

REPORT ON TERTIARY STRATIGRAPHY IN SEASPRAY
NO. 1. WELL.

Cores, side wall cores and rotary outtings (to 4000 ft.) have been examined from Arco-Woodside's Seaspray No. 1. Well. Contamination of rotary cutting samples made foraminiferal determinations extremely difficult. No cores and only three side wall cores were taken in the marine Tertiary section. For these reasons, the designation of stratigraphic boundaries is unwarranted, so only general comments will be made.

The marine Tertiary section, in Seaspray No. 1., is directly comparable with other wells in the vicinity (see Figure), although this section is noticeably thicker. However ^{of the entire section} this thickening is partially due to a greater accumulation of the Pleistocene sands, gravels and lignites. The first appearance of Foraminifera was at 390 feet and this fauna was typical of the Kalimnan (=Jennys Point Formation). There is a gradual thickening of these post-Kalimnan sediments from the Baragwanath Anticline to the Woodside area, where these sediments reach a thickness of the order of 1,000 feet.

The typical planktonic fauna of the Janjukian Stage was first encountered at 2150 feet. The sediment assignable to the Janjukian Stage is over 200 feet thicker than in other sections in the vicinity (see Figure). A careful examination of a side wall core from 2640 feet (15 feet above the brown coal) revealed a fauna which represents the base of Carter's (1959) Faunal Unit 5. Hooking & Taylor (1964) show that, in the Gippsland Basin, the initial marine Tertiary transgression was diachronous, commencing at the base of the Janjukian (= Carter's Faunal Unit 4). Thus the initial marine sediments in the Seaspray section was deposited later than that in structurally lower lying areas, but is older than the other wells in the Seaspray area and on the Baragwanath Anticline. The initial marine sediments in Seaspray are also of interest as they contain fragments of brown coal which are often associated with these sediments in the deeper parts of the basin,

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but not on the Baragwanath Anticline.

No Foraminifera were found below 2660 feet which suggest an older age than those above 2660 feet.

The accompanying diagram illustrates the biostratigraphic correlation of wells drilled by Arco in the Seaspray area. This diagram shows that the thickening of the Seaspray No. 1. section can be accounted for, in terms of:-

- (i) The thickening of post marine Tertiary sediments.
- (ii) The greater thickness of Janjukian sediments, which is partially due to an earlier initiation of marine sedimentation.

The above interpretation suggests that the initial marine transgression took place on pre-existing structures as is proposed by Hocking & Taylor (loc. cit.).

References:

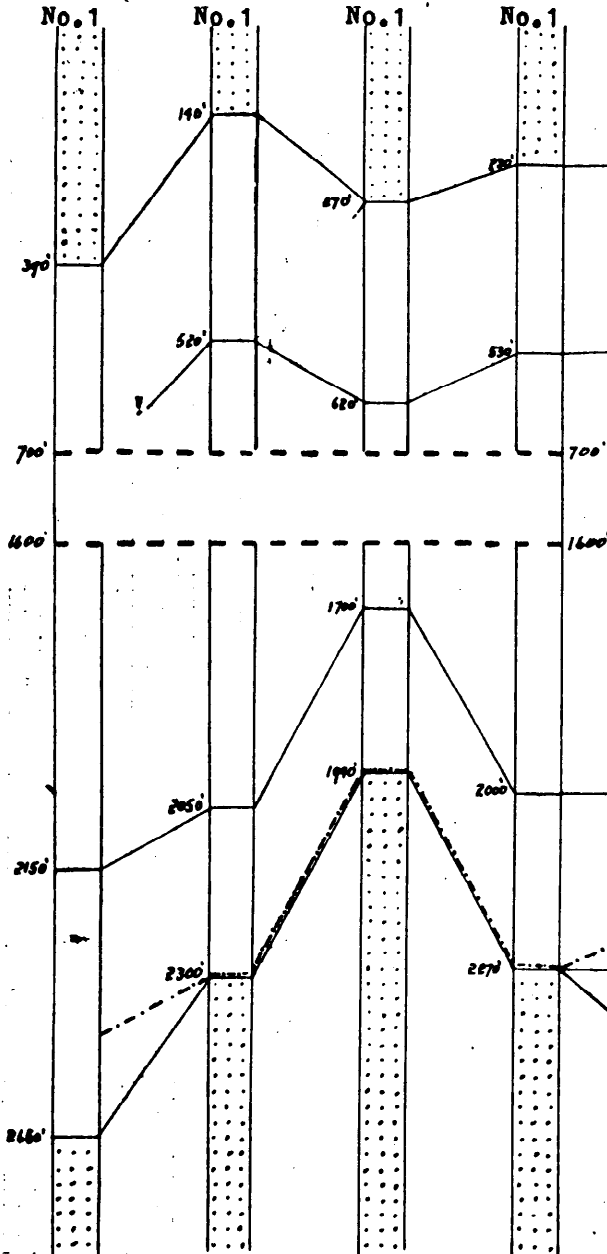
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SEASPRAY MERRIMAN NORTH SEASPRAY CARRS CK.

VICTORIAN TERTIARY STAGES:



= non-marine sediments. Vert. scale = 1" : 250ft. N.B. Depths are "drilled depths".

BIOSTRATIGRAPHIC CORRELATION DIAGRAM OF WELLS IN SEASPRAY AREA.

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