



FIGURE 1 CORRELATION DIAGRAM FOR WS-T-1-86 (STANTONSBURG) AND WY-T-2-82 (SAULSTON RESEARCH STATION-NCOWS). DATUM IS MEAN SEA LEVEL.

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SURFICIALS - (0-15') consist of yellow oxidized medium to coarse grained quartz sand becoming cleaner in the 10/15' sample. Calcareous aggregates (FLOOD TRAILS?) occur in the 5/10 sample.

YORKTOWN FORMATION - (15-34') - generally consists of muddy fine grained sands, white to grey shell material and phosphate. The overall color of this unit is grey, which is more apparent in macroscopic examination of the samples. The electric log and samples agree in that the upper 13' is sandier than the lower 6'. The lower portion contains more shell material, more sandy clay and phosphate. Fossils observed include Pecten fragments, one Ecphora and several Tunitella. Echinoid spines are abundant in the 30/35 sample.

Phosphate along with coarse sand are more prevalent in the 30/35 sample, suggesting that these materials are concentrated near or at the base of the Yorktown. At an outcrop near Old Sparta, Edgecombe county, the base of the Yorktown is characterized by a phosphate-pebble conglomerate.

CAPE FEAR FORMATION - (34-152) - TAN sandy clay along with trace amounts of Pyrite make their first appearance in the 35/40 sample. Yellow, orange, red and green mottled sandy clay/siltstone occur in the 40/45 sample. Hematitic sandy clay is present in the 70/80 samples.

corresponding to a gamma high and a resistivity low. Below this, medium to coarse grained quartz sands dominate the rest of the sedimentary section. These sands are angular, moderately well sorted and contain minor amounts of grey and white feldspar (andesine - orthoclase?). Rose quartz is especially abundant just above the basement contact (149/152).

BASEMENT - (152') (62'sld) Quartz chlorite sericite schist fragments appear in the 150/152 sample, coincident with a gamma high. Common to abundant siderite "oolites" altering to hematite occur in the 155/160 sample, possibly occupying space in fractures of the basement rock.

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## CORRELATIONS

The nearest interpreted well is WY-T-2-82, approximately 10 miles South.

ELEVATION - 98'      DEPTH - 216'

ELECTRIC LOG, GAMMA LOG AND SAMPLES AVAILABLE.

Both wells contain a similar surficial lithologic unit of almost equal thickness (FIGURE 1).

The Yorktown Formation in T-1-86 (+75) correlates to a phosphatic sand in T-2-82 (+82), although the existing description for this well, done in 1982, lumps this phosphatic sand with the Surficials. In T-1-86, the Yorktown is shelly and contains black shiny phosphate. T-2-82 has larger grey and dull black phosphate but exhibits a total lack of shell material which has apparently been leached out. The Yorktown is thinning towards the South and becomes only patchy, at best, another 10-12 miles south of T-2-82.

The main discrepancy between the two wells is the presence of the Black Creek Formation in T-2-82 and not in T-1-86. The Black Creek pinches out between these two wells.

The top of the Cape Fear Formation best correlates in T-2-82 at 68' (+30'), although the description for the well indicates that the Cape Fear doesn't appear until 100' (-2'). Mottled Red, yellow and grey clay fragments in the 70/80 sample of T-2-82 correlate

to the 40/45 sample in T-1-86. Hematitic clays along with coarse sands are present in both wells, however T-1-86 has the greater thickness of coarse sands (98-142).

In T-2-82, the Cape Fear Formation has been broken up into 2 chronostratigraphic units, Cretaceous unit D and Cretaceous unit F. I could find no definitive point at which to subdivide the lithostratigraphic Cape Fear Formation in T-1-86

Basement was penetrated in T-1-86 @ 152(-62) and consists of a quartz chlorite sericite schist.

In T-2-82, basement was reported @ 215(-117) and lithic fragments of basement occur in the 210/216 sample. The lithology of the T-2-82 basement is dissimilar to T-1-86 and is recorded as intermediate to mafic volcanic.

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