**Isocore Relationships**

Upper Ismay "Clean Carbonate" Isocore Map

**Major Facies Mapped in the Upper Ismay Zone**

Seven depositional facies, interpreted from upper Ismay cores, have been recognized across the study area.

**Open Marine**

1-28 Cuthair (28 - 385 - 22E) 5590 ft.

Lime muds containing well-preserved partially calcified mudstones and pebbles, as well as calcified the rounded locations. (B) are typical of Open Marine deposits.

**Phylloid-Algal Mounds**

8-36 Mustang 22-43 (20 - 365 - 25E) 6204 ft.

Very large, sheet-like anhydrite plate. The large, sheet-like plate is typical of mound-like structures. Note that the patches of preserved porosity between algal plates.

**Anhydritic Salinas**

Tank Canyon 1-9 (1 - 375 - 14E) 5433 ft.

Nodular mosaics ("chicken-wire") anhydrite are one of several growth forms seen within this study. This patchy accumulation of upper Ismay intra-shelf basins.

**Bryozoan Mounds**

5-6-36 Mustang 22-43 (20 - 365 - 25E) 6204 ft.

A mesh-like network of tubular and sheet-like fenestrate bryozoans (BY) provide the binding agent for the structure. (C) and other open-marine tidal-flat settings. Remnants of intraparticle (WP) spaces (in black).

**Quartz Sandstone Dunes (?)**

3-6 Mustang 22-43 (20 - 365 - 25E) 6204 ft.

Very large, sheet-like anhydrite plate. The large, sheet-like plate is typical of mound-like structures. Note that the patches of preserved porosity between algal plates.

**Middle Shelf**

Tank Canyon 1-9 (1 - 375 - 14E) 5433 ft.

Nodular mosaics ("chicken-wire") anhydrite are one of several growth forms seen within this study. This patchy accumulation of upper Ismay intra-shelf basins.

**Bryozoa**

1-28 Cuthair (28 - 385 - 22E) 5590 ft.

Lime muds containing well-preserved partially calcified mudstones and pebbles, as well as calcified the rounded locations. (B) are typical of Open Marine deposits.

**Quartz Sandstone Dunes (?)**

3-6 Mustang 22-43 (20 - 365 - 25E) 6204 ft.

Very large, sheet-like anhydrite plate. The large, sheet-like plate is typical of mound-like structures. Note that the patches of preserved porosity between algal plates.

**Upper Ismay "Anhydrite 2" Isocore**

Isocore map of the upper ismay "Anhydrite 2." The log picks and correlations of Anhydrite 2 are shown in Cross Sections 2 and 6 on the poster panel to the left. Note that the areas of thickest anhydrite (in darker shades of orange) coincide with some of the thins on the upper ismay Clean Carbonate isocore map above. The Anhydrite 2 thicks were deposited within semi-intra-shelf basins.

**Isocore "Dilemma***

The isocore relationships shown on the maps above are too coarse or complex to accurately define prospective facies tracts and intra-shelf basin boundaries. Detailed examination of cores tied to wireline logs showed that the upper Ismay can be divided into two depositional sequences across the study area. We have formed these packages the "upper part" and "lower part" of the upper Ismay. The top of the Lower Part is frequently capped with an exposure or an erosional surface. The two maps on the next panel show the result of core and log interpretations for these two packages.