

A significant reduction in interval velocity from 9200 down to 8000 feet per seconds is also noted at the base of this interval.

For purposes of seismic mapping, the upper boundary of this interval (3844') is called "Upper Cretaceous" horizon.

Also for purposes of seismic mapping, the lower boundary of this interval (4492') is called "intra-Upper Cretaceous Unconformity" horizon.

#### 4492' - 5065'

This interval consist of shale with very rare and minor siltstone. The shale or mudstone is dark grey to black, carbonaceous, fissile. The siltstone is dark grey, carbonaceous.

This interval is assigned to the *C. triplex* and *A. distocarinatus* palynological zones of the Upper Cretaceous. Its upper boundary is the intra-Upper Cretaceous Unconformity while its lower boundary, with bright red siltstones, may represent a significant change in depositional environment, a re-worked zone, one of aerial or subaerial exposure, (weathered zone) or metasomatism associated with volcanic activity.

Its interval velocity is uniformly 8000 feet per seconds.

The dipmeter interpretation log indicates a significant change at approximately 5000'. Down to about 4750', the dip segments are 0° to 30° with random orientation. From 4750' to 4950', the dip is toward the west at an average angle of 25°. At 5000', or so, the dip is towards the northwest, increasing with depth from less than 20° up to 35°. A minor down-to-the northeast normal fault is recognized at this depth on seismic data. Random dips are measured over the interval 5065' to 5400' or so.

#### 5065' - 5400'

Sample studies describe this interval as siltstone; quartzose in part, white or bright green, bright red, grey-blue, hard, tight, sandy, trace calcite interbedded with shale or mudstone; dark grey, grey black or red brown, soft, carbonaceous.

Detailed petrographic studies of cutting's over the interval 5060' to 5400' describe one hand specimen, from unknown depth within this interval, as a black, very friable, altered vesicular olivine basalt. In thin section it is described as, a highly altered amygdaloidal volcanic rock. The amygdules are filled with fine grained pale green chlorite and clay. The chloritization is believed to be of deuteric origin. A second hand specimen, also from unknown depth within this interval, is described as a medium grained, grey and black, porphyritic olivine basalt.