

Rock-Eval Tmax values agree reasonably well with measured vitrinite reflectance (Figs. 5-7). Low Tmax values and high production indices (PI = 0.35-0.54) were obtained from several SWC samples of the Cretaceous sequence (Table 5, Fig. 7B). These anomalous values are due to a combination of instrumental errors in handling small ill-defined S<sub>2</sub> peaks, and the effects of staining by migrated hydrocarbons (Peters, 1986) or contamination from mud invasion of the sidewall core.

Another maturation parameter, the Rock-Eval production index increases from PI = 0.04-0.10 in immature Eocene sediments to PI = 0.20-0.35 in the mature Paleocene and Cretaceous sections of the Eastern View Coal Measures. Cuttings from the Cretaceous section gave lower PI values than did sidewall cores. This is believed due to the presence of caved coal in the cuttings (Watson, 1986).

#### 4.2 Source Richness

The Eastern View Coal Measures has good to very good gas richness (C<sub>1</sub>-C<sub>4</sub> = 10000-180000 ppm) throughout the interval sampled, but particularly between 2100 and 3600 metres depth (Eocene-Paleocene) where yields commonly exceed 50000 ppm (Fig. 1). Wet gas (C<sub>5+</sub>) yields in excess of 1000 ppm occur at two levels which produced hydrocarbons on test:

Depth m	C <sub>5+</sub> Yield ppm	Test
2709-2817	1000-2300	1) DST 6, 2786-2790 m, gas @ 3.5 MMCFD and condensate @ 400 BPD 2) RFT 3, 2788 m, condensate
3150-3645 (Paleocene)	1300-15900	DST 4, 3143-3162.5 m, gas @ 300 MCFD and trace oil

Total organic carbon values (Tables 4, 5) decrease with increasing depth in the Eastern View Coal Measures, thus:

	TOC		
	Range %	Mean %	n
Eocene	1.10-79.2	16.1	57
Paleocene	0.96-47.0	10.4	27
Cretaceous	0.82-13.7	3.1	19

The Eocene and Paleocene mean values, although well above average for clastic sediments, are heavily influenced by abundant coal in the sequence. Both TOC and Rock-Eval data for the cuttings may also be affected by contamination over those intervals where gilsonite was employed as a mud additive (cf. Peters, 1986).