KELSO DRILL HOLE No. 2

BOXES 1 & 2	HQ core, (diameter 64 mm)
0 - 4.29 m	Rounded to sub-rounded pebbles and cobbles (≤50 mm), mostly of orange-brown weathered basalt, with some kernels of fresh basalt; also subordinate quartzite pebbles. Less than 0.4 m of core. Probable alluvial deposit. Followed by ...
	Basalt. About 0.2 m of competent core of massive, fine-grained, dark grey, fairly fresh basalt, Possible boulder.
4.29 - 7.29 m	A few well-rounded quartzite pebbles at top of interval. followed by ...
	Basalt. Hard but weathered, massive, fine-grained.
7.29 - 10.29 m	Claystone and subordinate siltstone. About 2.2 m of core, core loss 0.8 m. Mainly soft pale brown claystone with coarser silty material in places, and abundant black carbonised fragments of plant material. Detrital white mica present, especially in silty intervals. Lower part of interval is dominantly soft, poorly sorted micaceous siltstone.
	Probable Tertiary age.
10.29 - 10.8 m	Claystone, pale to dark brown, less well consolidated, abundant carbonised plant material.
10.8 - 11.3 m	Lignite(?), poor quality, dark grey-brown, very friable.
11.3 - 12.8 m	Claystone, place brown, friable. SAMPLE at 12.5 m (palynology).
12.8 - 13.29 m	Siltstone, poorly sorted, micaceous. Abundant plant material, occasional quarry granules and pebbles, rare angular clasts to several mm across of fine-grained black basalt.
13.29 - 13.8 m	Claystone, pale brown, as above.
13.8 - 14.3 m	Possible palaeosoil, Very poorly sorted zone of soft pale grey-brown to grey-green material, containing dark brown organic matter, fine-grained mica flakes, mud pellets, and rounded vesicles within (?) altered basalt.
14.3 - 15.3 m	Basalt. Very weathered, soft, friable, pale grey-blue to khaki-green, vesicular. Vesicles typically 5-10 mm across, up to 30 mm.
15.3 - 17.33 m	Basalt, weathered, grey-green to khaki-coloured. Becoming less vesicular, nearly massive below 15.8 m. Sparse secondary calcite present.

BOX 3

17.33 - 17.4 m	Basalt, nearly massive, weathered, khaki-green as above.
17.4 - 19.29 m	Basalt, moderately vesicular, pale grey-green to pale grey-blue. Some amygdaloidal fillings of dark grey-brown limonite.
19.29 - 19.7 m	Possible tuff or intra-basalt sediment. Poorly consolidated, very weathered, poorly sorted, friable orange-brown material.
19.7 - 20.4 m	Basalt, vesicular to amygdaloidal, grey-green, weathered.
20.4 - 21.0 m	Basalt, amygdaloidal, grey, weathered. Abundant irregularly shaped amygdales 10-30 mm across, filled with calcite.
21.0 - 21.3 m	Basalt, very vesicular, grey.
21.3 - 21.6 m	Basalt, glassy, dark brown to black, weathered. Grades into ....
21.6 - 23.30 m	Basalt, very fine-grained to glassy, vesicular to very vesicular, weathered. Vitreous lustre. Agglomerate?

BOX 4

23.30 - 25.30 m	Basalt, very fine-grained to glassy, vesicular, as above.
25.30 - 27.1 m	Basalt, very fine-grained to glassy, very vesicular. Dull medium-grey with bluish ring, weathering khaki-brown.
27.1 - 27.8 m	Basalt, fine-grained, only moderately vesicular, dull grey, less weathered.
27.8 - 28.6 m	Irregular, interdigitating contact with very vesicular, often glassy, more even weathered basalt.
28.6 - 29.07 m	Basalt, fine-grained, slightly to moderately vesicular, dull blue-grey, less weathered. Some amygdale filled with calcite.

BOX 5

(Caution - core may be out of sequence)

29.07 - c.31.8 m	Basalt, glassy, very vesicular, weathered.
c.31.8 - c.32.1 m	Basalt, less vesicular, less weathered, dull grey. Off-white to pale grey, sugary zeolite lining some large vesicles near 32.1.
c.32.1 - c.32.2 m	Basalt, glassy, weathered.
c.32.2 - c.32.6 m	Gritty mudstone/siltstone (?), poorly sorted, unbedded, dirty yellow-green to khaki-green coloured. Fragments of plant material (stems) present. Probable Tertiary age.
c.32.6 - c.33.0	Basalt, glassy, very vesicular, weathered.

c.33.0 - c.34.3 m	Gritty mudstone/siltstone (?) as above, poorly sorted, unbedded, some angular clasts of basalt.
BOX 6	
34.3 - 41.2 m	Change to NQ core, (Diameter 47 mm)
	About 3.3 m of core, core loss 2.30 m.
	Gritty mudstone/siltstone(?) as above, very poorly sorted, soft dirty grey-green coloured, some detrital mica, rare dolerite (?) clasts (e.g. 130 mm at 39.8 m). Probably partly derived from decomposition of dolerite. Also cobble-sized dolerite clasts at 40.3 and 40.5 m.
41.2 m	Contact with dolerite, slightly wavy, average about 70° to core axis. Tertiary weathering boundary?
41.2 - 42.90 m	Dolerite. Massive, medium-coarse grained, dark grey-green, fairly fresh. Pyroxene 1-2 mm, plagioclase laths 1-3 mm. SAMPLE at 42.87 m (petrology). Zeolite veinlets 1 mm wide, 30°to core axis at 42.2, 42.4 m.
42.9 - 44.58 m	Dolerite as above. Several weathered joints from 43.3 - 43.8 m.
BOX 7	
44.58 - 46.01 m	Dolerite as above. Calcite ± zeolite veinlets at 25-30° to core axis, at 45.8 and 45.9 m.
46.01 - 48.93 m	Dolerite as above.
48.93 - 52.36 m	DOlerite as above. Joint lined with khaki-green (?) oxidised chlorite at 80° to core axis, near 49.6 m. Several anastomosing zeolite veinlets at low angle to core axis from 51.9 - 52.2 m.
BOX 8	
52.36 - 55.00 m	Dolerite as above. Fractured zone 54.4 0 54.8 m, dolerite more weathered adjacent to fractures.
55.00 - 58.00 m	Dolerite as above. Joint lined with off-white (?) zeolite and minor calcite, 15° to core axis, 55.0 - 55.15 m. Calcite also present in fractured one from 55.2 - 55.4 m. Fracture lined with zeolite, 55.5 - 55.7 m. Joint lined with abundant off-white calcite at 40° to core axis at 55.8; also at 15° to core axis near 56.4 m.
58.00 - 60.04 m	Dolerite as above. Calcite ± zeolite veinlet, 2 - 3 mm, 10° at 58.8 - 59.0 m.
BOX 9	
60.04 - 64.00 m	Dolerite as above. Fractured zone near 60.4 m. Zeolite veinlet 1 mm wide, 30° to core axis, near 61.1 m. Zeolite veinlet ≤10 mm, 30°, from 63.4 - 63.5 m, SAMPLE.

64.00 - 68.03 m Dolerite, medium-coarse, as above. Veinlet of white to pale yellow fine-grained (?) zeolite ± calcite, 8 mm wide, 25° to core axis, at 64.3 m. Calcite veinlet with reddish staining, 5 mm, 35° at 65.3 m. Zeolite veinlet 1-2 mm, 5-10° from 64.2 - 64.5 m.

BOX 10

68.03 - 72.86 m Dolerite as above. Calcite veinlet 1-2 mm, 40° at 68.03 m. Zeolite veinlet, 85° at 69.3 m. SAMPLE. Zeolite veinlet, 1 mm, 85° at 70.8 m.

72.86 - 75.93 m Dolerite as above. Joint lined with pinkish-red stained calcite, at 10° to core axis from 72.2 - 72.45 m. Wavy narrow veinlets of calcite ± zeolite at low angles to core axis from 74.0 - 74.6 m. Planar joint lined with off-white calcite at 25° at 75.8 m.

BOX 11

75.93 - 78.94 m Dolerite as above. Joint lined with pale brown, fine-grained calcite at 75° near 76.5 m. Calcite veinlet 1-2 mm, 75° from 73.3 - 73.5 m. Calcite ± zeolite veinlet, 3-5 mm, 80° from 73.5 - 73.9.

78.94 - 81.97 m Dolerite as above. Fracture lined with calcite, 70° to core axis at 81.1 m. Joint lined with calcite ± zeolite, 90°, at 82.8 m.

BOX 12

82.83 - 84.95 m Dolerite as above. Veinlet of white zeolite and minor calcite, ≤5 mm wide, 15°, 84.7 - 84.9 m. Cross-cut by a probably later calcite veinlet, 2 mm, 85° at 84.85.

84.95 - 87.97 m Dolerite as above. Zeolite veinlet 1 mm, 15° from 85.3 - 85.5 m. Calcite veinlet, ≤1 mm, 10° to core axis, from 85.9 - 86.25 m.

Dolerite has similar grain size throughout hole, from 41.2 m to 87.97 m. SAMPLE at 87.97 m (petrology).

END OF HOLE