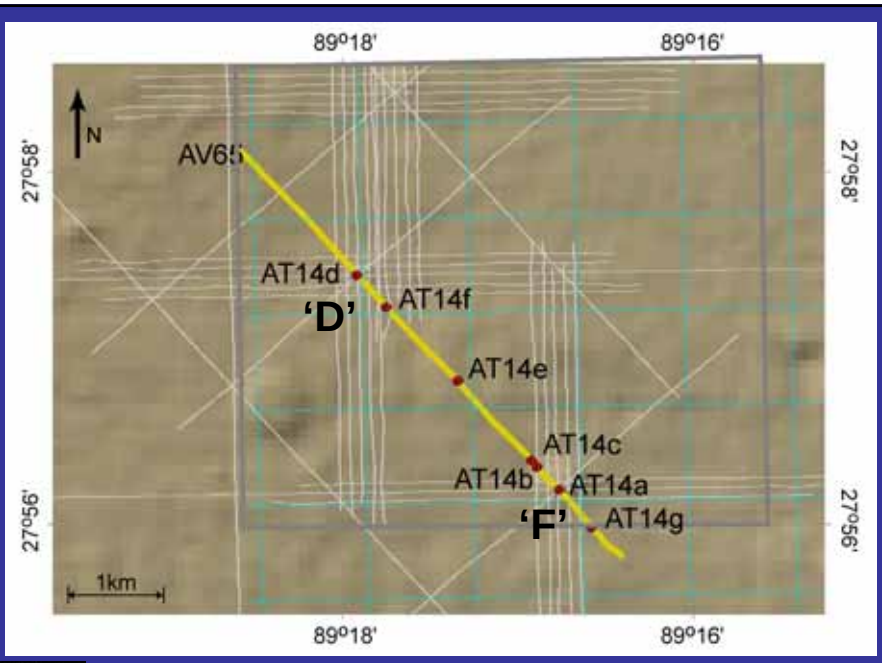
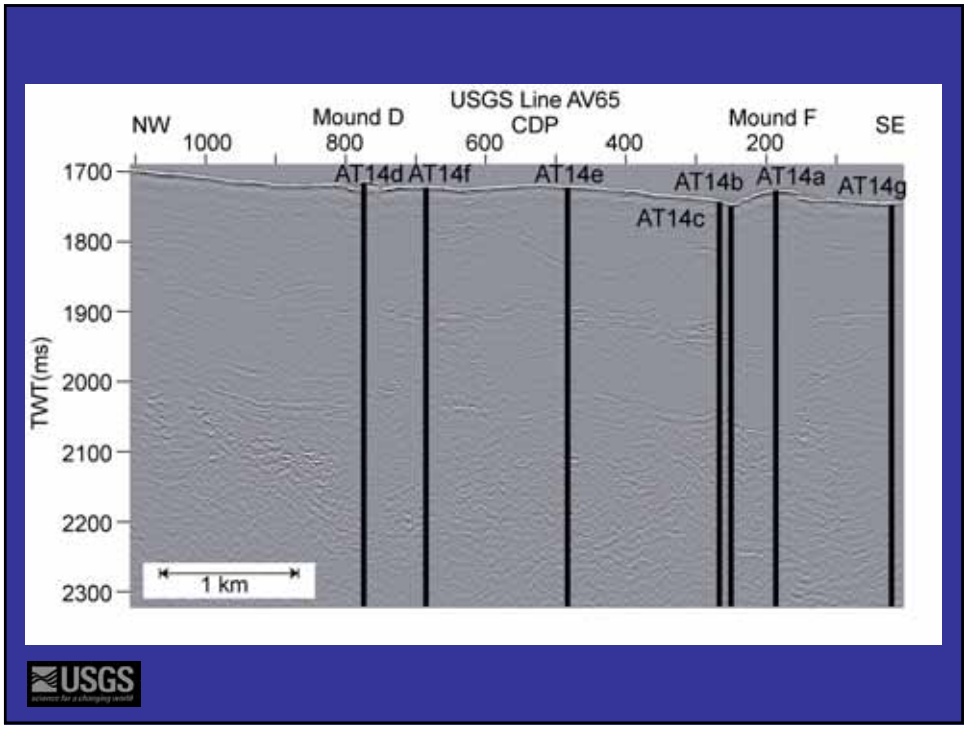
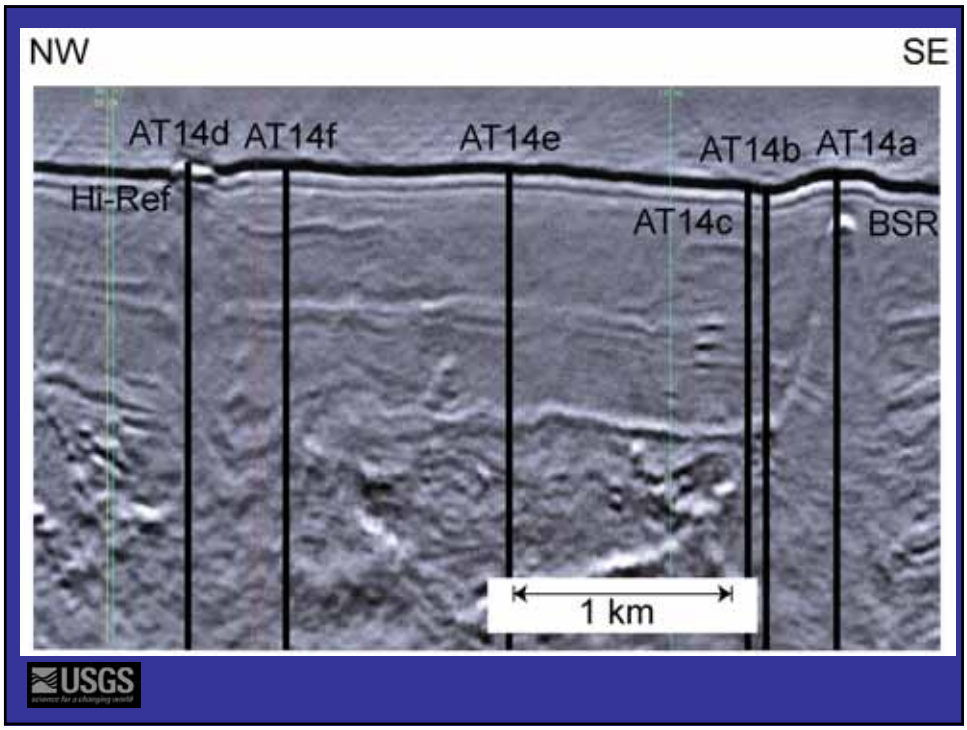
Atwater Valley 14 Region

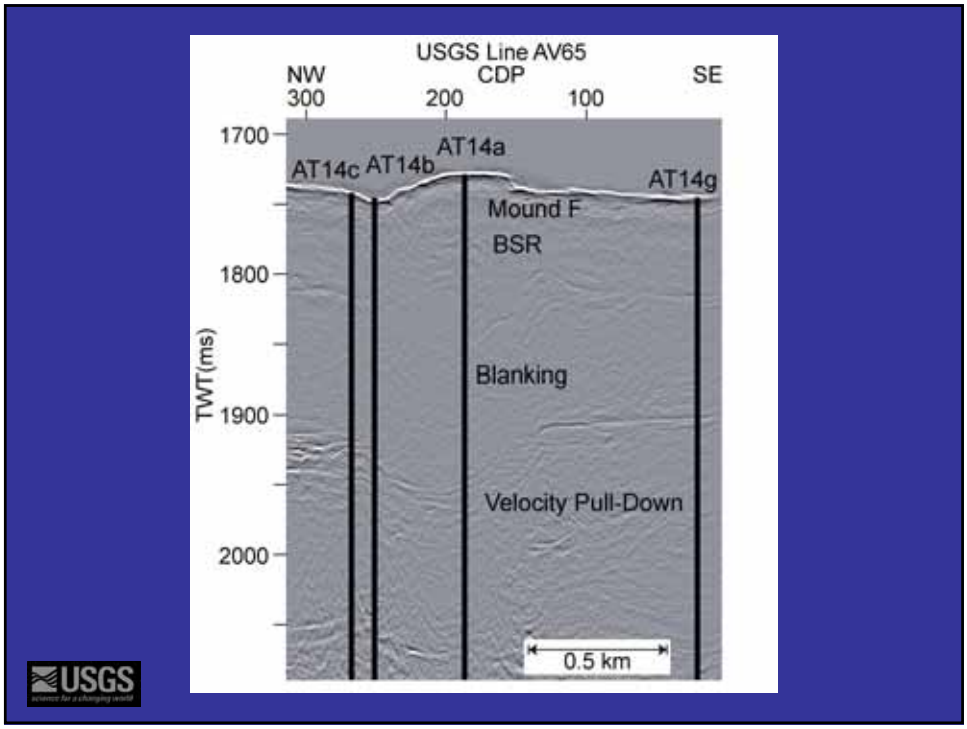
1) Local, anomalously shallow BSR
2) Seismic blanking
3) Possible seafloor hydrate
4) Baseline site



Atwater Valley 14 Region


USGS Line AV65
NW
Mound D
CDP
Mound F
SE
1000
800
600
400
200
1700
1800
1900
2000
2100
2200
2300
TWT(ms)
AT14d
AT14f
AT14e
AT14b
AT14a
AT14g
AT14c
1 km
USGS


NW
SE
AT14d
AT14f
AT14e
AT14b
AT14a
Hi-Ref
AT14c
BSR
1 km
USGS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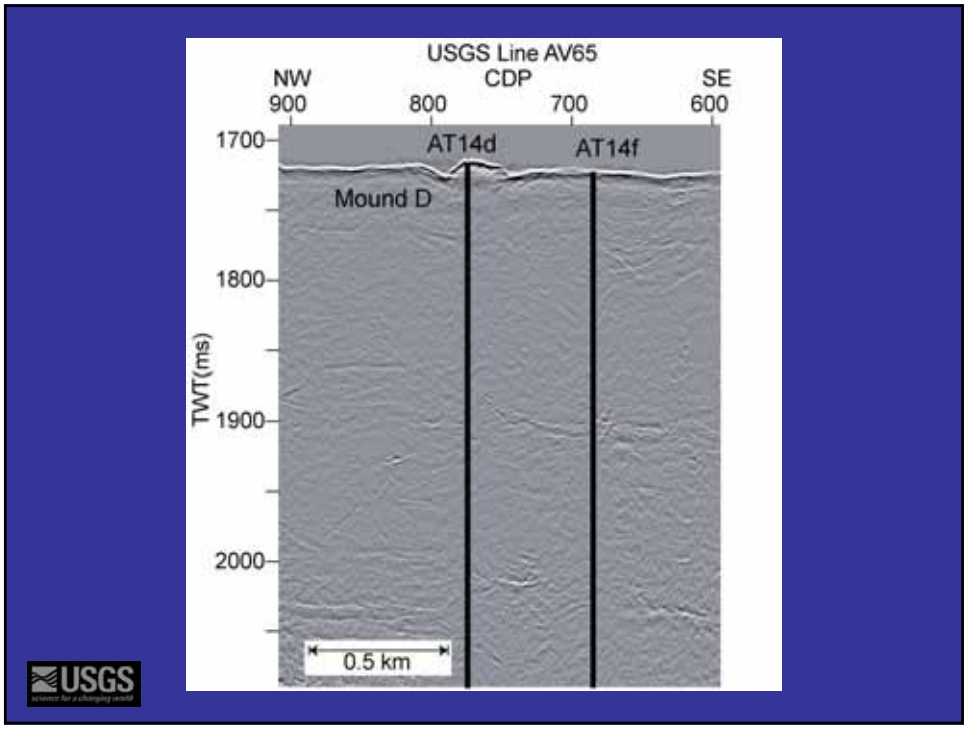
NW
CDP
SE
300
200
100
1700
1800
1900
2000
TWT (ms)
AT14c
AT14b
AT14a
AT14g
Mound F
BSR
Blanking
Velocity Pull-Down
0.5 km
USGS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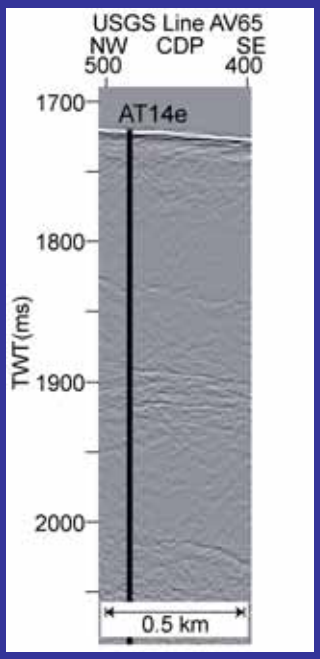
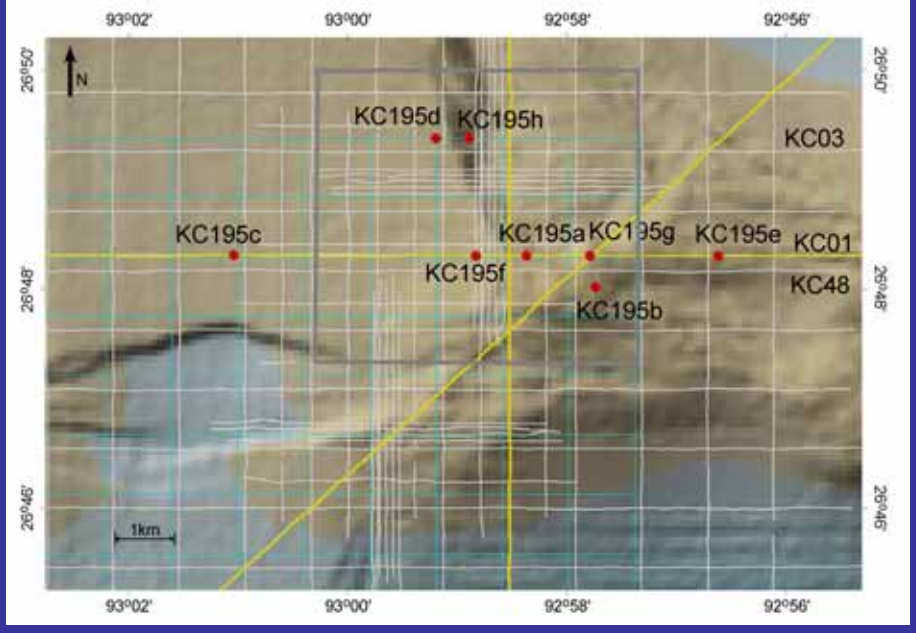
NW
CDP
SE
900
800
700
600
1700
1800
1900
2000
TWT (ms)
AT14d
AT14f
Mound D
0.5 km
USGS



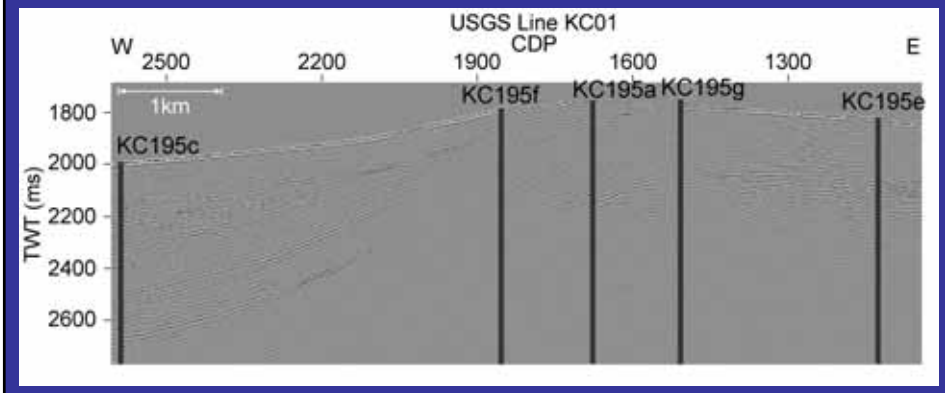
Keathley Canyon 195 Region

1) Regional BSR
2) High-amplitude sands
3) Mini-basin baseline
4) Mounds

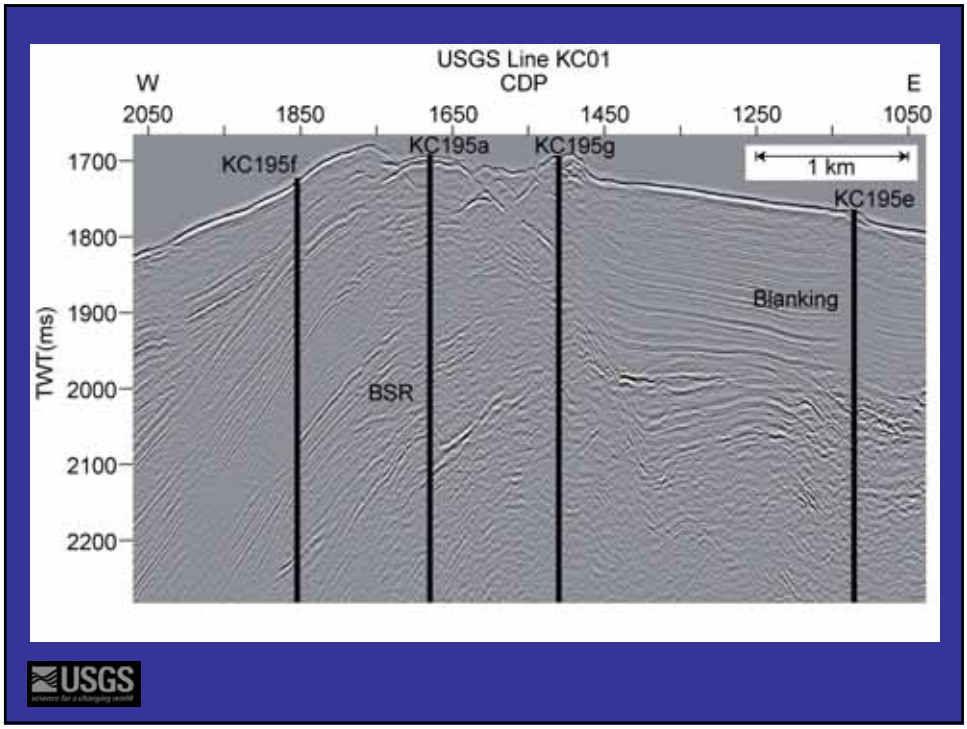


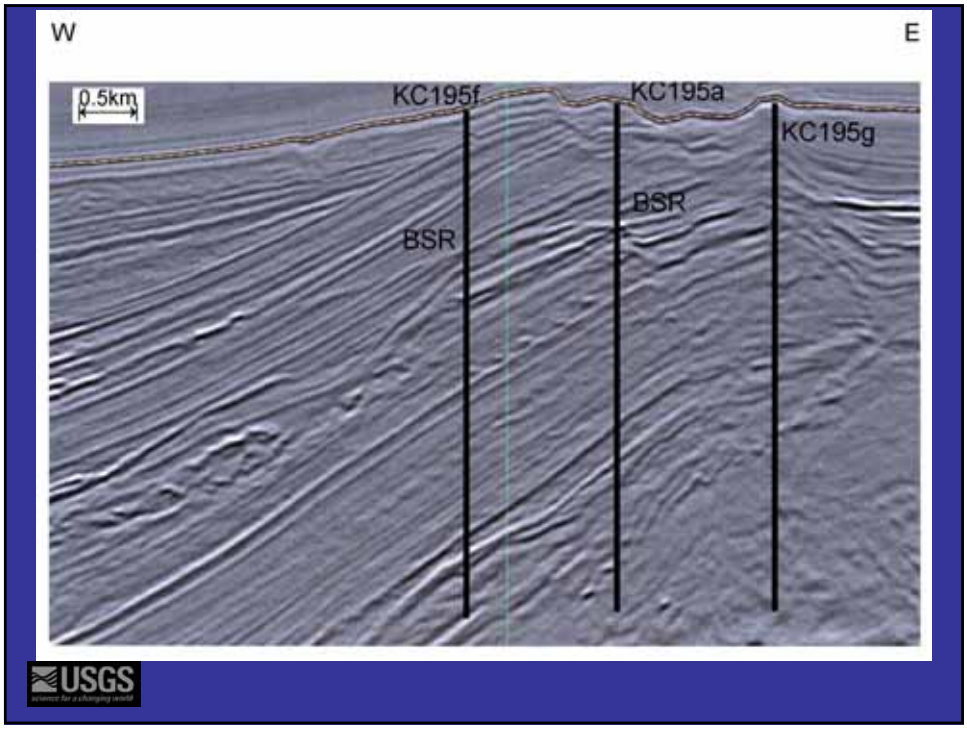
USGS

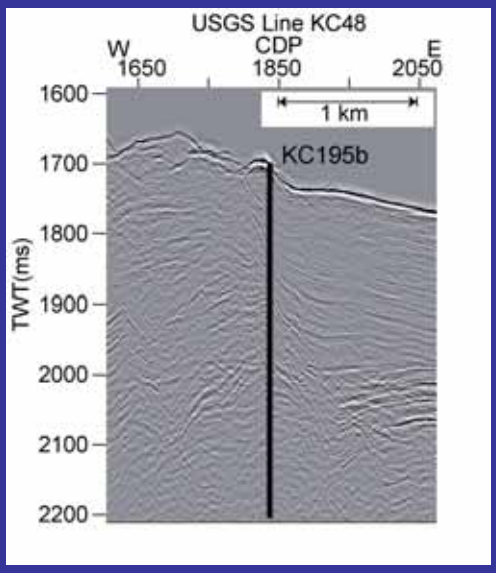
Keathley Canyon 195 Region

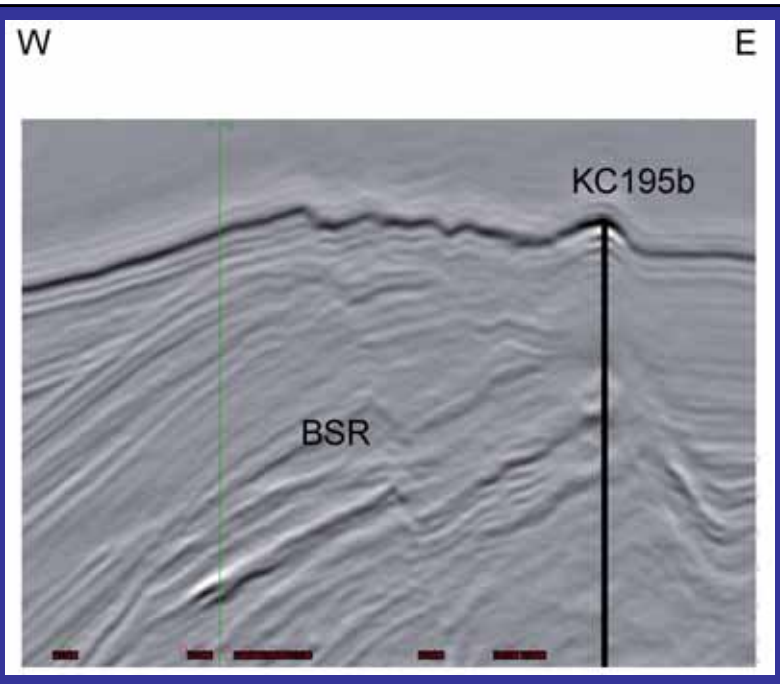


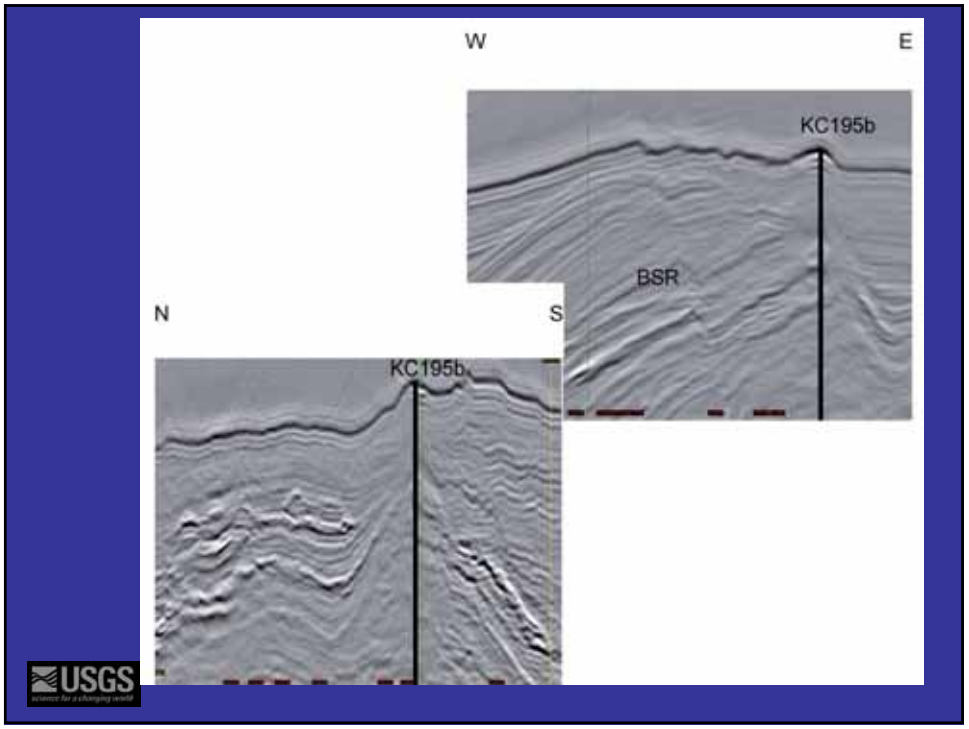
USGS

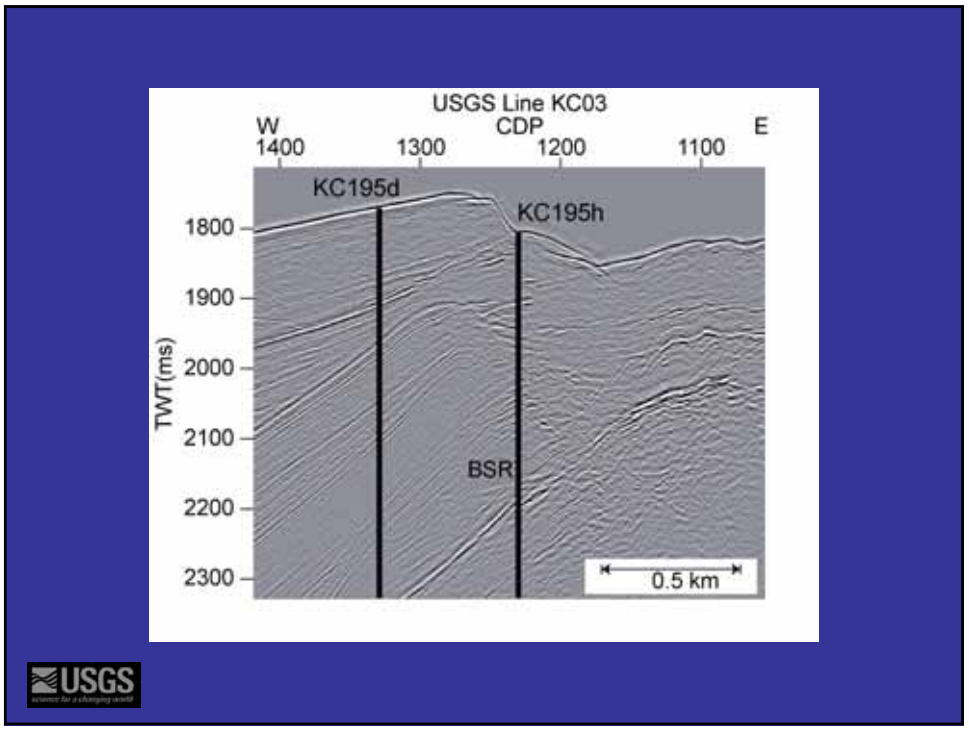

USGS Line KC01
W
CDP
E
2050
1850
1650
1450
1250
1050
1700
1800
1900
2000
2100
2200
TWT(ms)
KC195f
KC195a
KC195g
KC195e
1 km
Blanking
BSR
USGS

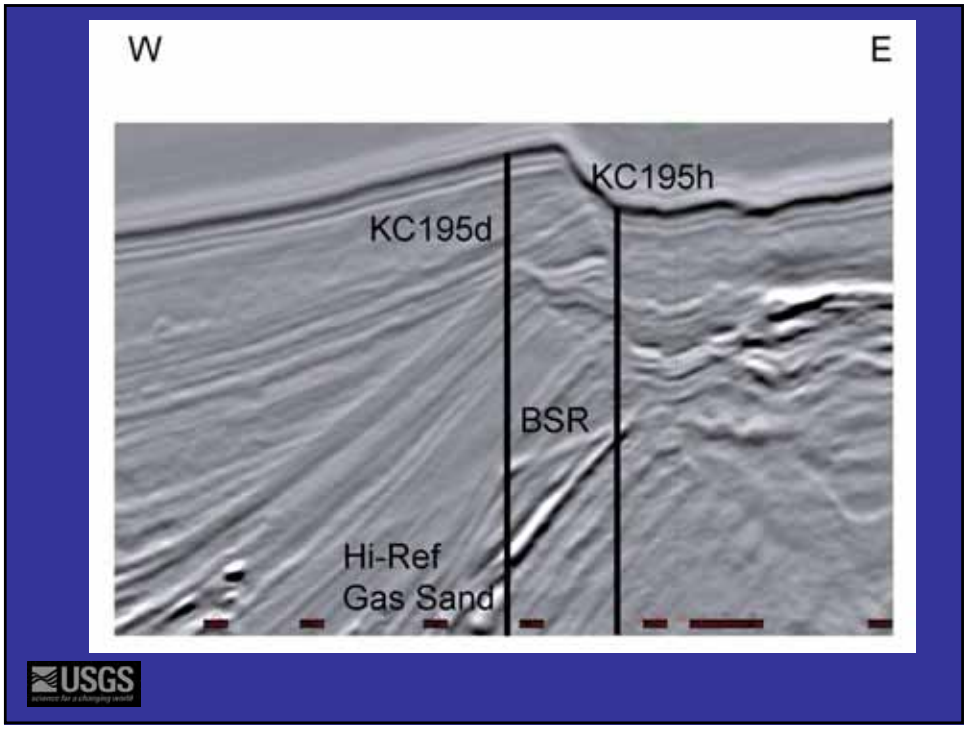

W
E
0.5km
KC195f
KC195a
KC195g
BSR
BSR
USGS

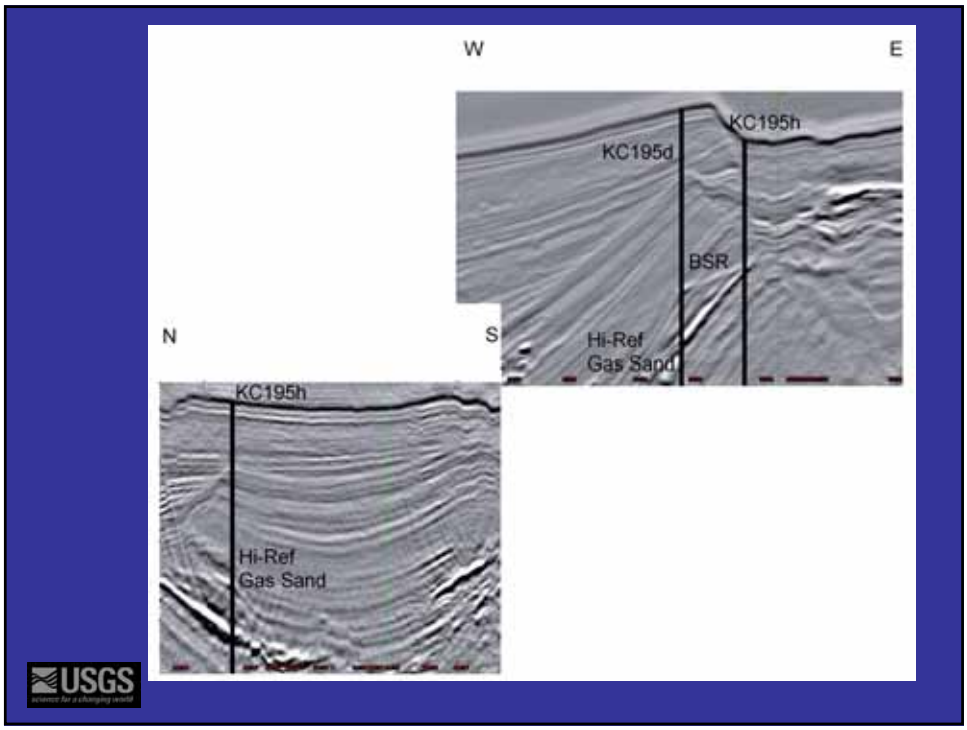

USGS Line KC48
W
1650
CDP
1850
E
2050
1600
1700
1800
1900
2000
2100
2200
TWT(ms)
1 km
KC195b

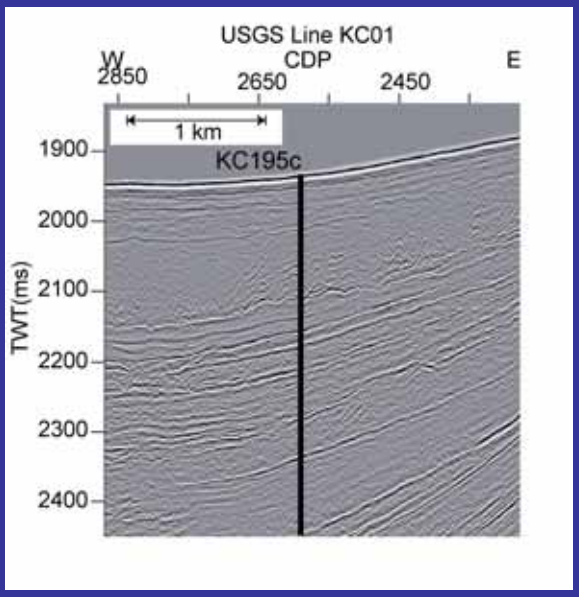

W
E
KC195b
BSR


W
E
KC195b
BSR
N
S
KC195b


USGS Line KC03
W
CDP
E
1400
1300
1200
1100
KC195d
KC195h
1800
1900
2000
2100
2200
2300
TWT(ms)
BSR
0.5 km


W
E
KC195h
KC195d
BSR
Hi-Ref
Gas Sand


W
E
KC195h
KC195d
BSR
Hi-Ref
Gas Sand
N
S
KC195h
Hi-Ref
Gas Sand



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Science Plan

1) 500-750 mbsf (1650-2450 ft bml)

2) continuous coring

3) logging-while-drilling

4) *in situ* pressure/temperature

5) porewater chemistry

6) lithology, grain size, porosity

7) core preservation

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Post-Cruise Studies

1) geotechnical experiments

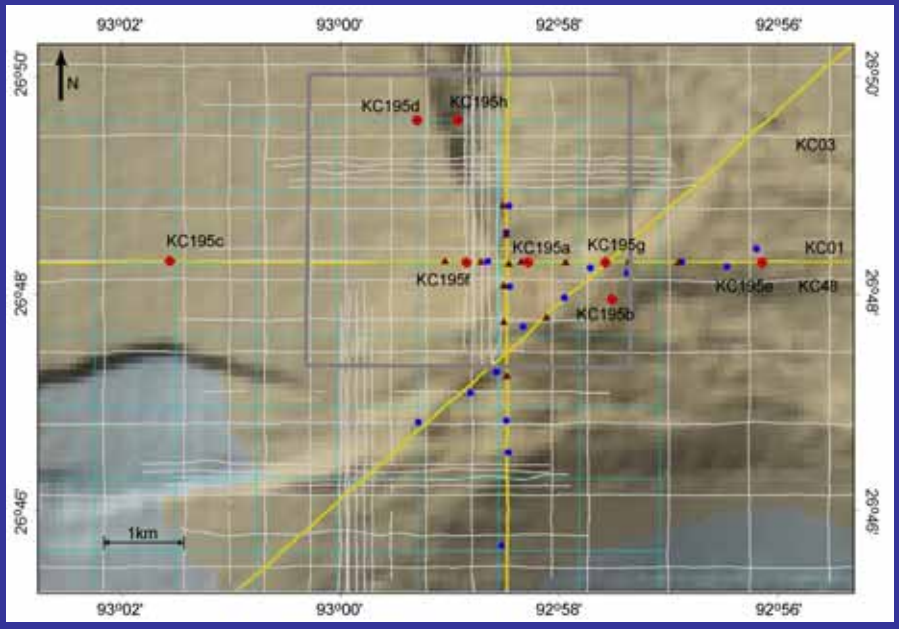
2) geochemical analyses

3) numerical modeling

- **a) development**
- **b) calibration**

4) correlate direct/indirect data

USGS



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