2 Field Data and Charts of Data of Long-term Soil Vapour Extraction Tests

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION RE-TEST (LONG-TERM)

Date : ..... 10 - 11 - 1998 .....

Vacuum/Flowrate : ..... 20 - 34" H_2O / 10 cfm .....

Location/SVE ID : ..... VT1 .....

Sheet (1) of (2)

Time Elapsed (hr)					0	1	2	3	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60	64	68	72
SVE Well				Vacuum (in H_2O)	30	30	32	32	34	34	32	32	20	22	32	32	28	26	24	24	30	30	24	26	20	22
SVE Well				Depth to Water (m)	2.77	2.36	2.24	2.21	2.20	2.17	2.15	2.14	2.25	2.29	2.09	2.07	2.16	2.22	2.24	2.13	2.12	2.12	2.20	2.18	2.30	2.28
SVE Well				Free Product Thickness	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	5m	Shallow Probe A1 (painted)	Vacuum (in H_2O	0.0	1.5	1.8	1.8	2.0	2.2	1.8	1.8	1.0	1.0	2.0	2.0	2.5	1.3	1.2	1.1	1.5	1.5	1.3	1.2	1.0	1.0
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	5m	Shallow Probe A1 (painted)	VOC (ppm)	6.8	1.7	1.7	ND	ND	ND	ND	ND	4.0	15.0	19.3	4.7	1.6	1.1	6.9	1.6	ND	5.5	ND	3.2	6.1	ND
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	5m	Shallow Probe A1 (painted)	CO_2 (%)	0.18	0.06	0.06	0.02	0.02	0.02	0.02	0.06	0.06	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	5m	Shallow Probe A1 (painted)	O_2 (%)	18.2	20.0	20.1	20.3	20.0	20.0	20.0	20.1	19.4	19.0	19.0	20.0	19.3	20.0	20.0	18.9	18.8	18.7	19.8	19.8	19.9	19.9
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	5m	Shallow Probe A1 (painted)	CH_4 (%)	0.58	ND	ND	ND	ND	ND	ND	ND	ND	0.14	ND	ND	ND	ND	ND	ND	ND	0.15	0.32	0.16	0.46	ND
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	5m	Deep Probe A2	Vacuum (in H_2O	0.0	2.5	7.2	9.2	6.0	9.2	7.2	7.0	5.0	6.0	8.5	8.8	6.5	5.5	5.5	5.7	7.0	7.2	5.5	4.2	4.5	5.5
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	5m	Deep Probe A2	VOC (ppm)	4.0	1.7	2.5	ND	ND	ND	ND	ND	1.7	11.5	7.1	4.8	1.4	3.2	6.2	1.0	ND	5.1	ND	3.4	5.0	ND
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	5m	Deep Probe A2	CO_2 (%)	0.88	0.02	0.02	0.02	ND	ND	ND	ND	0.06	0.02	0.02	0.02	0.02	0.02	0.02	0.02	ND	0.02	ND	0.02	0.02	0.02
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	5m	Deep Probe A2	O_2 (%)	16.8	20.10	20.10	20.1	20.0	20.0	20.0	20.1	19.0	19.1	19.2	20.0	19.3	20.0	20.0	18.9	18.8	18.7	19.8	19.9	20.0	19.9
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	5m	Deep Probe A2	CH_4 (%)	0.15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.20	ND
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	10	Shallow Probe B1 (painted)	Vacuum (in H_2O	0.00	0.50	0.60	0.60	0.80	0.70	0.05	0.10	0.00	0.20	0.60	0.50	0.00	0.00	0.00	0.20	0.50	0.40	0.00	0.00	0.00	0.10
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	10	Shallow Probe B1 (painted)	VOC (ppm)	167	42.0	38.9	68.3	21.0	18.6	17.4	23.1	851	73.2	42.4	29.1	200	44.7	841	90.8	43.5	93.7	171	104	516	63.0
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	10	Shallow Probe B1 (painted)	CO_2 (%)	0.54	0.10	0.06	0.02	0.02	ND	0.02	0.02	0.26	0.06	0.02	0.02	0.14	0.02	0.33	0.06	ND	0.06	0.10	0.06	0.02	0.02
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	10	Shallow Probe B1 (painted)	O_2 (%)	15.9	20.0	20.0	20.1	20.1	20.0	20.1	20.0	18.9	19.0	19.2	20.0	19.3	20.0	18.7	18.8	18.8	19.9	19.7	19.8	20.0	20.0
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	10	Shallow Probe B1 (painted)	CH_4 (%)	1.68	ND	ND	ND	ND	ND	ND	ND	4.30	0.98	ND	ND	2.42	ND	16.0	ND	ND	0.15	0.70	0.34	0.03	ND
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	10	Deep Probe B2	Vacuum (in H_2O	0.0	4.5	4.8	5.4	6.2	7.0	6.2	5.9	4.6	3.6	4.8	5.7	5.4	4.6	4.4	3.6	2.8	4.2	3.8	4.0	3.6	3.2
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	10	Deep Probe B2	VOC (ppm)	117	4.0	4.1	4.3	0.3	1.0	0.9	2.3	28.0	18.1	8.6	10.7	7.9	11.4	13.1	8.3	1.7	10.2	11.0	13.8	18.9	7.5
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	10	Deep Probe B2	CO_2 (%)	1.50	0.02	0.02	ND	ND	ND	ND	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	ND	0.02	0.02	0.02	0.02	0.02
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	10	Deep Probe B2	O_2 (%)	11.7	20.0	20.0	20.1	20.1	20.1	20.0	19.9	20.0	19.1	19.0	20.0	19.4	20.0	19.0	19.0	18.9	19.8	19.9	19.7	19.9	20.0
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	10	Deep Probe B2	CH_4 (%)	6.19	ND	ND	ND	ND	ND	ND	0.02	ND	0.02	ND	ND	ND	ND	0.74	ND	ND	ND	ND	ND	0.14	ND
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	20	Shallow Probe C1 (painted)	Vacuum (in H_2O	0.00	0.00	0.05	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	20	Shallow Probe C1 (painted)	VOC (ppm)	214	188	177	125	215	196	186	201	123	1644	240	1224	1129	391	1907	1077	660	1549	404	865	1661	312
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	20	Shallow Probe C1 (painted)	CO_2 (%)	2.29	1.19	1.27	1.06	1.12	1.27	1.18	1.02	2.20	2.24	1.74	4.00	2.56	2.09	2.71	2.44	2.83	3.06	2.60	2.79	2.48	2.83
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	20	Shallow Probe C1 (painted)	O_2 (%)	1.40	11.8	11.3	12.4	11.1	12.8	12.1	11.6	15.2	12.7	13.2	17.6	14.2	12.1	13.6	13.1	10.9	14.1	15.1	18.4	16.0	15.0
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	20	Shallow Probe C1 (painted)	CH_4 (%)	39.9	5.90	5.01	3.28	2.27	6.61	5.34	4.82	4.38	34.8	2.42	3.40	18.0	5.11	10.2	2.15	4.58	3.83	2.85	3.12	3.40	4.06
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	20	Deep Probe C2	Vacuum (in H_2O	0.00	0.60	0.70	0.70	0.80	0.90	0.70	0.80	0.80	0.50	0.70	0.80	0.60	0.50	0.50	0.60	0.60	0.70	0.50	0.60	0.40	0.50
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	20	Deep Probe C2	VOC (ppm)	22.0	40.0	56.5	19.4	27.1	25.4	23.1	20.9	147	94.0	39.2	171	176	124	283	80.0	43.0	169	82.1	104	112	32.5
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	20	Deep Probe C2	CO_2 (%)	1.50	1.23	1.08	1.07	1.16	0.10	0.18	0.10	1.40	1.86	1.35	1.42	1.23	1.14	1.04	0.65	0.61	1.34	1.11	1.34	1.45	2.60
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	20	Deep Probe C2	O_2 (%)	15.5	16.7	17.1	17.1	16.8	20.0	20.0	19.9	18.0	15.8	16.2	17.1	17.1	18.2	17.0	17.8	18.2	16.8	17.4	17.0	17.1	15.3
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	20	Deep Probe C2	CH_4 (%)	11.7	7.61	5.98	5.68	5.88	0.43	0.51	0.40	12.9	14.0	4.98	7.74	9.40	8.60	9.40	6.60	1.89	10.6	6.01	4.65	7.40	9.70
Blower Inlet Vacuum (in H_2O)					32	32	34	35	38	38	34	34	24	24	36	36	32	30	30	28	34	34	30	32	22	26
Blower Outlet				Temp (deg C)	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Blower Outlet				Air Flow (cfm)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Blower Outlet				VOC (ppm)	27.0	84.9	70.0	80.3	77.5	89.6	163	196	89.2	94.2	90.2	452	83.9	77.4	970	82.0	104	200	75.2	96.7	93.4	63.4
Blower Outlet				CO_2 (%)	1.88	1.86	1.90	1.93	1.94	1.70	1.60	1.89	0.87	1.11	1.42	1.11	0.96	0.66	0.80	0.88	1.24	1.08	0.72	1.02	0.61	1.00
Blower Outlet				O_2 (%)	11.9	11.7	11.5	11.0	11.2	13.7	15.0	14.1	17.0	17.0	15.2	16.1	17.4	14.7	17.2	16.7	15.6	16.9	18.0	17.6	18.3	17.7
Blower Outlet				CH_4 (%)	1.99	2.67	3.20	4.20	3.48	10.9	10.1	10.2	4.50	14.8	2.85	3.91	8.88	7.44	12.5	1.60	2.27	3.36	2.38	2.73	1.64	6.15
Carbon Adsorber Outlet				Temp (deg C)	6	9	11	13	13	12	11	12	7	9	13	10	10	7	8	11	12	11	9	10	6	9
Carbon Adsorber Outlet				VOC (ppm)	ND	8.3	3.8	3.3	1.7	1.0	0.8	1.0	4.0	11.0	19.1	156	8.4	5.2	471	17.4	10.3	19.6	14.1	11.6	24.7	10.4
Carbon Adsorber Outlet				CO_2 (%)	0.10	1.86	1.89	1.89	1.97	1.70	1.58	1.74	0.80	1.08	1.39	1.15	0.92	0.72	0.76	0.80	1.19	1.06	0.76	1.00	0.57	0.92
Carbon Adsorber Outlet				O_2 (%)	12.0	11.6	11.8	11.0	11.1	13.0	14.7	14.0	17.0	16.7	15.2	16.1	17.3	14.1	17.4	16.5	15.5	17.2	18.1	17.5	18.4	17.7
Carbon Adsorber Outlet				CH_4 (%)	ND	2.42	2.97	4.03	3.21	8.80	7.63	8.03	4.14	9.80	2.31	3.54	7.55	3.55	7.08	1.52	2.50	3.09	2.07	2.62	1.60	5.60

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION RE-TEST (LONG-TERM)

Date : ..... 10 - 11 - 1998 .....:..... Location/SVE ID : ..... VT1 .....

Vacuum/Flowrate : .....20-34" H_2O / 10 cfm ..... Sheet (2) of (2)

Remarks :

1. ND -- not detected (detection limit: CO_2, O_2, CH_4 < 0.01% VOC < 0.1ppm)
2. A small pump was used to measure the gas.
3. The pump was not strong enough to extract gas under such high vacuum. The capacity of the pump is 1.5 "H_2O.

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION RE-TEST (LONG-TERM)

Date : ..... 15 - 11 - 1998 .....

Vacuum/Flowrate : ..... 19 - 20" H_2O / 70 - 90 cfm .....

Location/SVE ID : ..... VT2 .....

Sheet (1) of (2)

Time Elapsed (hr)					0	1	2	3	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60	64	68	72	73
SVE Well				Vacuum (in H_2O)	19	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	-
				Depth to Water (m)	2.11	2.12	2.11	2.11	2.08	2.06	2.04	2.00	2.01	2.01	2.01	1.96	1.93	1.92	1.91	1.90	1.90	1.88	2.14	2.21	1.97	1.89	-
				Free Product Thickness	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	-
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	5m	Shallow Probe A1	Vacuum (in H_2O	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.2	0.2	0.3	0.0
				VOC (ppm)	44.6	35.8	7.4	15.9	44.3	8.3	41.8	52.4	44.7	3.6	2.0	73.2	14.1	18.6	31.2	29.1	25.3	52.8	69.7	89.2	25.9	14.6	1.3
				CO_2 (%)	0.30	0.10	0.06	0.06	0.10	0.02	0.06	ND	0.14	0.10	0.14	ND	ND	ND	ND	ND	0.02	ND	0.02	0.03	0.00	0.01	ND
				O_2 (%)	18.6	19.9	20.3	20.1	20.0	20.0	20.1	20.2	20.2	20.1	20.2	20.0	20.0	20.0	19.9	20.0	19.9	20.0	19.9	19.9	19.8	19.8	19.9
				CH_4 (%)	15.6	1.84	0.70	1.09	2.11	1.79	2.97	1.36	1.44	8.21	10.6	1.33	0.82	1.01	0.90	0.54	6.46	0.92	6.54	6.74	5.04	0.21	0.19
			Deep Probe A2	Vacuum (in H_2O	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.0
				VOC (ppm)	62.9	44.8	8.4	39.3	23.7	7.8	33.7	55.9	25.9	3.9	43.0	48.0	13.0	17.1	33.1	29.1	45.2	48.1	59.9	59.7	61.7	12.0	1.3
				CO_2 (%)	0.57	0.37	0.30	0.33	0.30	0.45	0.53	0.53	0.61	0.37	0.45	0.57	0.49	0.41	0.51	0.26	0.33	0.26	0.61	0.88	0.26	0.18	0.18
				O_2 (%)	17.2	18.0	18.4	17.6	18.7	18.8	18.4	19.2	19.3	19.9	19.6	19.6	19.6	19.7	19.6	19.9	19.7	20.0	19.7	19.6	19.8	19.9	19.8
				CH_4 (%)	7.44	2.07	0.74	0.94	1.80	1.71	2.65	1.47	1.66	5.09	11.6	4.58	0.78	0.53	0.74	0.43	6.12	0.80	6.45	9.19	2.23	0.11	0.15
		10m	Shallow Probe B1	Vacuum (in H_2O	0.0	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
				VOC (ppm)	42.6	35.5	0.8	18.0	20.1	13.0	42.1	98.1	114	2.9	6.5	27.0	5.5	8.6	18.6	91.0	46.7	56.4	43.1	60.7	62.3	36.0	ND
				CO_2 (%)	1.27	1.46	0.99	1.23	1.19	1.42	1.42	0.02	0.02	1.16	1.20	1.04	0.92	0.84	1.00	0.65	0.53	0.49	0.61	0.61	0.53	0.49	0.41
				O_2 (%)	13.8	14.0	14.4	13.0	13.1	13.4	15.4	20.2	18.7	19.8	19.7	20.0	19.8	19.7	19.8	19.9	19.9	20.0	19.9	19.7	19.7	19.8	19.0
				CH_4 (%)	4.81	2.40	0.66	1.17	1.14	2.73	2.23	1.72	2.12	4.11	9.80	0.67	0.97	0.81	2.19	0.98	1.56	0.98	2.11	4.25	2.07	0.21	0.15
			Deep Probe B2	Vacuum (in H_2O	0.2	0.3	0.4	0.3	0.4	0.6	0.4	0.1	0.4	0.4	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0
				VOC (ppm)	49.4	43.7	3.9	25.7	28.9	11.2	8.0	35.8	24.9	5.9	12.0	53.5	24.2	30.4	39.8	43.8	38.0	85.4	44.9	57.1	102	33.8	17.6
				CO_2 (%)	2.05	1.23	1.78	1.86	1.93	2.62	0.22	0.29	0.31	2.17	1.78	1.89	1.81	1.88	1.46	1.37	1.23	1.46	1.24	1.50	0.88	1.20	1.17
				O_2 (%)	12.5	13.7	12.5	12.0	12.2	12.4	18.6	19.5	18.2	17.3	17.4	16.3	15.7	15.9	16.8	17.7	17.3	16.8	17.3	17.1	18.0	18.6	18.0
				CH_4 (%)	4.73	2.55	0.7	1.14	1.02	2.03	0.31	1.27	1.44	5.25	3.05	1.45	1.65	1.52	2.19	0.70	1.25	0.94	2.01	2.44	1.99	0.23	0.11
		20m	Shallow Probe C1	Vacuum (in H_2O	0.00	0.00	0.30	0.35	0.30	0.70	0.50	0.60	0.30	0.05	0.30	0.70	0.80	0.70	0.50	0.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00
				VOC (ppm)	49.5	85.1	11.4	19.7	45.4	49.5	73.1	56.4	66.2	2.9	21.9	57.5	28.6	40.6	43.0	301	41.2	77.1	40.7	55.7	66.0	4.3	2.5
				CO_2 (%)	3.61	2.99	1.89	1.69	2.33	2.49	1.57	1.58	1.82	0.45	0.96	1.10	0.72	0.93	0.37	0.88	0.38	0.30	0.24	0.10	ND	0.06	0.10
				O_2 (%)	10.2	12.2	16.0	17.4	15.5	15.0	18.0	18.2	18.7	20.1	19.5	18.6	19.0	18.8	19.0	18.8	19.7	19.5	19.7	19.6	19.7	19.7	20.0
				CH_4 (%)	3.34	3.52	0.59	1.21	1.21	5.79	1.64	3.04	1.77	2.84	4.03	0.63	2.93	3.02	1.91	1.99	1.52	1.99	1.44	1.11	1.67	0.46	0.07
			Deep Probe C2	Vacuum (in H_2O	0.00	0.10	0.40	0.10	0.10	0.20	0.10	0.10	0.20	0.15	0.25	0.30	0.20	0.30	0.20	0.20	0.20	0.20	0.10	0.10	0.00	0.00	0.00
				VOC (ppm)	52.3	56.5	40.2	8.6	41.6	39.2	122	99.5	128	66.0	95.0	139	103	96.4	204	525	320	498	365	401	399	290	180
				CO_2 (%)	5.49	5.01	5.02	0.06	1.66	3.53	3.42	2.91	2.77	3.14	3.81	3.54	3.16	3.48	3.81	3.38	3.70	4.12	3.88	3.95	3.20	3.64	2.95
				O_2 (%)	2.60	5.40	3.20	20.0	13.4	8.70	7.00	9.20	8.70	10.1	5.90	7.20	8.80	8.00	9.00	9.50	8.70	7.10	8.20	7.70	10.0	11.6	12.3
				CH_4 (%)	4.11	9.00	2.90	0.82	2.31	20.7	14.0	13.9	11.4	16.4	23.9	9.40	8.84	9.20	5.62	4.17	4.97	4.64	4.99	5.01	1.96	0.58	0.15
Blower Inlet Vacuum (in H_2O)					29	29	30	30	30	30	30	30	30	30	30	28	30	30	28	28	28	28	30	30	30	30	-
Blower Outlet				Temp (deg C)	24	32	32	34	36	36	35	36	37	36	36	35	37	37	36	34	34	36	35	35	35	37	-
				Air Flow (cfm)	82	82	82	83	90	88	78	82	82	85	70	82	81	80	80	83	81	83	80	78	81	79	-
				VOC (ppm)	70.2	107	47.2	59.2	59.0	41.0	124	134	144	67.2	90.0	111	84.3	97.2	115	141	119	191	257	365	205	106	-
				CO_2 (%)	0.80	0.61	0.57	0.57	0.57	0.72	0.76	0.76	0.76	0.80	0.80	0.88	0.81	0.87	0.99	0.77	0.72	0.80	0.92	0.88	0.22	0.76	-
				O_2 (%)	13.7	14.0	14.4	14.4	14.5	15.0	15.4	15.8	15.4	16.7	16.5	16.5	16.3	16.5	16.4	16.8	16.8	16.5	17.1	17.0	16.9	17.2	-
				CH_4 (%)	9.80	8.52	5.99	6.62	6.51	7.98	7.40	6.48	6.61	6.01	4.62	5.76	5.12	5.61	7.68	3.40	5.91	7.79	23.50	47.20	3.77	3.70	-
Carbon Adsorber Outlet				Temp (deg C)	19	28	27	29	30	30	30	29	30	28	29	27	29	30	30	27	28	29	29	28	28	30	-
				VOC (ppm)	ND	34.1	3.3	22.0	14.1	ND	39.7	50.5	33.7	1.7	22.0	40.1	4.6	16.9	23.2	36.6	18.9	104	44.7	56.7	4.5	20.0	-
				CO_2 (%)	0.92	0.61	0.57	0.57	0.61	0.68	0.76	0.76	0.76	0.84	0.80	0.88	0.80	0.86	0.96	0.76	0.72	0.76	0.88	0.88	0.14	0.76	-
				O_2 (%)	13.8	14.0	14.4	14.4	14.5	15.0	15.2	15.8	15.4	16.7	16.5	16.5	16.4	16.5	16.4	16.8	16.8	16.7	17.1	17.0	17.0	17.2	-
				CH_4 (%)	9.00	8.42	5.76	6.38	6.39	8.06	7.47	6.14	6.04	5.72	4.30	5.36	4.62	5.49	7.47	3.01	5.76	7.44	5.11	58.8	3.74	3.20	-

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION RE-TEST (LONG-TERM)

Date : ..... 15 - 11 - 1998 ..... Location/SVE ID : ..... VT2 .....

Vacuum/Flowrate : ..... 19 - 20" H_2O / 70 - 90 cfm ..... Sheet (2) of (2)

Remarks :

1. ND -- not detected (detection limit: CO_2, O_2, CH_4 < 0.01% VOC < 0.1ppm)
2. Gas was measured with a small pump.
3. SVE system stopped at the 72nd hour and one more set of data was recorded 1 hour after completion of test.
4. SVE system stopped for gas measurement and resumed to operate from the 56th hour and onward.
5. All deep probes had been pulled up for 80 mm above the water table before the re-test. The surface seals were then repaired by the Contractor by re-applying cement grout.

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION RE-TEST (LONG-TERM)

Date : ..... 23 - 11 - 1998 .....

Vacuum/Flowrate : .....48 - 50 " H_2O / 8.5 - 10.0 cfm .....

Location/SVE ID : .....VT3 .....

Sheet (1) of (2)

Time Elapsed (hr)	SVE Well		Depth to Water at Groundwater Wells (m)				Soil Vapour Monitoring Probe Vacuum (in H_2O)												Blower Inlet Vacuum (in H_2O)	Blower Outlet						Carbon Adsorber Outlet				
			Distance from Extraction Well (m)				Distance from Extraction Well (m)																							
							1m (3A)		5m (3B)		10m (3C)		20m (3D)		5m (3E)		5m (3F)													
	Vacuum (in H_2O)	Depth to Water (m)	2.5m W1	5.5m W3	2.5m W6	2.5m W8	Shallow Probe A1	Deep Probe A2	Shallow Probe B1	Deep Probe B2	Shallow Probe C1	Deep Probe C2	Shallow Probe D1	Deep Probe D2	Shallow Probe E1	Deep Probe E2	Shallow Probe F1	Deep Probe F2		Temp. (deg C)	Air Flow (cfm)	VOC (ppm)	CO_2 (%)	O_2 (%)	CH_4 (%)	Temp. (deg C)	VOC (ppm)	CO_2 (%)	O_2 (%)	CH_4 (%)
0	50	2.57	2.58	2.56	2.54	2.55	0.0	0.0	0.00	0.00	0.00	0.0	0	0	0.00	0.0	0.0	0.0	50	28	8.5	308	0.06	10.0	2.40	27	108	1.86	10.0	1.25
1	50	1.18	2.58	2.55	2.54	2.55	2.0	2.0	0.10	0.10	0.00	0.0	0	0	0.00	0.0	0.0	0.0	50	40	8.5	90.0	0.06	11.6	3.06	28	128	0.45	11.6	1.83
2	50	1.19	2.58	2.54	2.53	2.54	2.2	2.3	0.10	0.10	0.00	0.0	0	0	0.00	0.0	0.0	0.0	50	46	8.5	75.9	0.06	13.0	4.66	30	110	0.80	13.0	9.70
3	50	1.19	2.57	2.54	2.52	2.54	2.2	2.3	0.10	0.20	0.10	0.0	0	0	0.00	0.0	0.0	0.0	50	56	8.5	84.0	0.03	13.4	6.75	32	124	ND	13.4	12.7
4	50	1.18	2.57	2.57	2.51	2.53	2.6	2.6	0.10	0.20	0.10	0.2	0	0	0.50	0.5	0.0	0.0	50	50	8.5	71.5	0.10	13.4	6.61	30	128	0.18	13.4	11.3
8	50	1.13	2.50	2.58	2.50	2.51	2.6	2.8	0.10	0.20	0.00	0.1	0	0	0.00	0.0	0.0	0.0	50	52	8.5	62.5	0.14	15.2	16.8	28	89.0	0.14	15.2	19.4
12	48	1.12	2.50	2.58	2.50	2.50	2.2	2.4	0.00	0.00	0.00	0.0	0	0	0.00	0.0	0.0	0.0	50	54	8.5	81.5	0.14	15.5	17.7	30	140	0.14	15.5	18.4
16	48	1.10	2.50	2.57	2.50	2.50	2.0	2.1	0.00	0.00	0.00	0.0	0	0	0.00	0.0	0.0	0.0	50	55	9.0	142	0.14	16.2	24.1	30	169	0.12	16.2	22.7
20	48	1.09	2.49	2.56	2.49	2.49	2.0	2.0	0.00	0.00	0.00	0.0	0	0	0.00	0.0	0.0	0.0	50	57	9.0	212	0.14	17.4	28.1	30	295	0.10	17.4	26.9
24	48	1.09	2.59	2.53	2.56	2.54	2.0	2.2	0.00	0.05	0.05	0.0	0	0	0.20	0.0	0.0	0.0	48	62	9.0	97.6	0.02	17.5	5.54	32	177	0.06	17.5	5.83
28	48	1.07	2.51	2.54	2.46	2.50	2.8	2.8	0.05	0.05	0.05	0.1	0	0	0.00	0.0	0.0	0.0	48	64	9.0	90.8	0.14	16.3	25.3	38	105	0.26	16.2	28.4
32	48	1.05	2.49	2.57	2.51	2.49	2.8	3.0	0.00	0.05	0.05	0.4	0	0	0.00	0.2	0.0	0.0	48	44	9.0	131	0.10	16.7	14.0	28	118	0.10	16.8	13.6
36	48	1.04	2.50	2.57	2.51	2.50	2.7	2.8	0.00	0.05	0.00	0.0	0	0	0.00	0.0	0.0	0.0	48	50	9.0	30.9	0.06	17.1	13.2	28	26.7	0.10	17.1	12.9
40	48	1.02	2.49	2.58	2.51	2.51	2.8	2.7	0.00	0.05	0.00	0.0	0	0	0.00	0.0	0.0	0.0	48	51	10.0	46.6	0.06	17.4	14.2	32	30.1	0.10	17.4	14.0
44	48	1.01	2.50	2.57	2.51	2.49	2.5	2.8	0.00	0.05	0.00	0.0	0	0	0.00	0.0	0.0	0.0	48	50	10.0	360	0.10	17.5	16.4	30	284	0.10	17.6	16.0
48	48	1.00	2.52	2.59	2.53	2.52	2.5	3.0	0.00	0.05	0.00	0.0	0	0	0.00	0.0	0.0	0.0	48	60	10.0	75.0	0.10	17.5	16.0	32	43.8	0.18	17.5	20.9
52	48	1.00	2.49	2.57	2.52	2.49	2.7	3.0	0.00	0.10	0.00	0.0	0	0	0.00	0.0	0.0	0.0	48	51	10.0	45.0	0.18	17.2	59.7	31	28.4	0.14	17.2	39.0
56	48	1.03	2.49	2.56	2.50	2.53	2.7	3.0	0.00	0.10	0.00	0.0	0	0	0.00	0.0	0.0	0.0	49	54	10.0	122	0.14	17.4	22.6	31	76.7	0.14	17.4	19.5
60	48	1.04	2.49	2.55	2.51	2.54	2.7	2.9	0.00	0.10	0.00	0.0	0	0	0.00	0.0	0.0	0.0	49	54	10.0	102	0.16	17.5	20.4	30	69.7	0.14	17.5	20.1
64	48	1.10	2.51	2.57	2.52	2.56	2.7	2.7	0.00	0.10	0.00	0.0	0	0	0.00	0.0	0.0	0.0	49	52	10.0	122	0.14	17.1	21.5	30	71.4	0.14	17.1	19.1
68	48	1.08	2.51	2.56	2.51	2.52	2.7	3.0	0.00	0.10	0.00	0.0	0	0	0.00	0.0	0.0	0.0	49	50	10.0	162	0.22	17.1	20.1	31	107	0.26	17.0	20.3
72	48	1.06	2.51	2.54	2.50	2.50	2.9	3.1	0.00	0.00	0.00	0.0	0	0	0.00	0.0	0.0	0.0	49	49	10.0	51.9	0.10	17.5	14.8	31	44	0.10	17.5	15.6

Remarks :

1. ND -- not detected (detection limit: CO_2, O_2, CH_4 < 0.01% VOC < 0.1ppm)
2. Bubbling occurred at SVE well and affected the accuracy of measurement of groundwater level.
3. All deep probes had been pulled up for 80 mm above the water table before the re-test. The surface seals were then repaired by the Contractor by re-applying cement grout

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION RE-TEST (LONG-TERM)

Date : ..... 23 - 11 - 1998 .....

Location/SVE ID : ..... VT3 .....

Vacuum/Flowrate : .....48 - 50" H_2O / 8.5 - 10.0 cfm.....

Sheet (2) of (2)

| Time Elapsed (hr) | Soil Vapour Monitoring Probe – Distance from Extraction Well | | |

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION RE-TEST (LONG-TERM)

Date : ..... 18 - 11 - 1998 .....

Vacuum/Flowrate : .....5 - 8" H_2O / 81 - 90 cfm .....

Location/SVE ID : .....VT4 .....

Sheet (1) of (2)

Time Elapsed (hr)	SVE Well		Depth to Water at Groundwater Wells (m)				Soil Vapour Monitoring Probe Vacuum (in H_2O)												Blower Inlet Vacuum (in H_2O)	Blower Outlet						Carbon Adsorber Outlet				
			Distance from Extraction Well (m)				Distance from Extraction Well (m)																							
							1m (3A)		5m (3B)		10m (3C)		20m (3D)		5m (3E)		5m (3F)													
	Vacuum (in H_2O)	Depth to Water (m)	2.5m W1	5.5m W3	2.5m W6	2.5m W8	Shallow Probe A1	Deep Probe A2	Shallow Probe B1	Deep Probe B2	Shallow Probe C1	Deep Probe C2	Shallow Probe D1	Deep Probe D2	Shallow Probe E1	Deep Probe E2	Shallow Probe F1	Deep Probe F2		Temp. (deg C)	Air Flow (cfm)	VOC (ppm)	CO_2 (%)	O_2 (%)	CH_4 (%)	Temp. (deg C)	VOC (ppm)	CO_2 (%)	O_2 (%)	CH_4 (%)
0	5	2.75	2.80	2.86	2.77	2.83	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0	0.0	12	24	83	124	17.7	0.60	50.7	19	ND	18.1	0.80	41.4
1	5	2.74	2.75	2.77	2.75	2.73	0.5	0.5	0.40	0.50	0.30	0.35	0.25	0.25	0.0	0.00	0	0.0	10	30	84	103	16.2	2.10	54.4	26	ND	16.2	2.10	43.4
2	5	2.75	2.74	2.79	2.75	2.73	0.5	0.5	0.40	0.30	0.30	0.35	0.30	0.30	0.2	0.30	0	0.0	10	30	82	156	16.2	2.90	54.7	26	ND	16.2	2.80	44.1
3	5	2.73	2.74	2.72	2.74	2.74	0.5	0.5	0.35	0.30	0.60	0.70	0.50	0.50	0.2	0.40	0	0.0	10	32	83	169	15.4	2.10	50.1	27	25.7	15.8	2.00	40.6
4	5	2.72	2.74	2.74	2.74	2.71	0.5	0.5	0.20	0.15	0.30	0.40	0.20	0.20	0.2	0.20	0	0.0	10	34	82	18.7	15.0	2.30	45.2	28	24.2	15.0	2.40	35.2
8	5	2.64	2.67	2.69	2.66	2.65	0.5	0.5	0.20	0.20	0.40	0.40	0.30	0.30	0.2	0.30	0	0.0	10	34	82	66.7	13.8	2.60	34.8	27	0.9	14.2	2.70	26.9
12	5	2.63	2.66	2.67	2.66	2.65	0.5	0.5	0.20	0.20	0.40	0.40	0.30	0.30	0.2	0.30	0	0.0	10	35	81	324	12.1	3.00	39.7	29	80.3	13.1	2.90	30.9
16	5	2.66	2.69	2.70	2.69	2.64	0.5	0.5	0.20	0.20	0.30	0.40	0.30	0.30	0.2	0.20	0	0.0	10	34	83	125	11.1	4.10	43.4	28	43.6	12.1	4.00	38.2
20	5	2.70	2.72	2.73	2.70	2.72	0.5	0.5	0.20	0.10	0.30	0.40	0.30	0.30	0.2	0.10	0	0.0	12	36	81	97.8	11.5	4.70	27.3	30	51.9	11.5	4.80	26.9
24	7	2.70	2.75	2.74	2.72	2.74	0.6	0.6	0.40	0.60	0.40	0.40	0.30	0.30	0.3	0.60	0	0.1	12	37	81	173	11.5	4.80	41.1	32	115	11.1	5.00	40.8
28	8	2.64	2.66	2.70	2.66	2.65	0.5	0.7	0.40	0.60	0.40	0.40	0.30	0.30	0.3	0.50	0	0.1	12	37	82	252	11.5	5.20	61.0	33	129	11.2	5.10	50.1
32	8	2.61	2.62	2.66	2.62	2.62	0.5	1.0	0.50	0.80	0.40	0.50	0.35	0.35	0.3	0.50	0	0.0	12	36	84	201	11.5	5.80	74.7	34	125	11.1	5.90	73.1
36	8	2.62	2.64	2.65	2.63	2.63	0.5	0.6	0.40	0.90	0.40	0.50	0.50	0.50	0.4	0.50	0	0.0	17	36	90	174	8.44	6.20	75.4	34	97.6	10.8	6.20	59.4
40	8	2.67	2.66	2.66	2.65	2.64	0.5	0.5	0.40	0.90	0.70	0.90	0.60	0.60	0.3	0.40	0	0.1	12	36	83	104	7.24	6.00	25.0	34	41.9	10.3	6.00	32.4
44	8	2.68	2.72	2.72	2.70	2.69	0.5	0.5	0.20	0.30	0.35	0.40	0.25	0.25	0.3	0.50	0	0.1	12	39	86	160	11.3	6.10	77.1	34	140	10.9	6.60	69.9
48	8	2.67	2.71	2.71	2.69	2.69	0.5	0.5	0.20	0.40	0.35	0.40	0.30	0.30	0.2	0.50	0	0.0	12	36	87	701	10.3	6.00	77.4	38	326	10.3	6.20	69.8
52	8	2.64	2.69	2.69	2.67	2.66	0.5	0.4	0.40	0.40	0.40	0.40	0.30	0.40	0.2	0.50	0	0.0	12	40	86	288	10.0	6.20	25.7	37	28.6	9.90	6.30	20.8
56	8	2.62	2.64	2.66	2.62	2.62	0.5	0.3	0.40	0.40	0.50	0.45	0.40	0.40	0.2	0.55	0	0.0	12	42	86	301	10.0	6.50	26.9	39	22.1	10.1	6.50	21.1
60	8	2.60	2.63	2.62	2.61	2.61	0.7	0.5	0.30	0.40	0.45	0.50	0.35	0.35	0.2	0.50	0	0.2	12	38	86	30.2	8.64	7.10	34.4	38	23.2	9.60	6.90	31.6
64	8	2.60	2.65	2.66	2.64	2.64	0.5	0.6	0.25	0.45	0.40	0.50	0.30	0.35	0.1	0.40	0	0.1	12	37	87	691	9.12	7.60	32.8	32	534	9.10	7.60	38.2
68	8	2.65	2.70	2.70	2.68	2.67	0.5	0.5	0.20	0.25	0.40	0.50	0.30	0.35	0.1	0.30	0	0.0	12	36	86	243	9.16	7.10	50.5	31	168	9.12	7.20	45.7
72	8	2.66	2.72	2.72	2.70	2.70	0.5	0.5	0.20	0.20	0.40	0.50	0.35	0.50	0.2	0.50	0	0.0	12	36	87	918	8.96	7.20	31.6	32	734	8.84	7.20	23.8
73	-	2.69	2.71	2.71	2.69	2.69	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0	0.0	-	-	-	-	-	-	-	-	-	-	-	-

Remarks :

1. ND -- not detected (detection limit: CO_2, O_2, CH_4 < 0.01% VOC < 0.1ppm)
2. SVE system stopped at the 72nd hour and one more set of data was recorded 1 hour after completion of test.

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION RE-TEST (LONG-TERM)

Date : ..... 18 - 11 - 1998 .....

Vacuum/Flowrate : ..... 5 - 8" H_2O / 81 - 90 cfm .....

Location/SVE ID : ..... VT4 .....

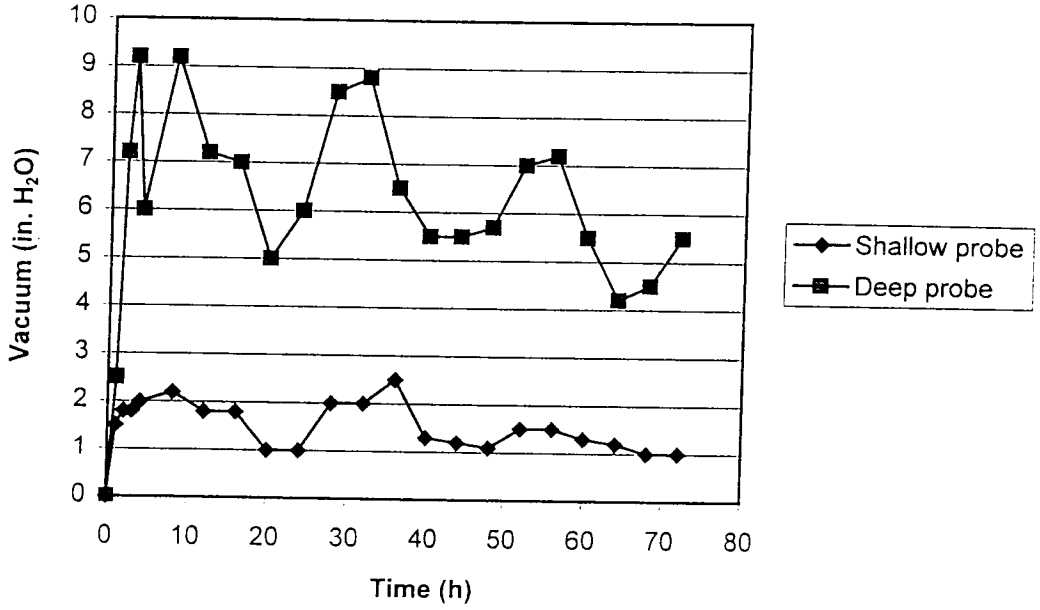
Sheet (2) of (2)

Time Elapsed (hr)	Soil Vapour Monitoring Probe																																															
	Distance from Extraction Well																																															
	1m								5m								10m								20m								5m								5m						
	Shallow Probe A1				Deep Probe A2				Shallow Probe B1				Deep Probe B2				Shallow Probe C1				Deep Probe C2				Shallow Probe D1				Deep Probe D2				Shallow Probe E1				Deep Probe E2				Shallow Probe F1				Deep Probe		
	VOC (ppm)	CO_2 (%)	O_2 (%)	CH_4 (%)	VOC (ppm)	CO_2 (%)	O_2 (%)	CH_4 (%)	VOC (ppm)	CO_2 (%)	O_2 (%)	CH_4 (%)	VOC (ppm)	CO_2 (%)	O_2 (%)	CH_4 (%)	VOC (ppm)	CO_2 (%)	O_2 (%)	CH_4 (%)	VOC (ppm)	CO_2 (%)	O_2 (%)	CH_4 (%)	VOC (ppm)	CO_2 (%)	O_2 (%)	CH_4 (%)	VOC (ppm)	CO_2 (%)	O_2 (%)	CH_4 (%)	VOC (ppm)	CO_2 (%)	O_2 (%)	CH_4 (%)	VOC (ppm)	CO_2 (%)	O_2 (%)	CH_4 (%)	VOC (ppm)	CO_2 (%)	O_2 (%)	CH_4 (%)	VOC (ppm)	CO_2 (%)	O_2 (%)
0	90.7	12.7	0.10	61.7	97.0	18.6	0.10	56.3	90.2	16.2	ND	43.4	102	6.46	12.2	19.1	70.9	6.62	3.70	48.1	79.4	21.3	ND	72.4	126	7.52	1.00	30.9	155	17.0	ND	34.4	108	8.11	1.40	43.8	120	18.6	ND	52.4	63.4	11.1	3.50	50.5	85.7	17.0	3.50
1	82.8	8.02	0.80	50.8	122	15.8	2.90	50.0	82.9	20.5	ND	62.6	98.8	7.75	11.1	23.4	74.7	9.27	3.30	52.8	86.9	21.3	ND	73.0	160	9.12	0.80	31.6	181	14.6	ND	31.9	96.1	ND	10.4	13.7	49.0	ND	19.4	1.33	59.7	2.20	16.7	5.56	179	2.95	15.6
2	100	8.45	1.50	51.2	104	10.4	3.70	52.8	104	21.3	0.30	60.7	114	7.13	12.8	21.0	104	10.4	3.70	52.8	116	22.0	0.50	69.6	165	10.8	1.60	30.4	234	16.6	0.60	30.8	153	0.02	2.80	17.9	133	10.8	1.10	37.1	252	2.60	17.0	3.43	318	2.95	15.9
3	191	8.17	1.20	51.2	244	15.4	2.60	47.3	188	20.9	ND	66.9	179	10.0	8.70	32.8	238	11.5	2.30	59.1	199	20.9	0.20	73.9	244	11.1	1.00	32.8	373	16.6	ND	34.0	281	ND	2.20	21.1	297	13.1	0.20	43.4	228	2.12	15.8	4.18	240	3.65	14.5
4	143	8.48	1.10	50.9	214	15.2	2.30	43.0	155	20.2	ND	63.2	136	10.9	7.80	32.9	134	11.9	2.30	52.1	140	20.7	0.30	61.2	196	10.8	1.60	30.1	243	15.6	0.70	31.3	231	0.06	2.90	19.5	246	13.9	0.40	40.4	256	1.93	17.0	4.68	259	2.48	15.1
8	70.2	8.76	0.80	50.4	180	14.6	1.50	31.2	69.1	21.4	ND	63.7	46.7	8.06	8.40	28.1	66.2	12.4	3.80	50.4	70.2	21.2	0.20	61.8	108	12.1	2.00	26.5	132	16.6	0.30	31.6	153	0.01	7.00	9.70	200	10.8	3.00	23.8	200	1.08	17.4	2.61	138	1.50	16.6
12	240	9.04	1.20	53.6	340	13.1	3.20	32.9	164	20.9	ND	72.5	181	8.34	8.50	29.6	172	12.7	3.70	50.9	136	21.6	0.40	63.2	232	11.6	2.70	28.4	297	15.8	0.60	33.4	301	0.02	7.30	11.2	391	11.6	3.90	24.1	295	1.11	17.0	2.93	244	1.66	16.9
16	76.7	10.0	1.30	54.1	198	12.1	3.30	28.5	57.1	21.2	0.20	66.4	46.0	4.82	10.1	24.8	59.0	13.6	4.10	51.2	70.2	19.7	0.60	63.9	91.2	11.5	4.00	30.4	112	16.2	0.90	40.1	199	ND	7.60	9.70	271	10.3	3.40	20.7	216	0.45	17.2	2.67	96.0	1.23	17.8
20	82.3	10.4	1.30	38.7	201	13.1	2.50	18.4	41.6	21.9	0.40	65.7	20.1	10.0	10.3	27.7	45.3	16.1	2.70	47.3	77.1	20.1	0.20	49.7	120	13.5	2.80	26.0	84.0	15.8	1.60	33.6	120	ND	7.40	4.30	328	10.8	3.00	12.8	130	0.84	18.0	1.72	62.2	3.54	14.8
24	160	8.86	7.30	26.9	485	10.0	8.80	15.2	79.4	22.4	0.40	70.8	45.2	11.9	9.00	35.6	62.0	16.6	2.10	49.8	98.0	16.7	2.50	44.0	140	17.4	2.00	39.1	126	13.1	3.00	30.1	270	0.53	8.10	5.91	413	11.9	2.30	17.2	101	1.86	17.3	5.72	79.8	4.00	14.0
28	177	7.74	4.20	42.5	377	10.0	7.40	20.4	90.1	21.7	0.60	71.9	55.7	12.5	9.80	47.1	102	16.8	2.00	49.1	109	17.2	2.90	47.7	172	14.4	2.20	49.7	177	15.2	1.90	42.5	255	1.02	9.10	6.11	447	14.1	3.10	12.9	161	1.02	17.6	5.51	62.1	3.44	14.2
32	152	8.04	2.50	59.1	479	15.1	6.20	24.7	102	21.9	0.50	66.8	94.2	14.2	11.0	57.1	97.1	17.7	1.70	61.1	144	17.4	1.90	55.1	212	14.2	2.20	65.6	227	16.2	1.60	67.1	290	0.88	6.80	4.70	497	10.7	4.20	12.5	121	1.12	17.9	6.19	92.5	5.77	14.7
36	95.9	9.80	2.30	58.6	286	10.3	5.70	30.1	191	22.0	0.30	70.3	76.7	10.3	10.4	51.6	76.2	15.4	3.80	62.5	121	18.5	0.30	66.0	133	13.4	3.10	51.2	176	15.8	1.60	52.4	393	0.02	12.1	8.33	434	8.99	5.00	19.1	180	0.30	19.7	2.97	147	1.15	19.0
40	65.8	10.3	2.00	43.4	128	10.3	5.80	20.3	78.8	21.9	0.20	70.0	54.1	11.9	9.20	40.6	38.9	16.6	2.30	46.9	56.5	18.6	0.30	46.9	41.6	13.1	3.10	29.7	49.9	16.6	1.00	32.8	212	ND	12.8	4.61	229	8.29	6.10	11.7	211	0.18	19.7	1.44	112	0.68	19.1
44	62.4	10.0	3.10	35.6	149	10.8	5.20	18.8	57.0	21.3	0.30	70.9	40.2	10.0	10.6	33.7	56.1	16.2	2.70	48.9	85.0	18.6	0.30	50.5	76.1	13.1	4.10	43.2	80.0	16.6	1.00	37.0	200	0.18	12.3	4.87	295	9.60	4.90	13.3	170	1.04	18.2	3.05	76.6	2.64	15.9
48	181	10.3	2.80	40.4	416	10.0	5.00	18.4	291	21.2	0.20	68.1	195	13.1	8.40	40.7	271	16.2	2.40	44.2	284	15.8	2.00	40.3	368	11.9	4.50	26.9	281	15.8	0.70	28.1	581	ND	14.0	4.11	832	7.86	6.00	11.8	283	0.30	19.0	1.85	241	1.42	16.6
52	121	9.90	2.70	39.4	398	10.6	5.00	19.3	131	21.0	0.10	69.2	76.3	9.10	9.00	33.6	104	14.6	2.20	40.7	160	16.1	1.40	41.3	209	11.2	4.40	27.1	250	15.2	0.80	25.4	264	ND	13.9	3.25	634	8.19	6.00	12.1	207	0.31	19.1	1.74	108	1.10	17.0
56	150	10.1	2.40	38.6	415	11.1	4.80	21.1	105	21.7	0.20	68.4	110	9.36	10.7	38.4	136	15.2	2.00	41.8	181	17.1	1.10	42.6	236	11.5	4.70	23.4	262	15.8	0.70	27.1	336	0.01	14.1	3.57	802	9.60	5.10	13.6	236	0.33	19.4	1.69	115	0.53	17.3
60	23.5	8.79	3.90	38.3	39.9	9.60	7.00	21.8	19.0	21.3	0.10	69.0	15.9	14.1	7.20	48.8	17.1	13.8	4.60	38.2	23.2	18.1	0.50	46.5	24.1	12.1	3.00	28.1	36.1	14.6	1.90	23.8	81.2	0.01	15.0	3.09	69.9	8.37	5.60	12.9	46.6	0.25	19.5	2.07	36.9	1.93	17.6
64	212	9.30	2.80	37.9	631	9.22	7.00	18.7	154	21.0	0.20	68.4	152	10.8	9.00	39.4	188	13.8	4.30	36.2	250	17.3	1.00	42.9	351	12.7	3.50	22.6	512	15.0	1.40	22.2	368	ND	16.0	2.60	1121	7.86	6.20	10.9	312	0.14	19.6	1.95	190	1.27	18.3
68	96.2	9.16	2.60	40.1	164	9.23	5.80	16.0	64.6	21.3	0.20	67.1	46.6	10.7	11.2	11.4	58.0	16.0	2.10	38.3	80.3	17.8	0.80	43.3	73.4	11.5	4.20	21.1	118	15.4	1.00	21.9	154	ND	16.4	2.19	260	8.19	6.60	9.70	115	0.30	19.6	2.11	58.5	1.46	18.5
72	194	9.60	2.60	33.6	601	9.04	6.60	16.2	131	20.9	0.50	63.7	101	10.8	9.20	29.6	150	13.9	3.60	30.9	212	17.3	0.90	38.7	328	11.6	4.60	19.5	652	15.0	1.10	21.5	282	ND	15.6	1.28	898	7.28	7.10	8.40	260	0.22	19.5	1.21	94.6	1.42	17.5
73	147	10.9	2.80	32.3	611	11.5	3.80	16.0	93.1	21.3	0.20	66.1	70.0	10.1	10.0	27.3	135	13.4	4.00	31.2	188	17.0	1.00	39.9	312	11.9	4.10	21.5	590	14.6	1.00	21.1	304	ND	15.0	1.91	780	8.2	6.50	9.70	280	0.45	19.0	1.44	97.7	2.28	16.7

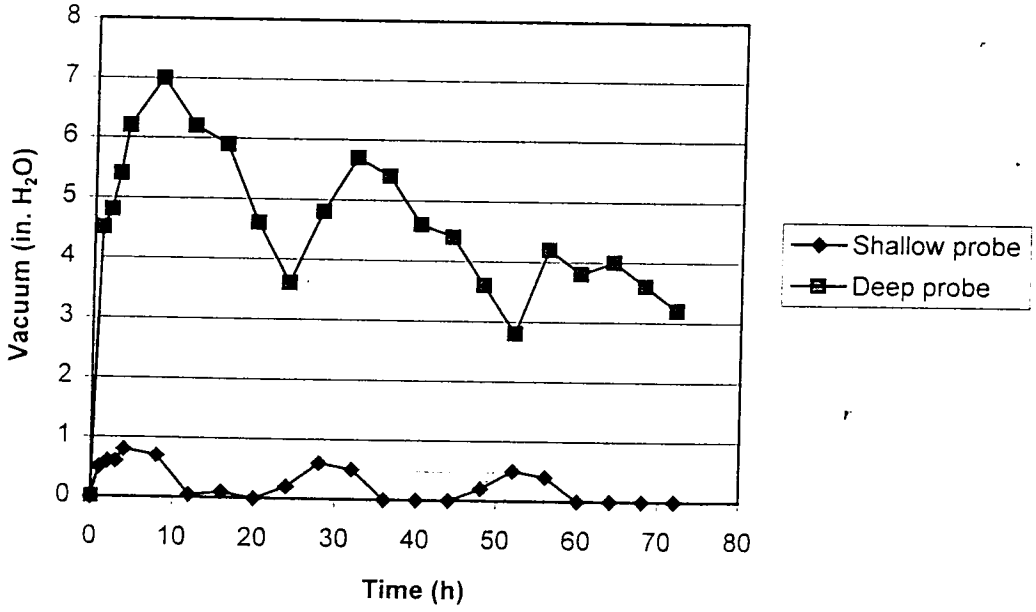
Remarks :

1. ND -- not detected (detection limit: CO_2, O_2, CH_4 < 0.01% VOC < 0.1ppm)
2. Gas was measured with a small pump.
3. SVE system stopped for 10 minutes before gas measurement.
4. SVE system resumed to operate after gas measurement.
5. SVE system stopped at the 72nd hour and one more set of data was recorded 1 hour after completion of test.

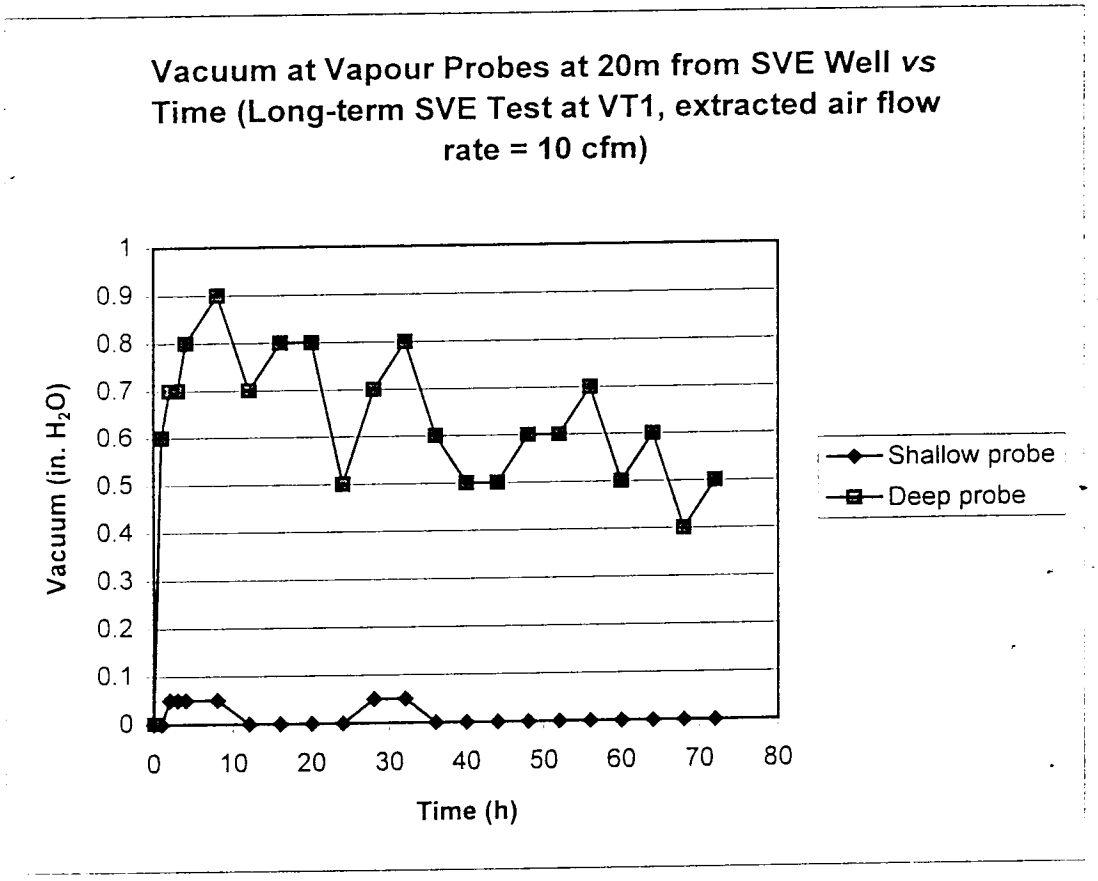
Vacuum at Vapour Probes at 5m from SVE Well *vs* Time (Long-term SVE Test at VT1, extracted air flow rate = 10 cfm)



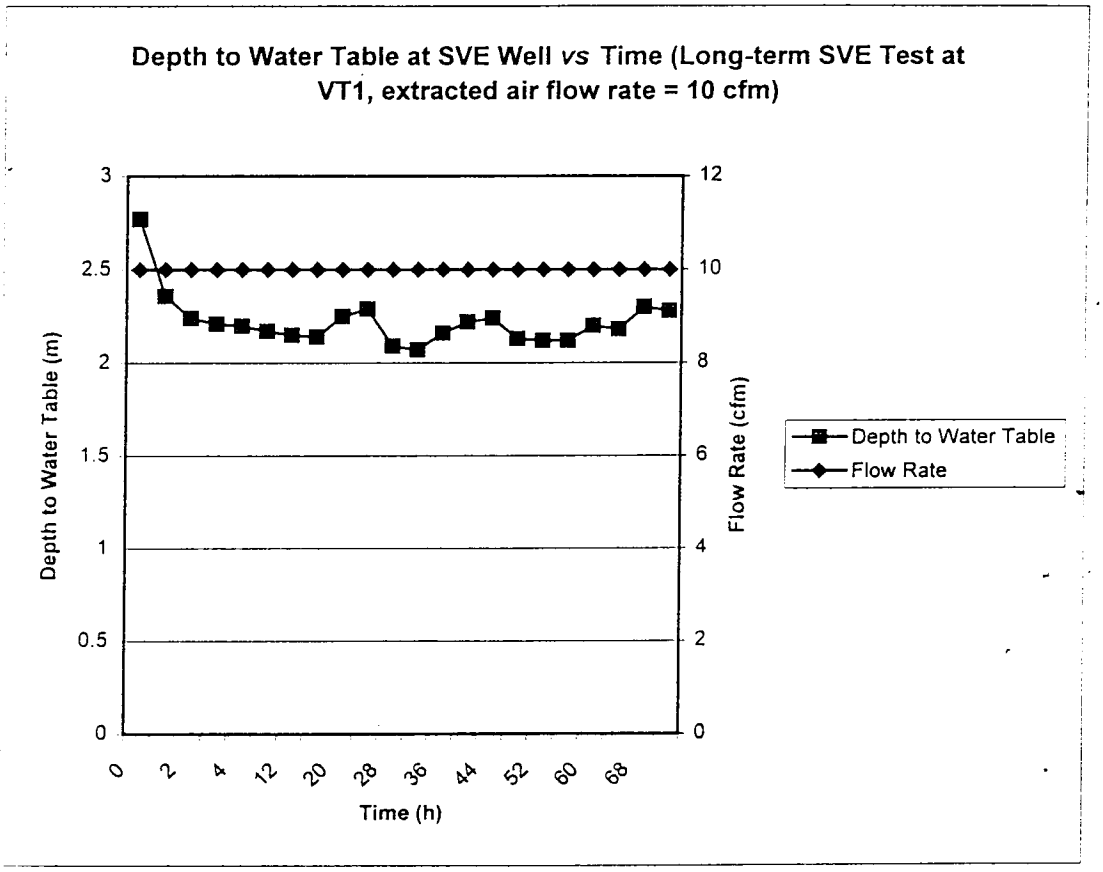
Vacuum at Vapour Probes at 10m from SVE Well *vs* Time (Long-term SVE Test at VT1, extracted air flow rate = 10 cfm)



C418\xl\svevt1-p1

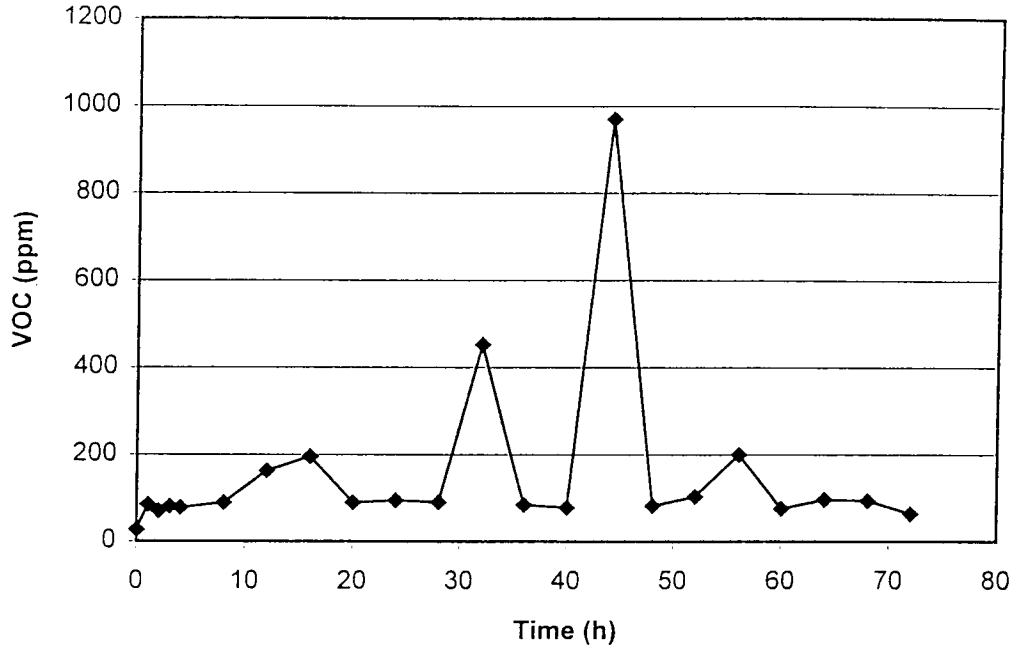


C418\xl\svevt1-p1

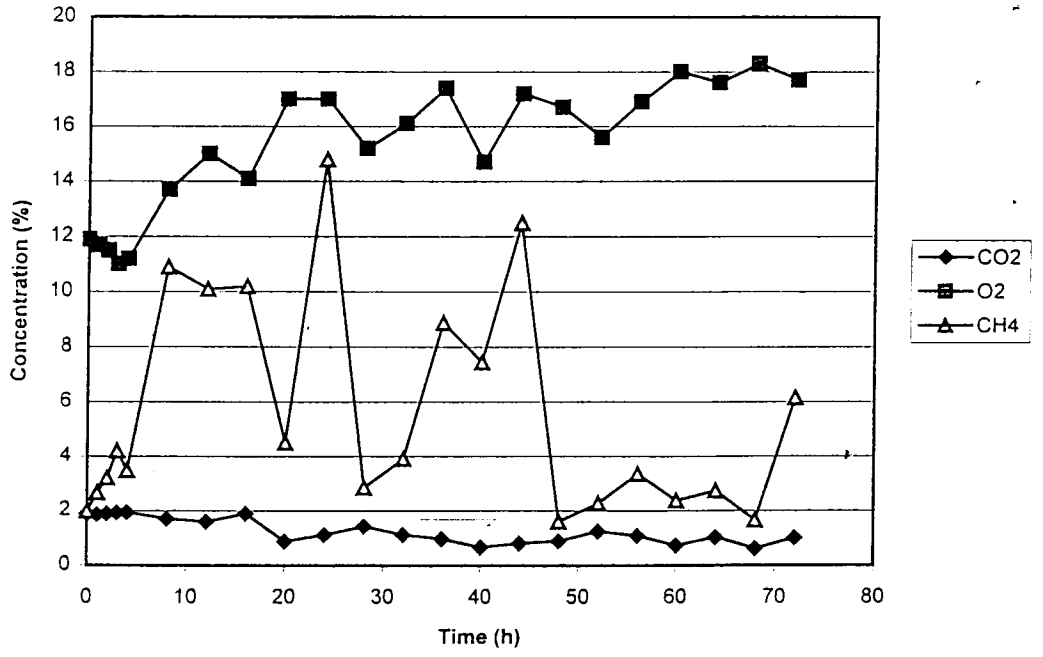


C418\xl\svevt1p-2

VOC at Blower Outlet *vs* Time (Long Term SVE Test at VT1, extracted air flow rate = 10 cfm)

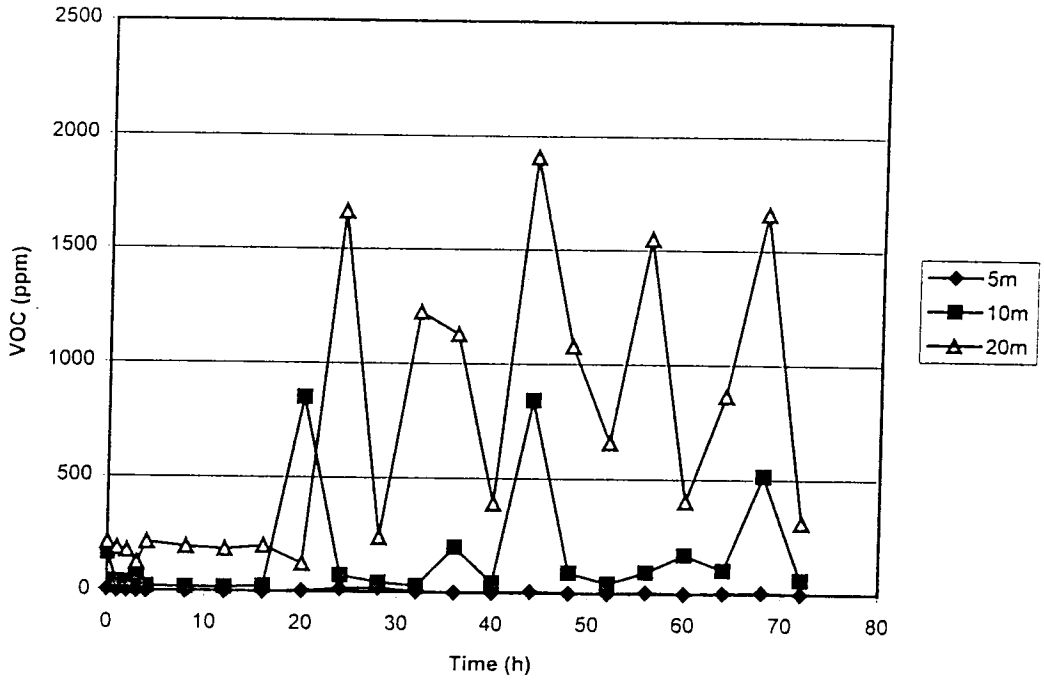


CO2, O2 & CH4 at Blower Outlet *vs* Time (Long Term SVE Test at VT1, extracted air flow rate = 10 cfm)

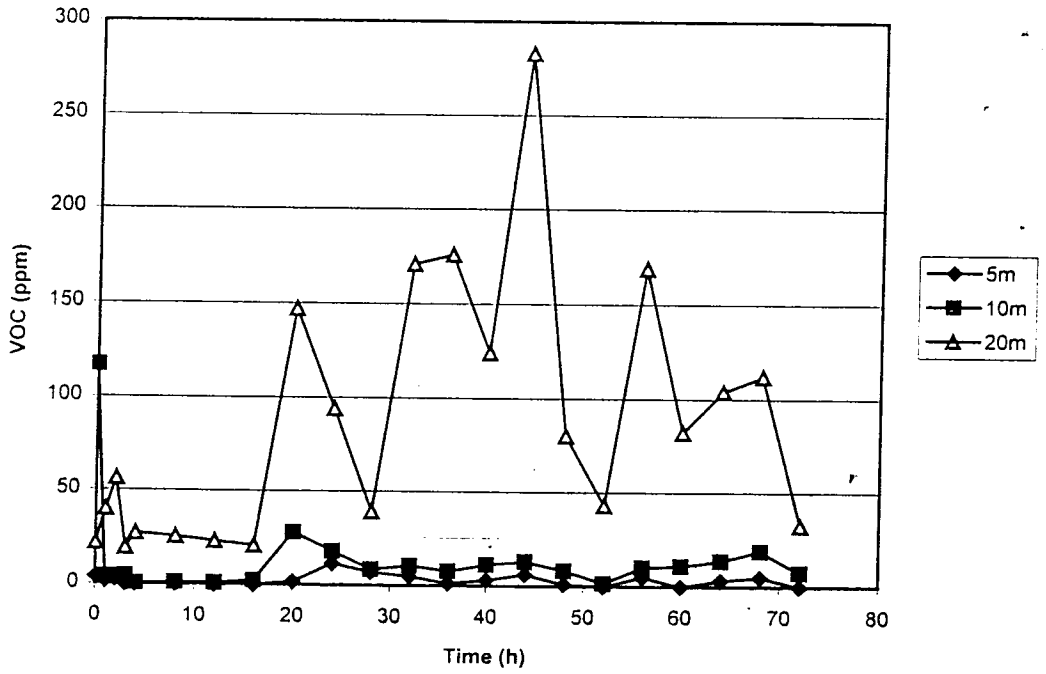


C418\xl\Svevt1g-2

VOC at Shallow Vapour Probes *vs* Time (Long-term SVE Test at VT1, extracted air flow rate = 10 cfm)

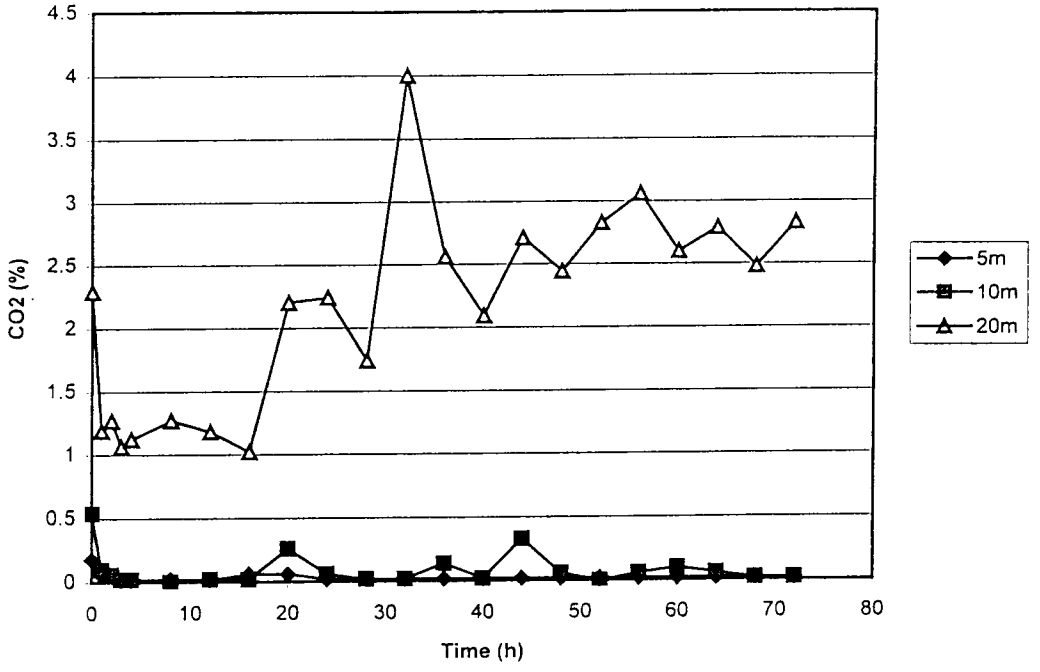


VOC at Deep Vapour Probes *vs* Time (Long-term SVE Test at VT1, extracted air flow rate = 10 cfm)

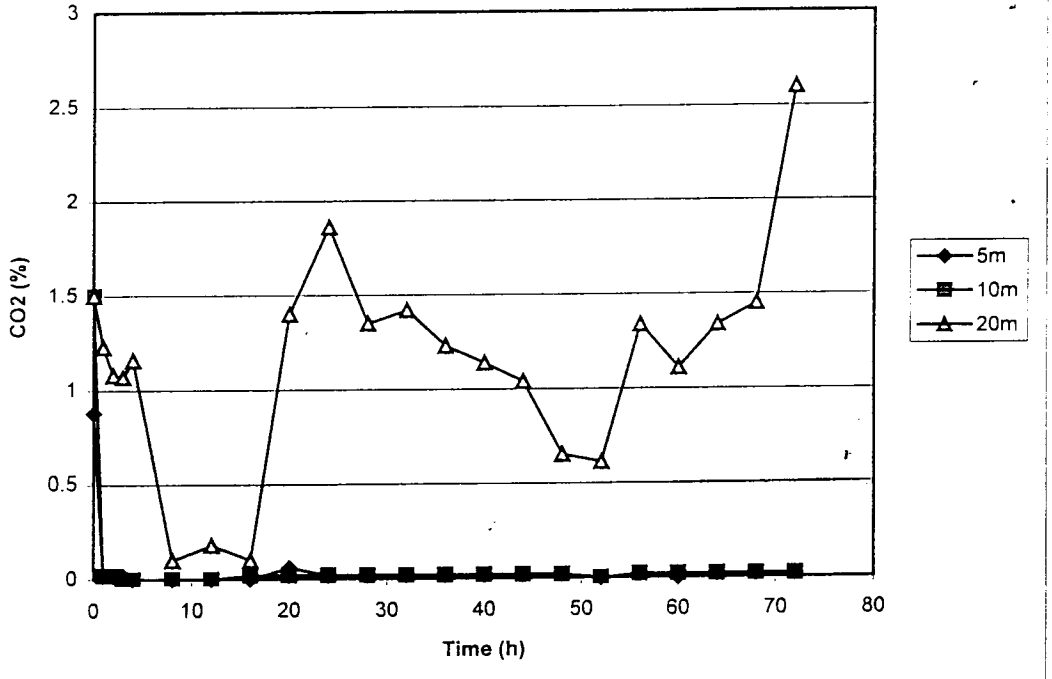


C418\xl\svevt1g-2

CO2 at Shallow Vapour Probes *vs* Time (Long-term SVE Test at VT1, extracted air flow rate = 10 cfm)

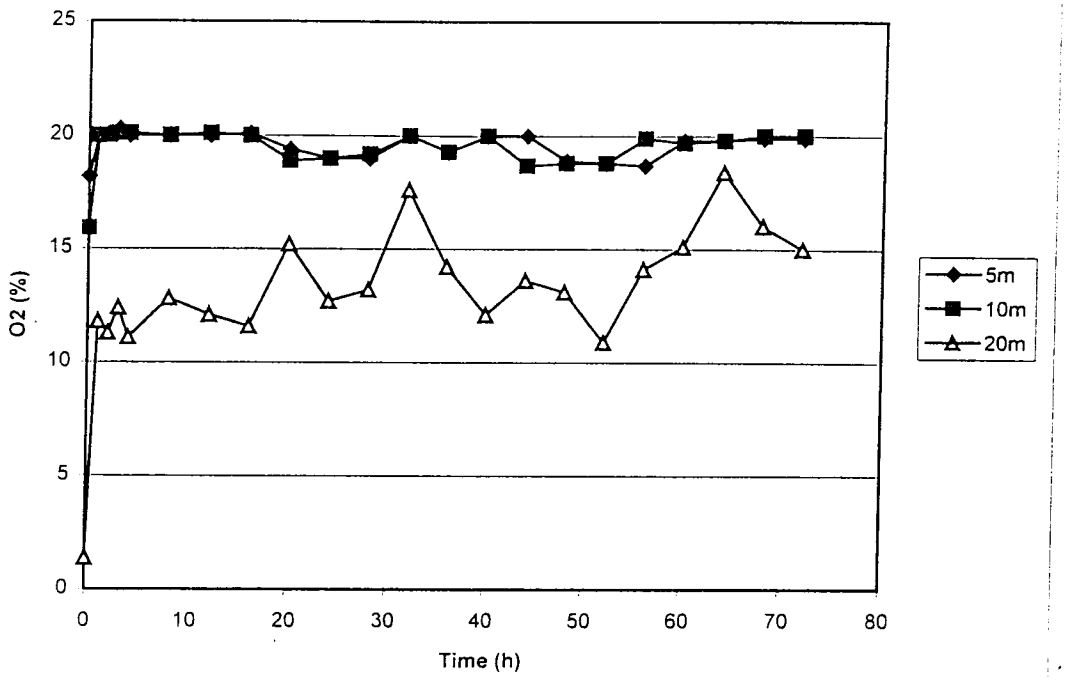


CO2 at Deep Vapour Probes *vs* Time (Long-term SVE Test at VT1, extracted air flow rate = 10 cfm)

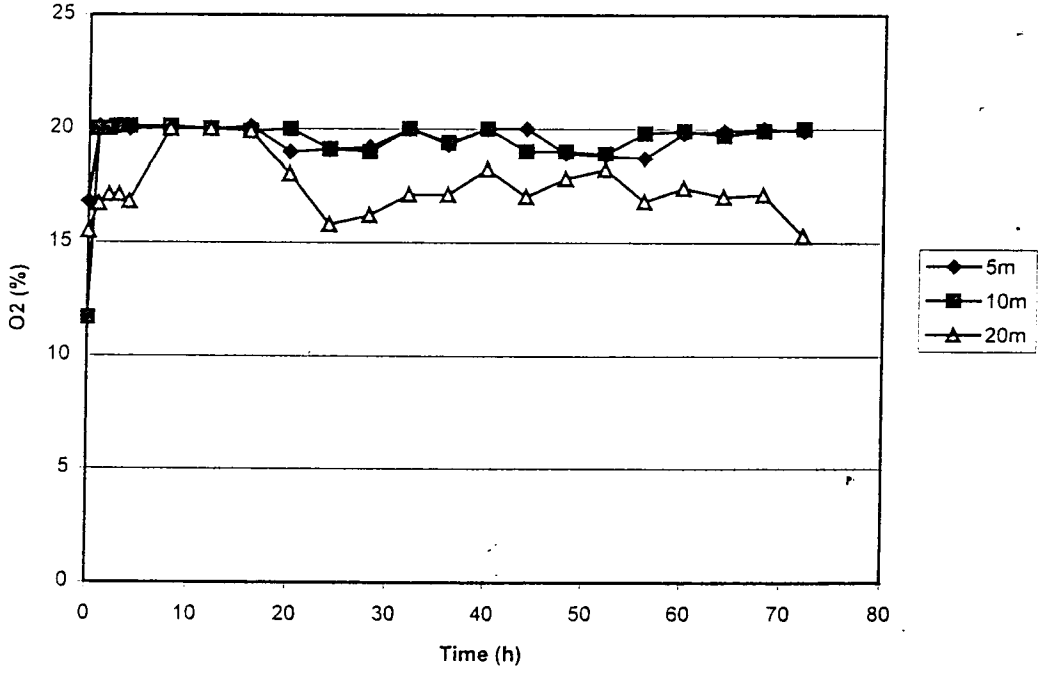


C418\xl\svevt1g-2

O2 at Shallow Vapour Probes *vs* Time (Long-term SVE Test at VT1, extracted air flow rate = 10 cfm)

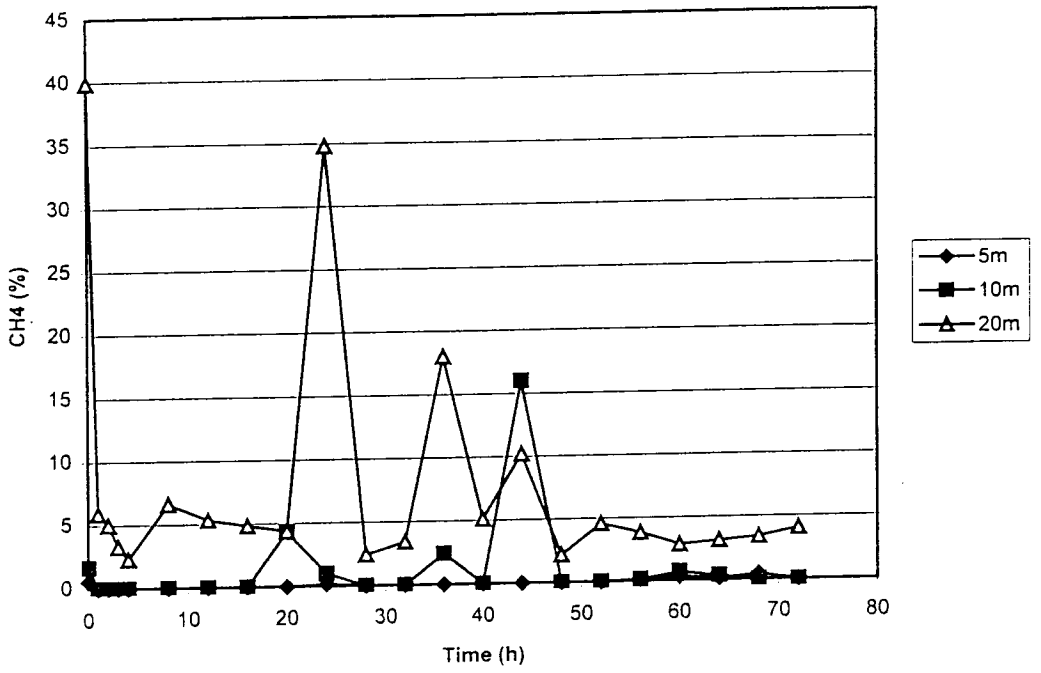


O2 at Deep Vapour Probes *vs* Time (Long-term SVE Test at VT1, extracted air flow rate = 10 cfm)

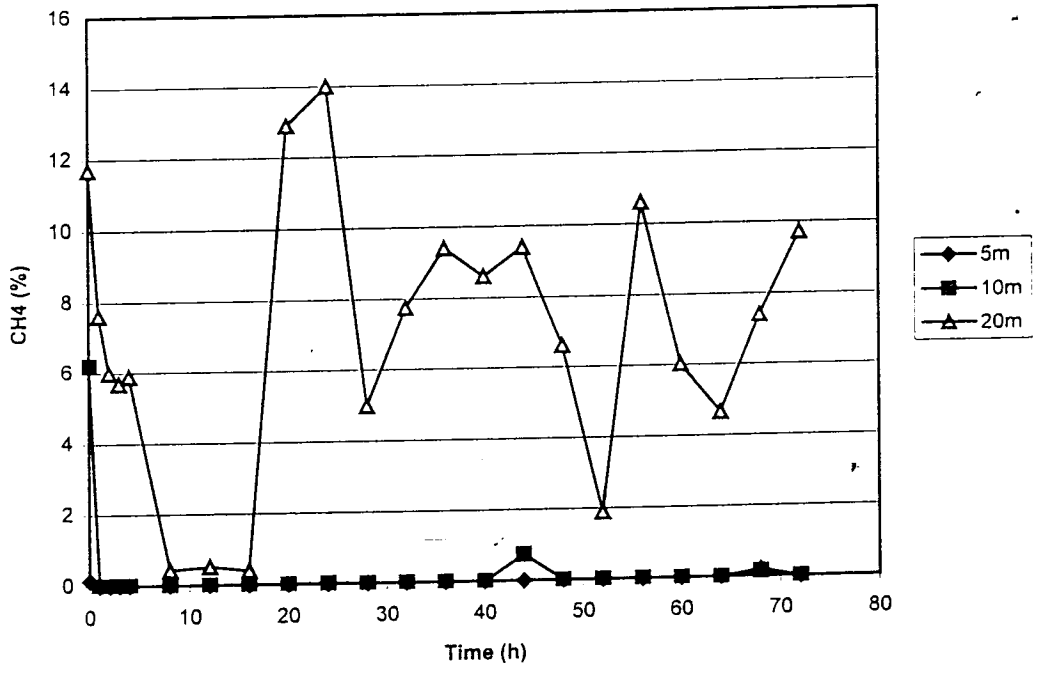


C418\xl\svevt1g-2

CH4 at Shallow Vapour Probes *vs* Time (Long-term SVE Test at VT1, extracted air flow rate = 10 cfm)

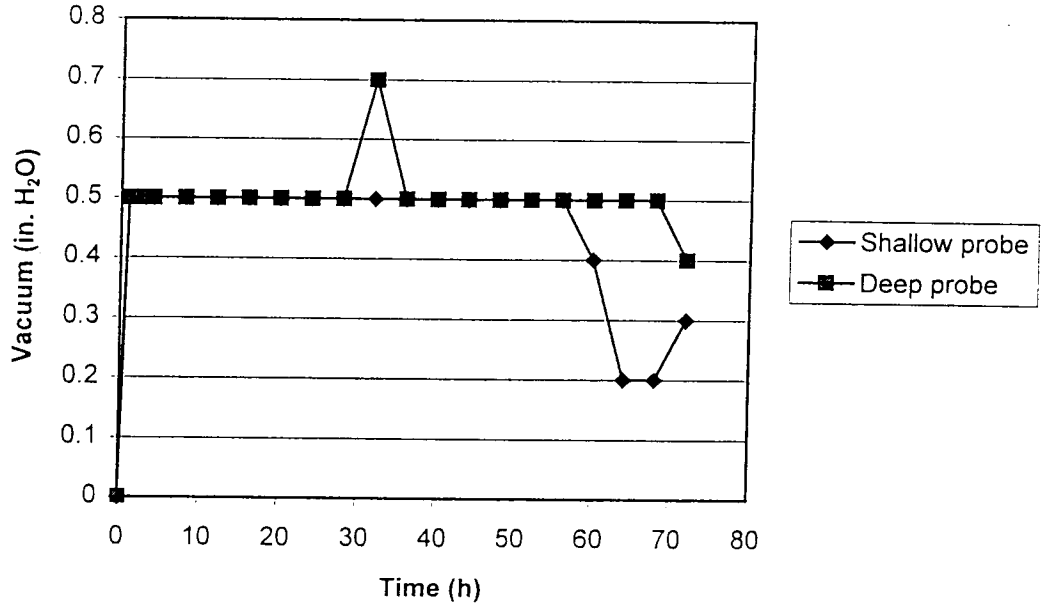


CH4 at Deep Vapour Probes *vs* Time (Long-term SVE Test at VT1, extracted air flow rate = 10 cfm)

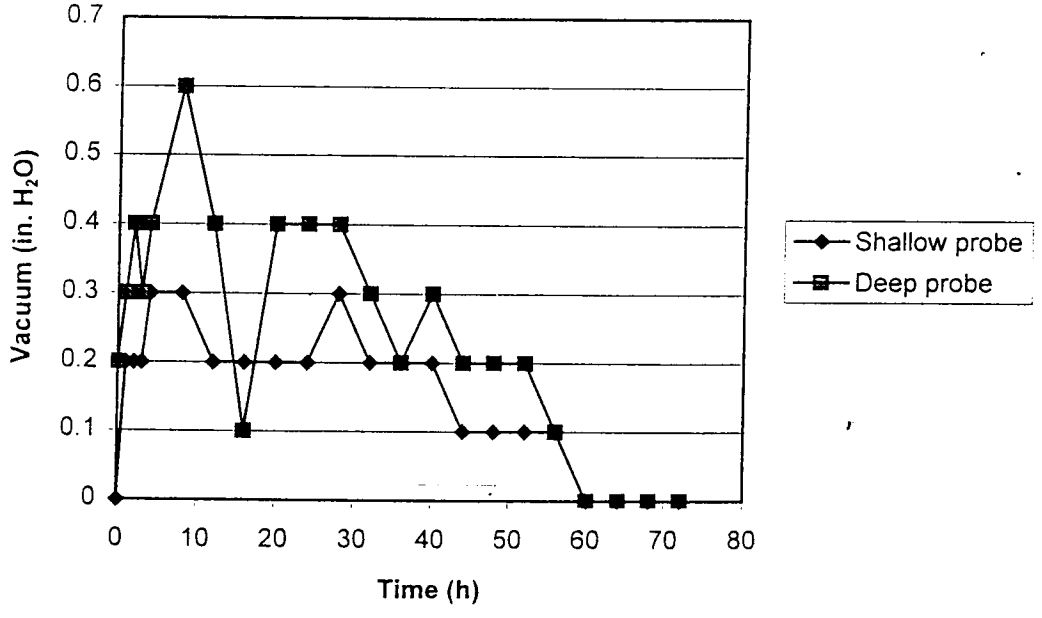


C418\xl\svevt1g-2

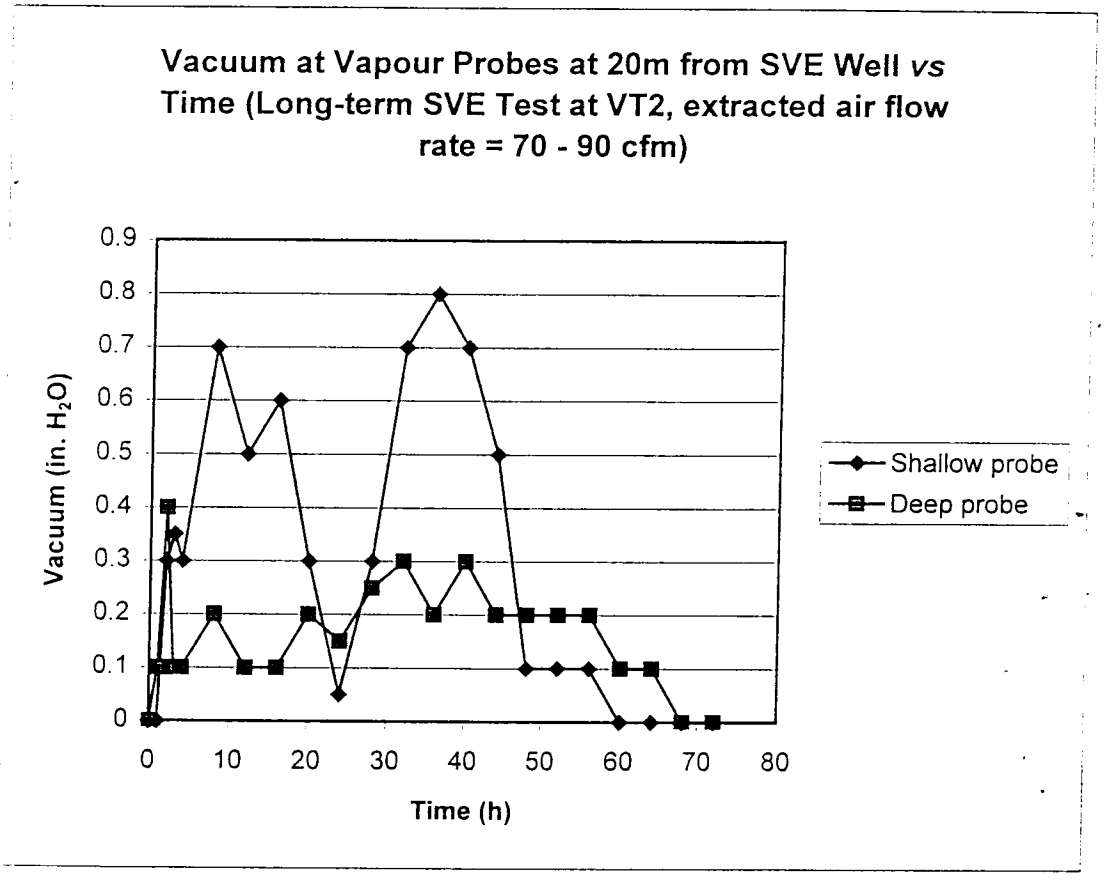
Vacuum at Vapour Probes at 5m from SVE Well *vs* Time (Long-term SVE Test at VT2, extracted air flow rate = 70 - 90 cfm)



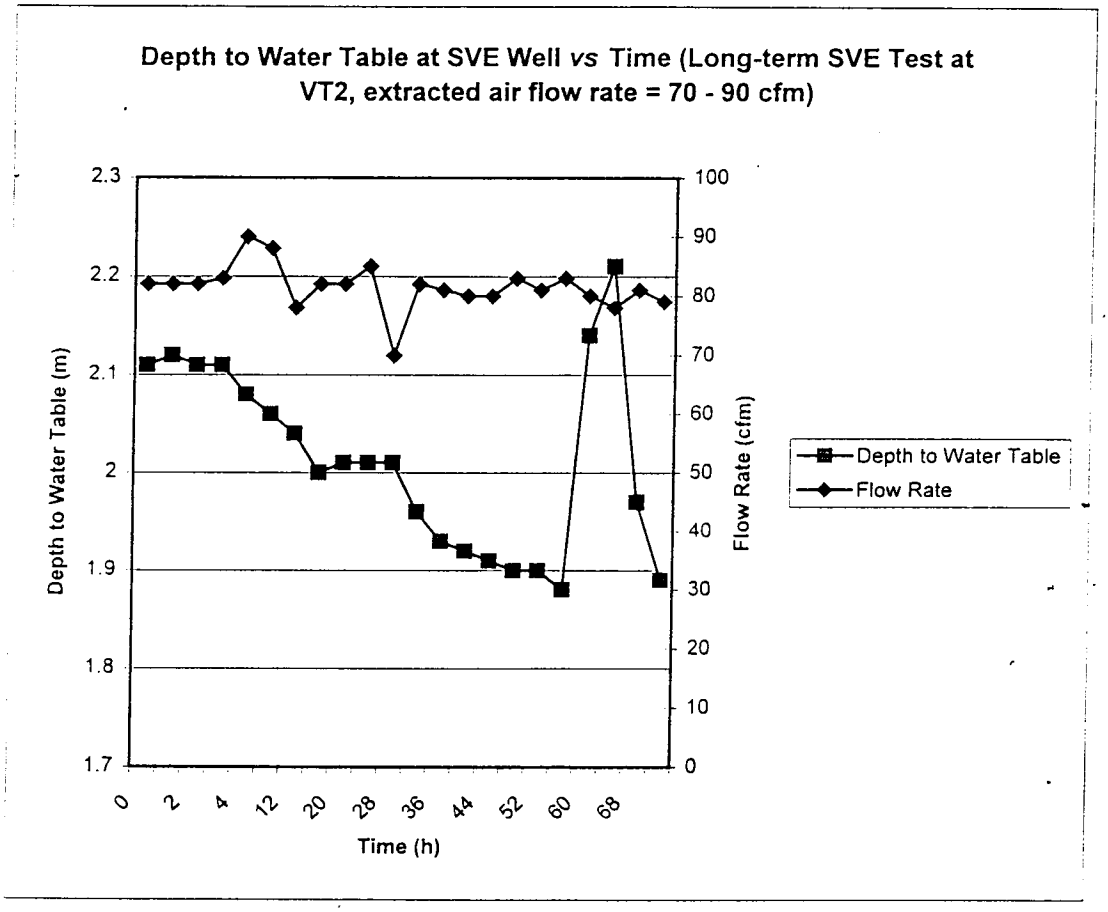
Vacuum at Vapour Probes at 10m from SVE Well *vs* Time (Long-term SVE Test at VT2, extracted air flow rate = 70 - 90 cfm)



C418\xl\svevt2-p1

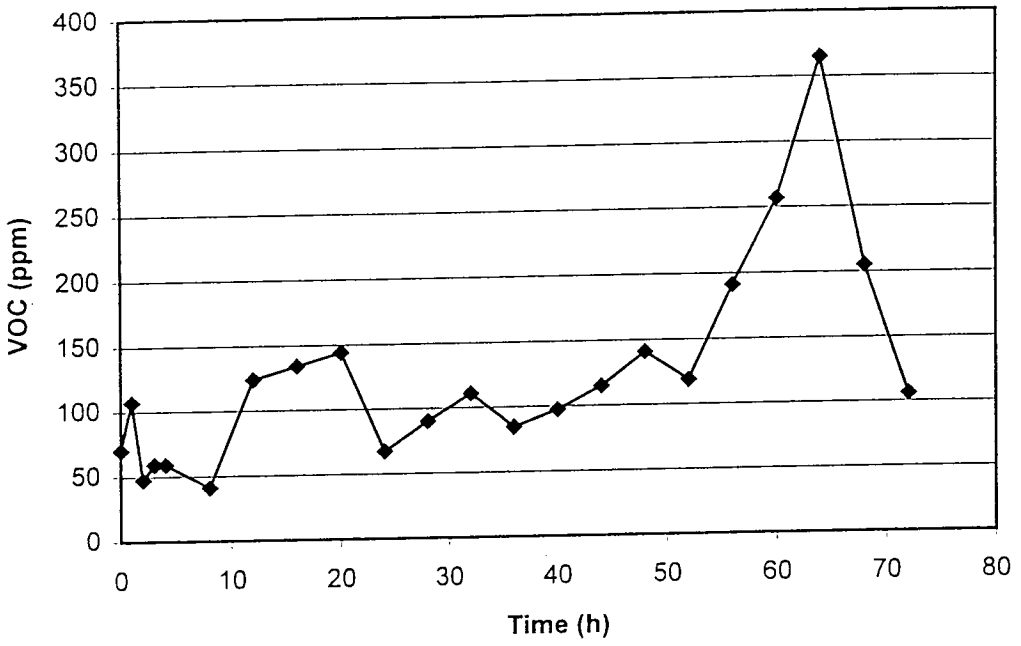


C418\xl\svevt2-p1

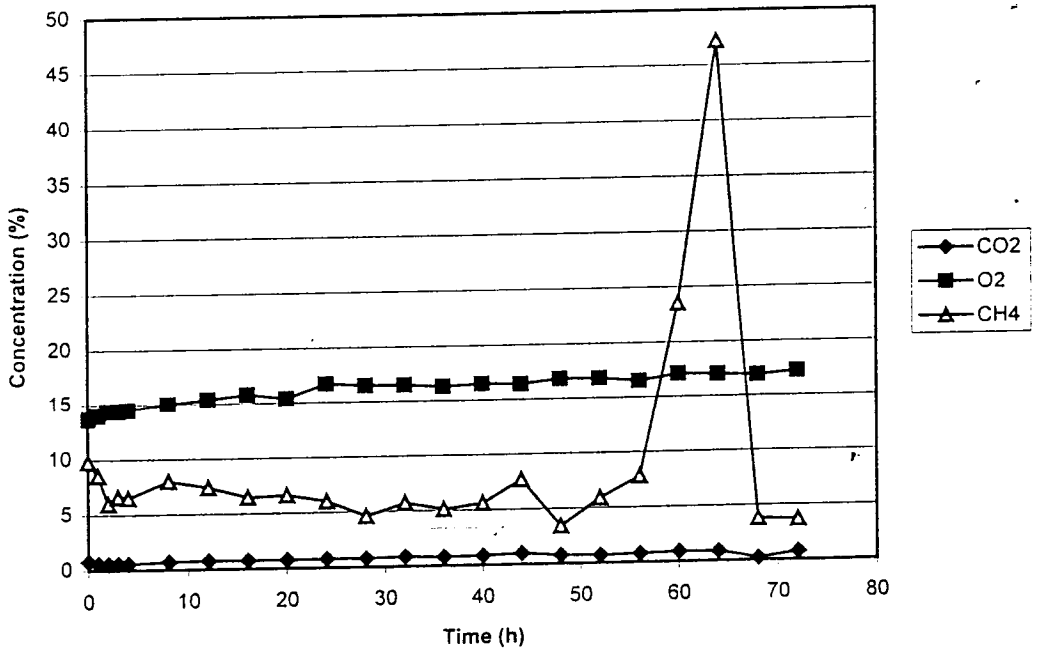


C418\xl\svevt2p-2

VOC at Blower Outlet *vs* Time (Long Term SVE Test at VT2, extracted air flow rate = 70 - 90 cfm)

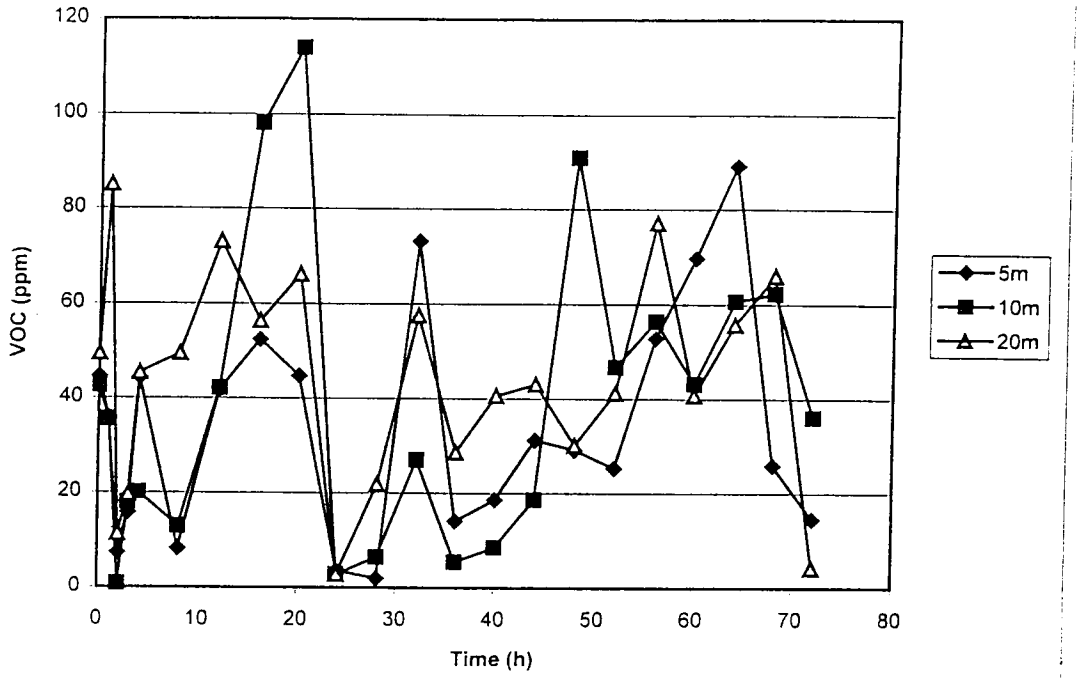


CO2, O2 & CH4 at Blower Outlet *vs* Time (Long Term SVE Test at VT2, extracted air flow rate = 70 - 90 cfm)

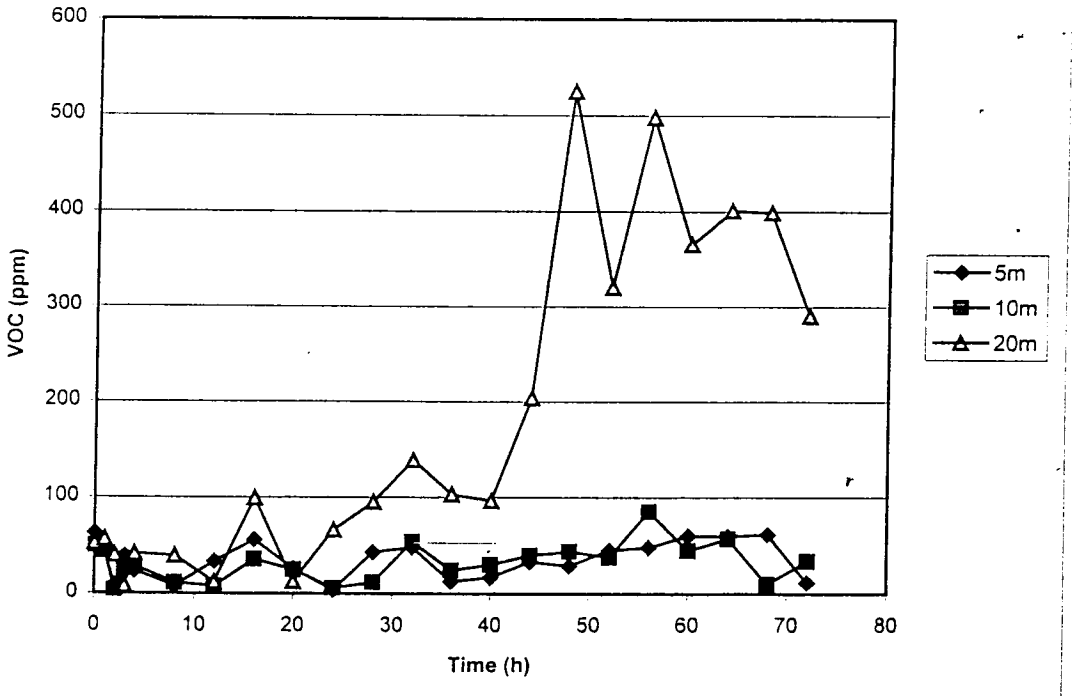


C418\xl\Svevt2g-2

VOC at Shallow Vapour Probes *vs* Time (Long-term SVE Test at VT2, extracted air flow rate = 70 - 90 cfm)

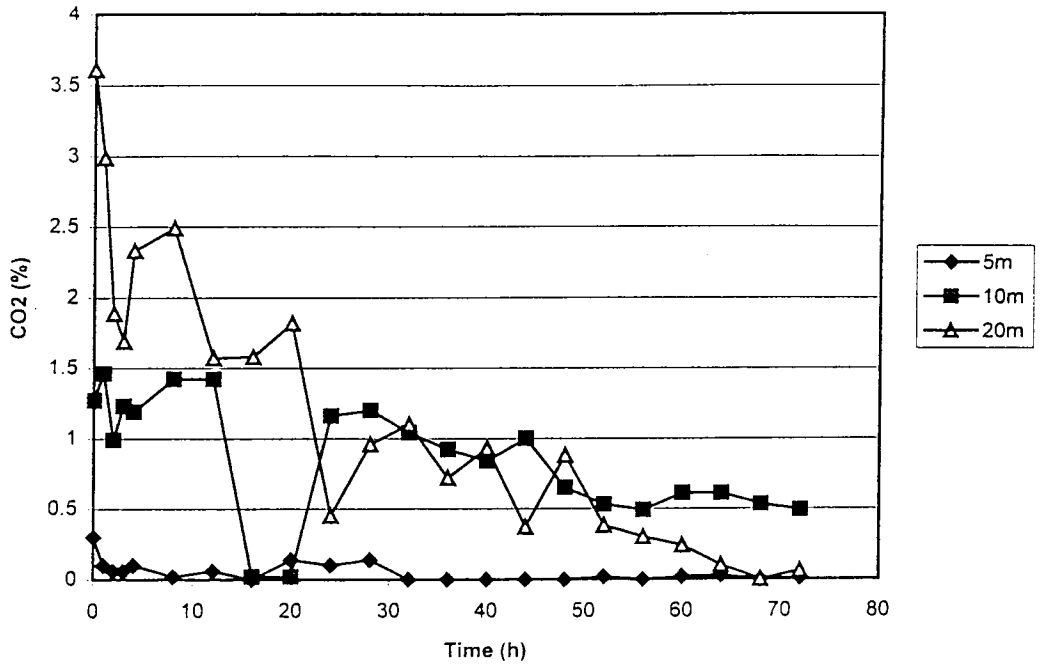


VOC at Deep Vapour Probes *vs* Time (Long-term SVE Test at VT2, extracted air flow rate = 70 - 90 cfm)

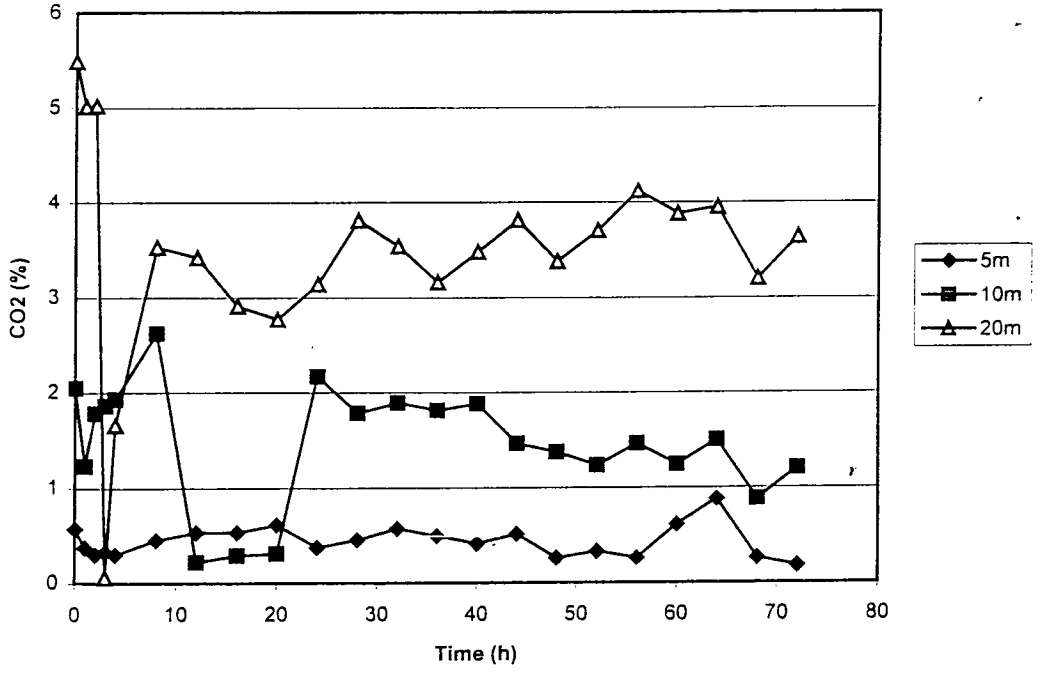


C418\xl\svevt2g-2

CO2 at Shallow Vapour Probes *vs* Time (Long-term SVE Test at VT2, extracted air flow rate = 70 - 90 cfm)

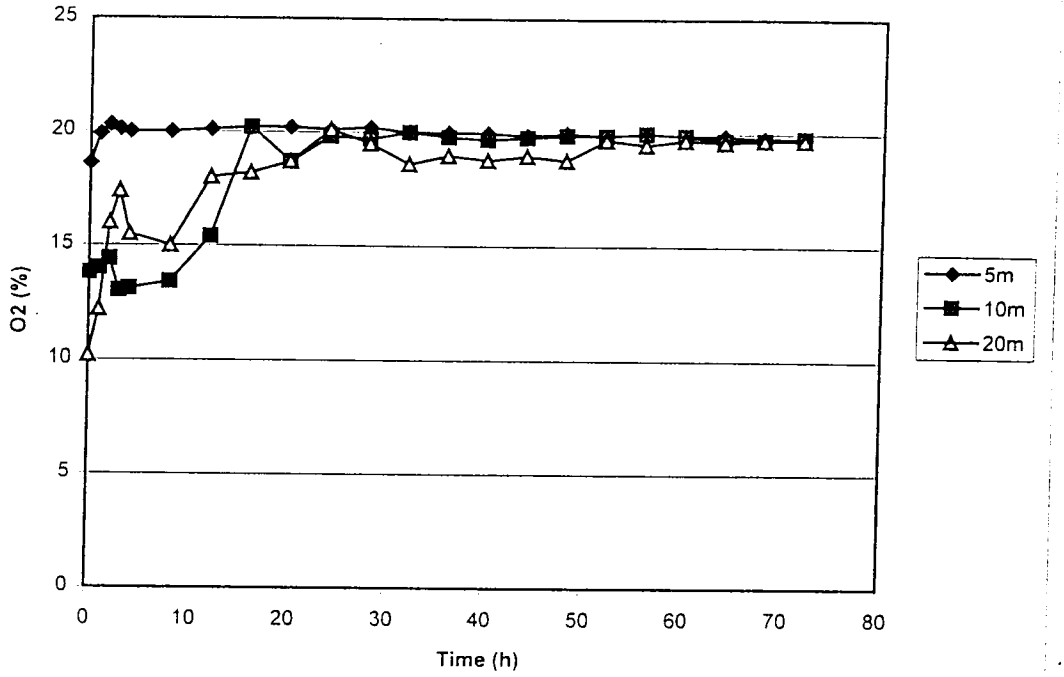


CO2 at Deep Vapour Probes *vs* Time (Long-term SVE Test at VT2, extracted air flow rate = 70 - 90 cfm)

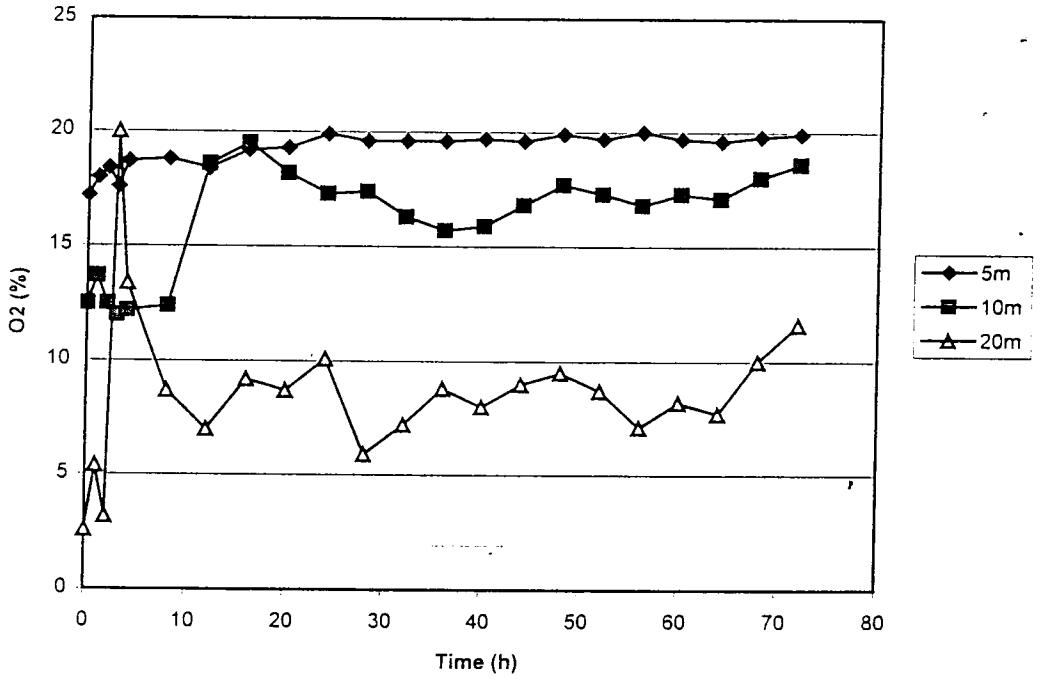


C418\xl\svevt2g-2

O2 at Shallow Vapour Probes *vs* Time (Long-term SVE Test at VT2, extracted air flow rate = 70 - 90 cfm)

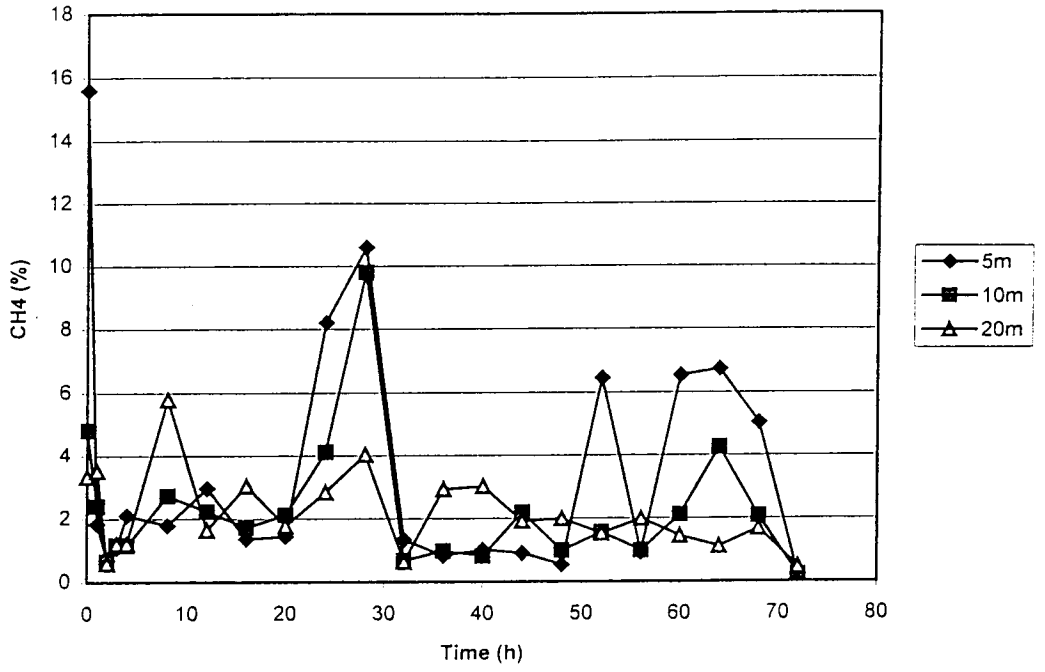


O2 at Deep Vapour Probes *vs* Time (Long-term SVE Test at VT2, extracted air flow rate = 70 - 90 cfm)

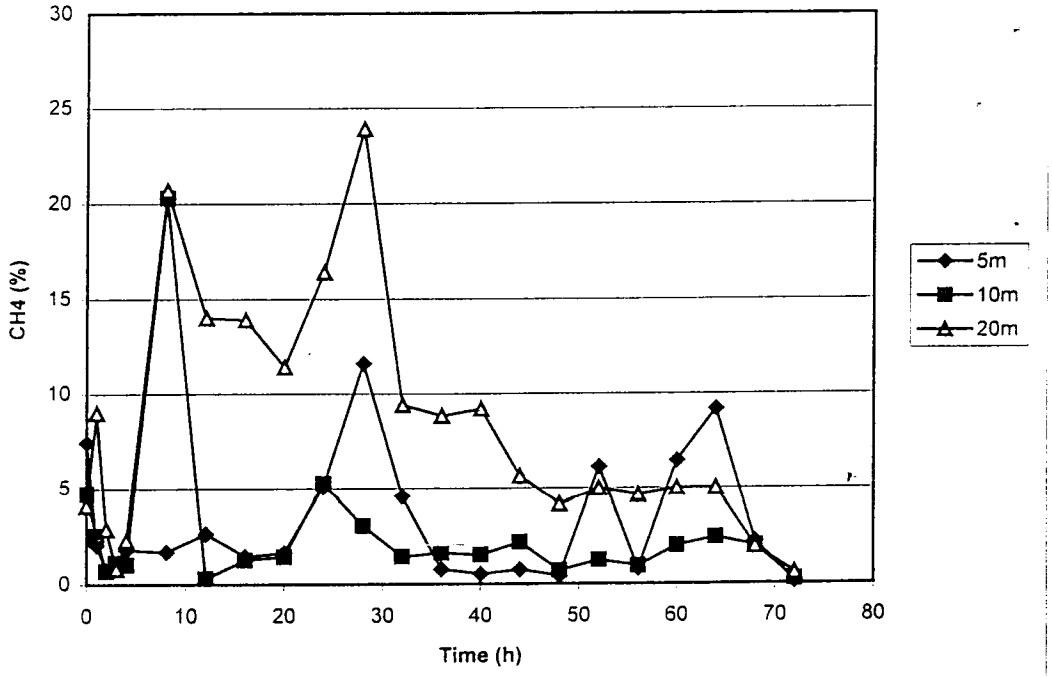


C418\xl\svevt2g-2

CH4 at Shallow Vapour Probes *vs* Time (Long-term SVE Test at VT2, extracted air flow rate = 70 - 90 cfm)

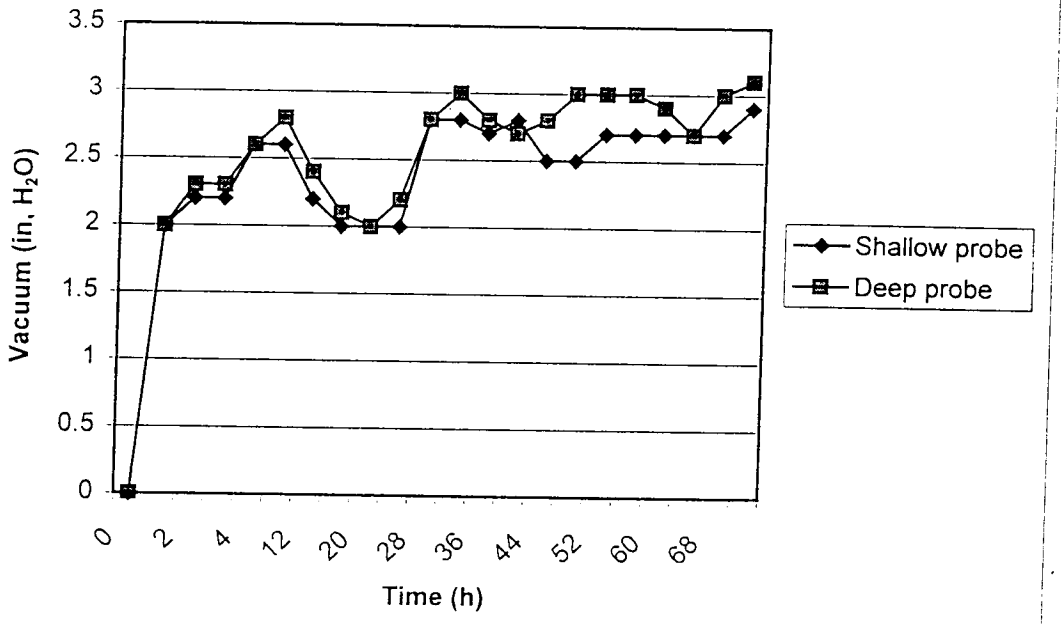


CH4 at Deep Vapour Probes *vs* Time (Long-term SVE Test at VT2, extracted air flow rate = 70 - 90 cfm)

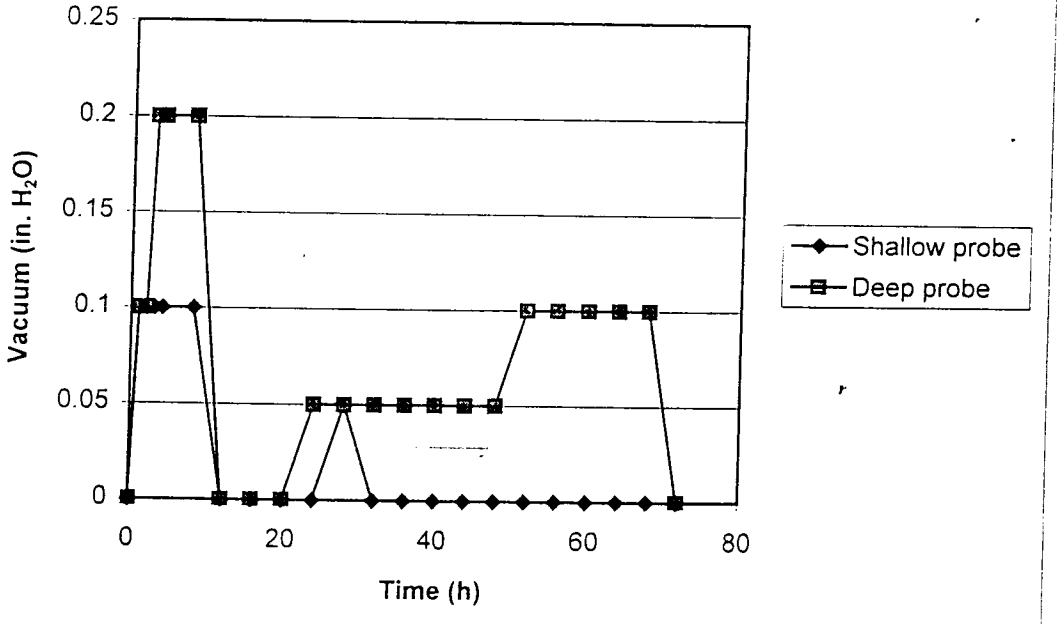


C418\xl\svevt2g-2

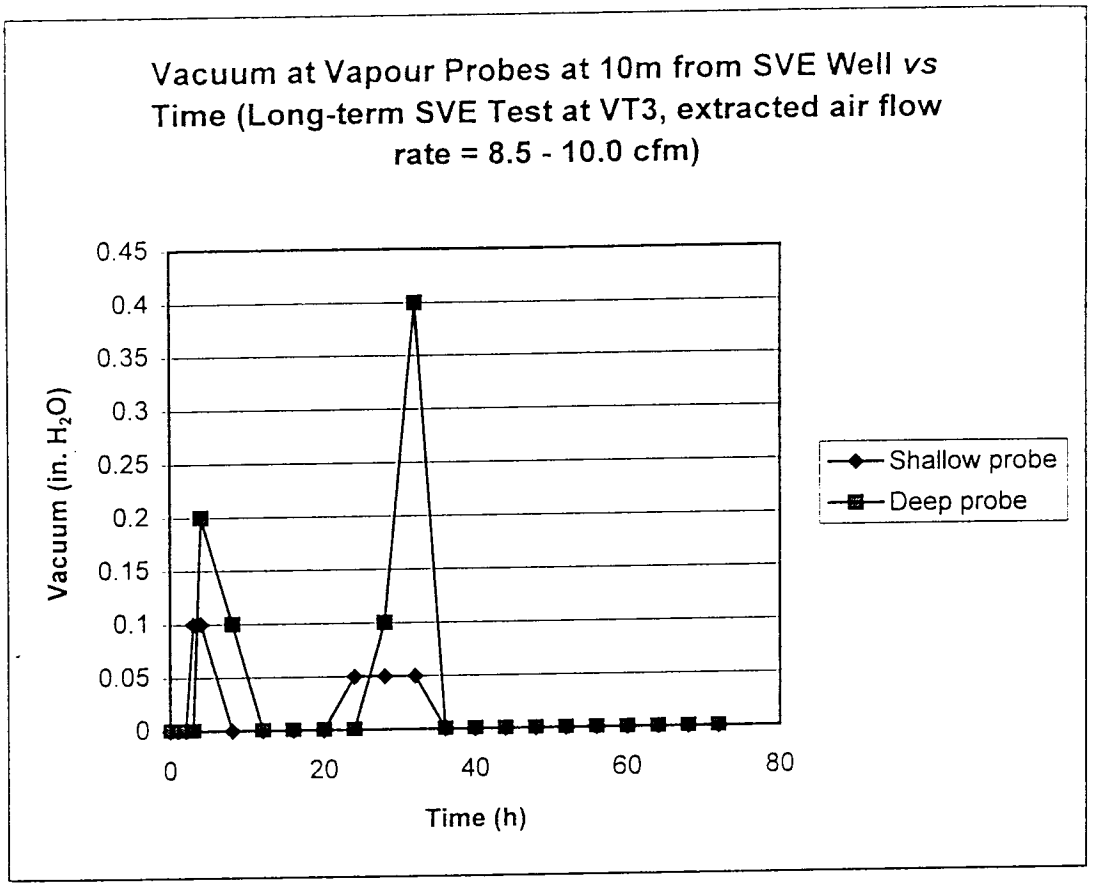
Vacuum at Vapour Probes at 1m from SVE Well *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)

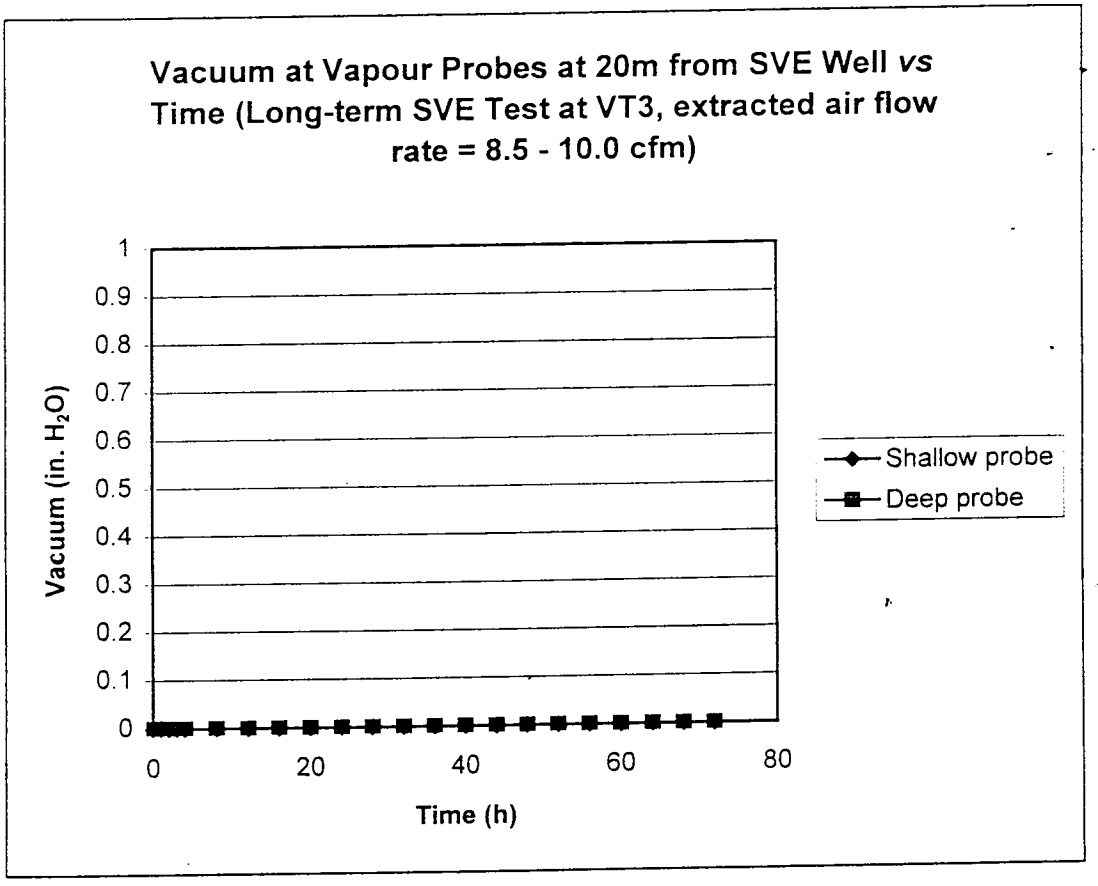


Vacuum at Vapour Probes at 5m (Probes B) from SVE Well *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)



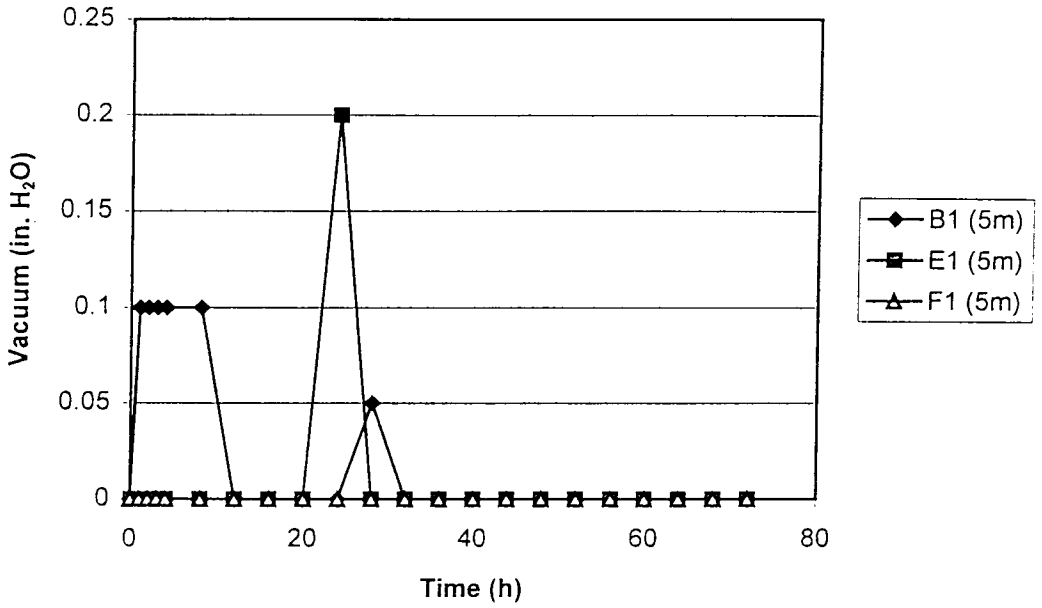
C418\xl\svevt3-p2



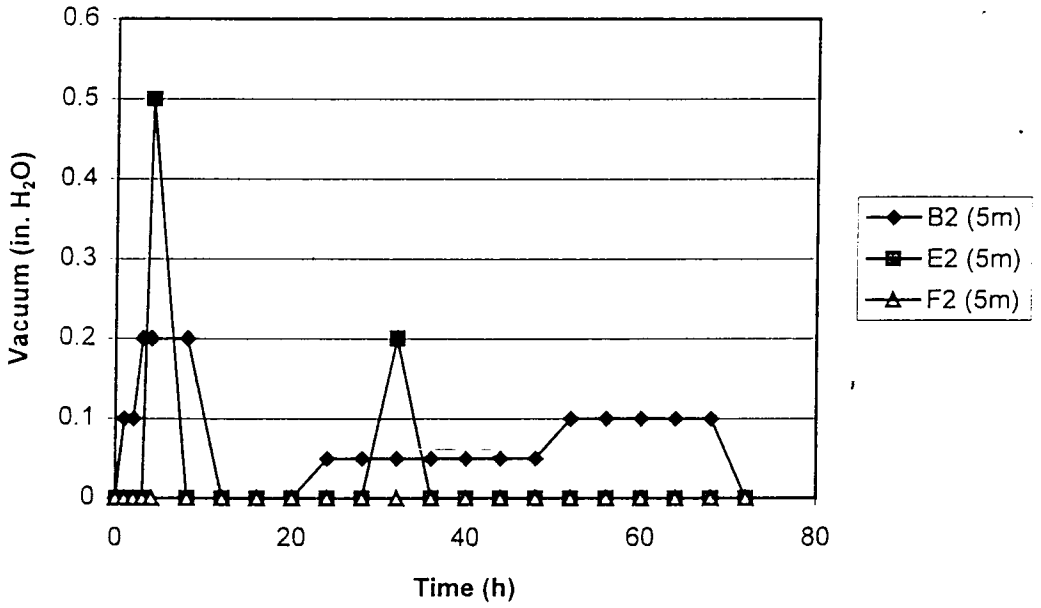


C418\xl\svevt3-p2

Vacuum at Shallow Radial Vapour Probes *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)

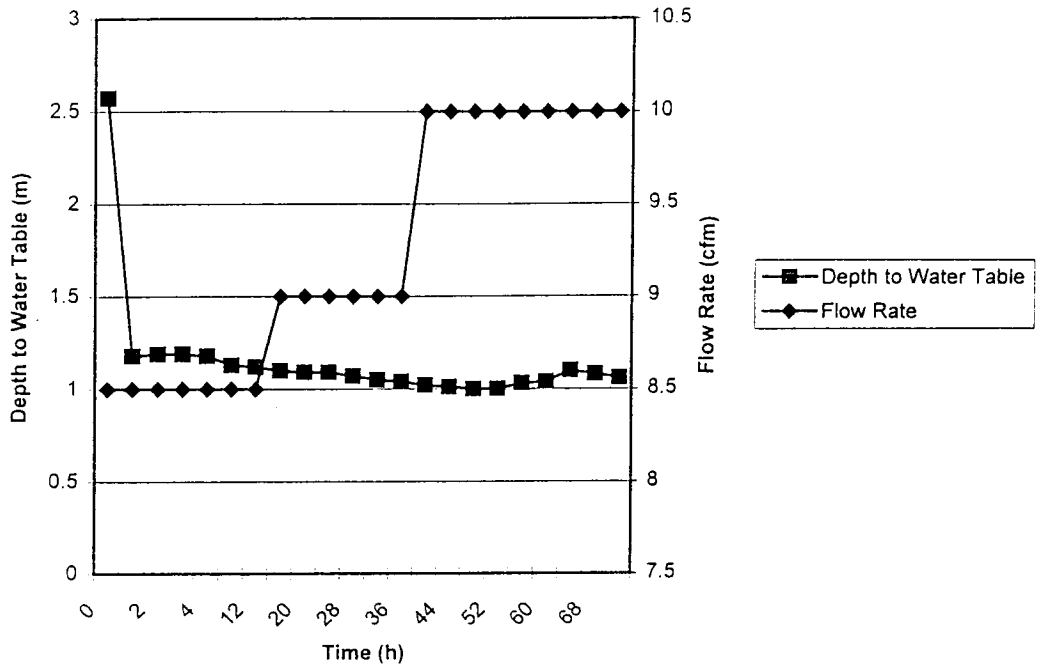


Vacuum at Deep Radial Vapour Probes *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)

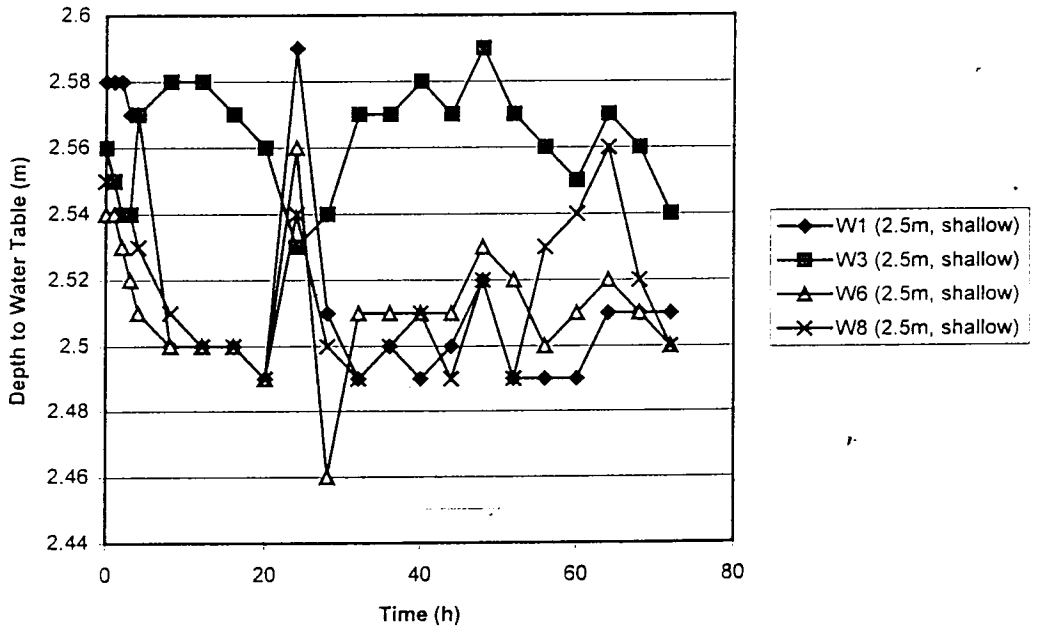


C418\xl\svevt3-p2

Depth to Water Table at SVE Well *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)

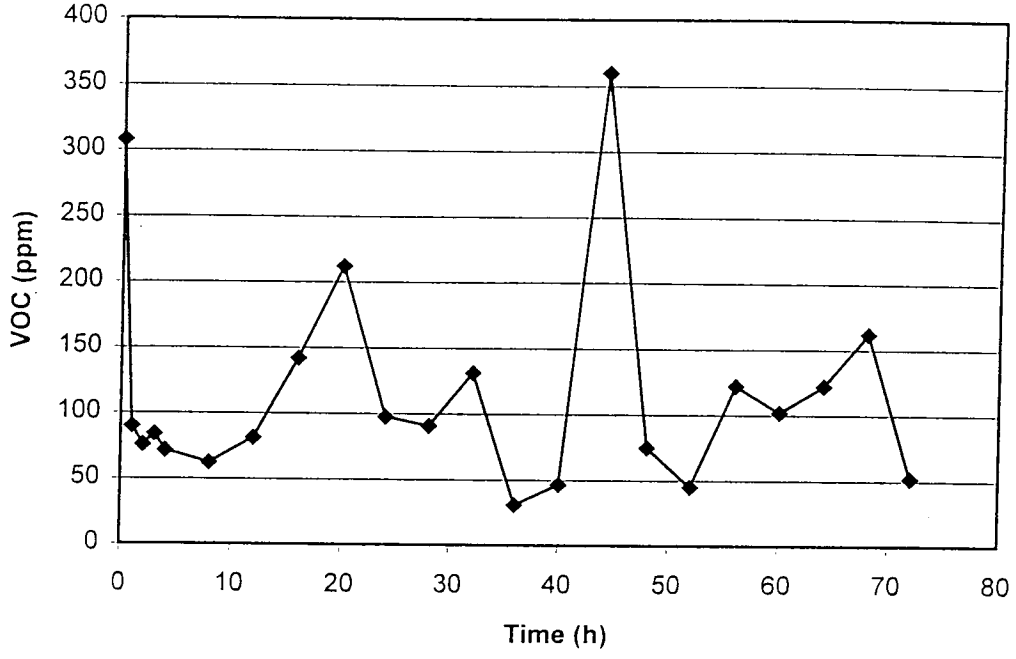


Depth to Water Table at Groundwater Monitoring Wells *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)

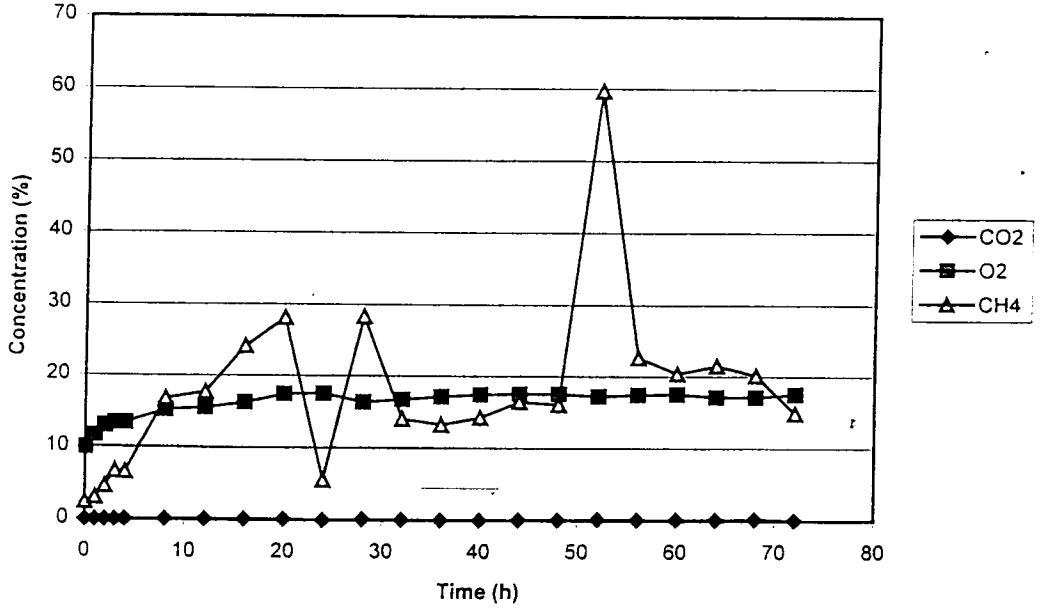


C418\xl\Svevt3-p2

VOC at Blower Outlet *vs* Time (Long Term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)

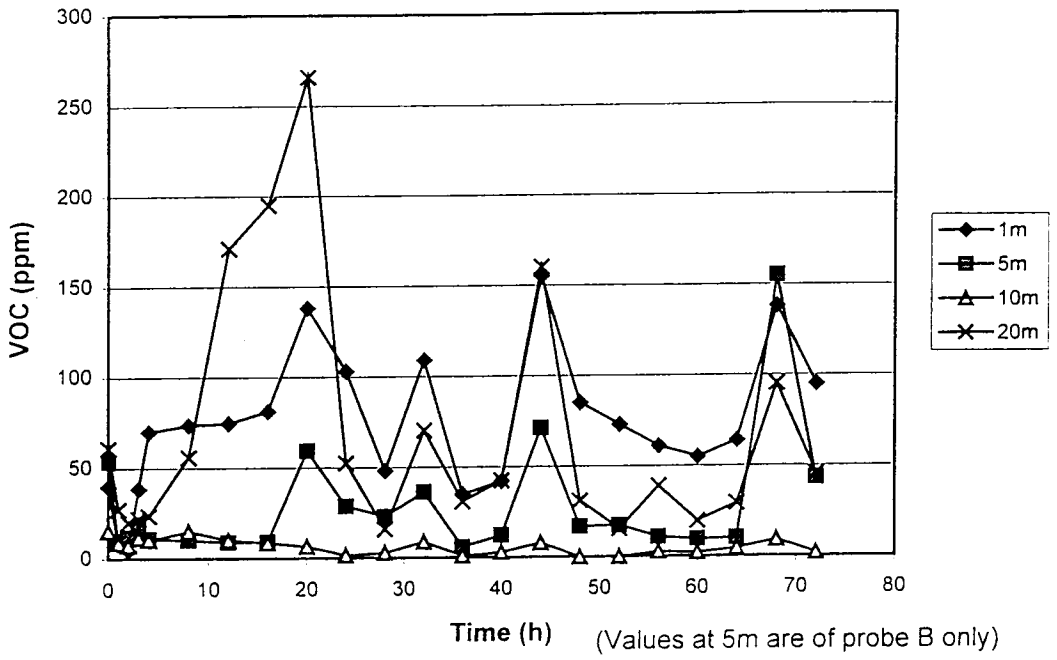


CO2, O2 & CH4 at Blower Outlet *vs* Time (Long Term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)



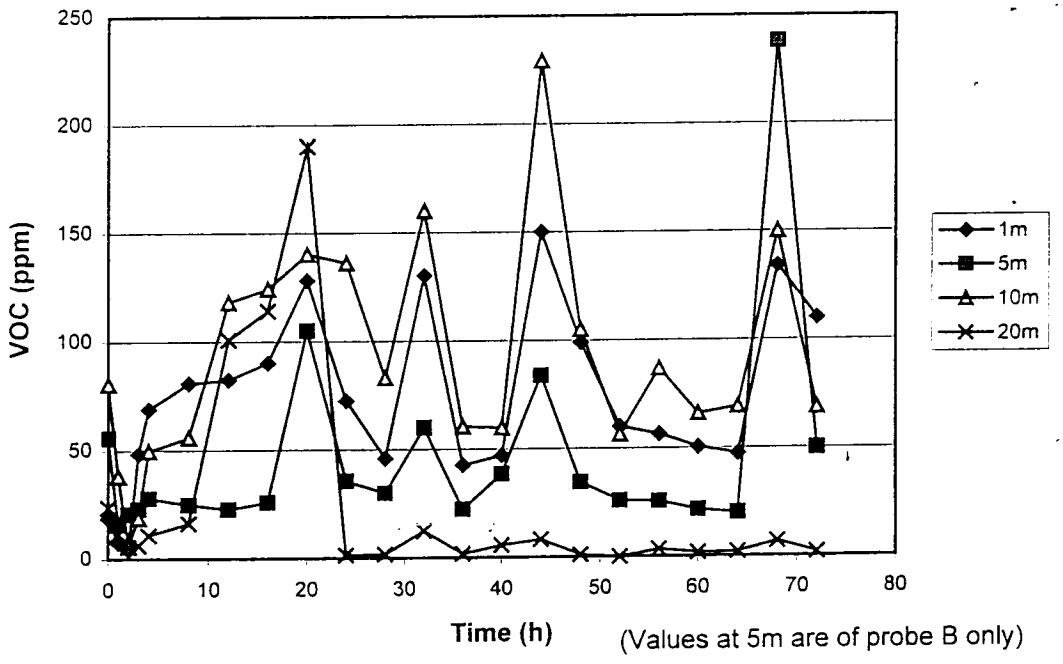
C418\xl\Svevt3-g2

VOC at Shallow Vapour Probes *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)



(Values at 5m are of probe B only)

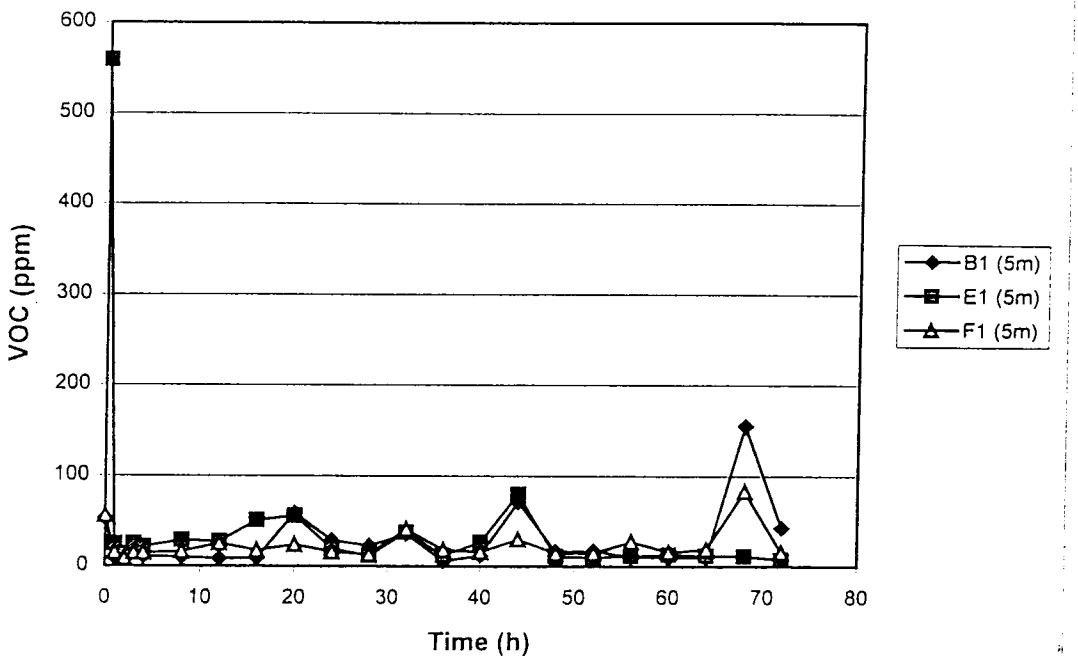
VOC at Deep Vapour Probes *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)



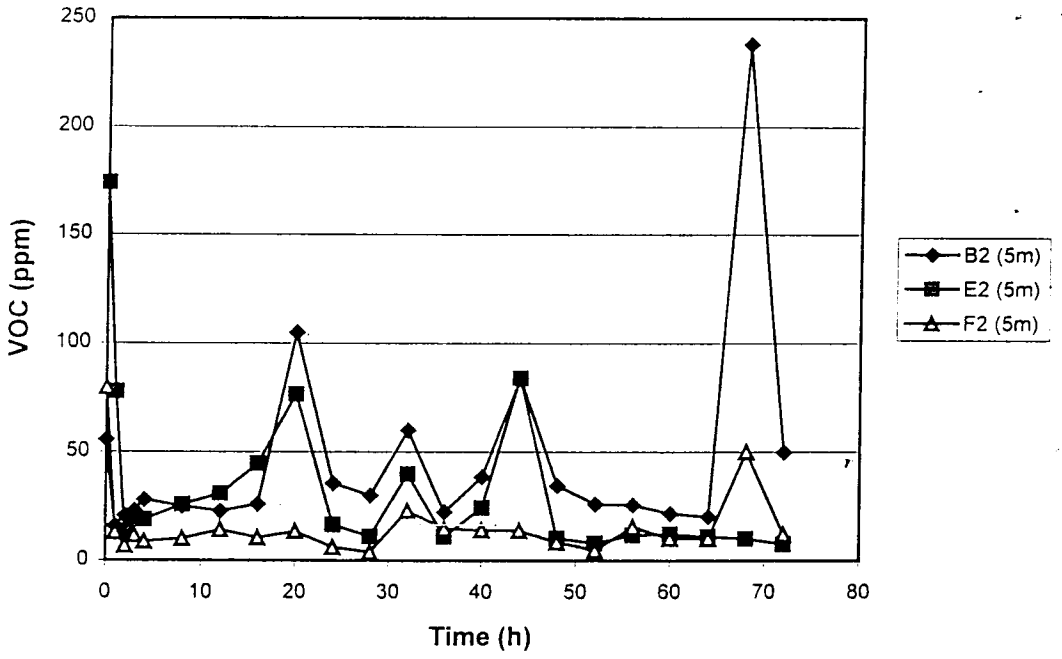
(Values at 5m are of probe B only)

C418\xl\Svevt3-g2

VOC at Shallow Radial Probes *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)

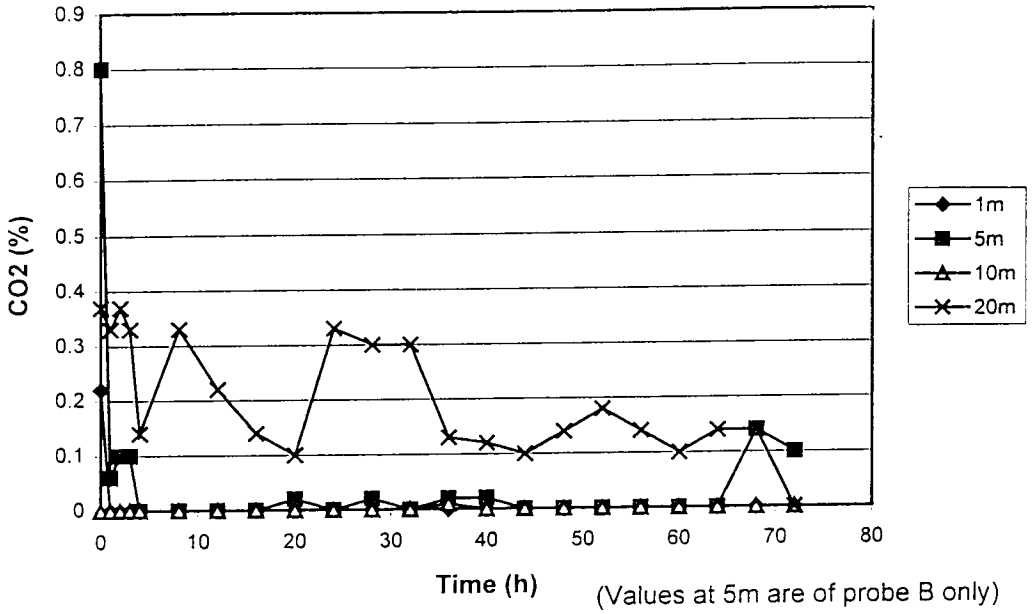


VOC at Deep Radial Probes *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)



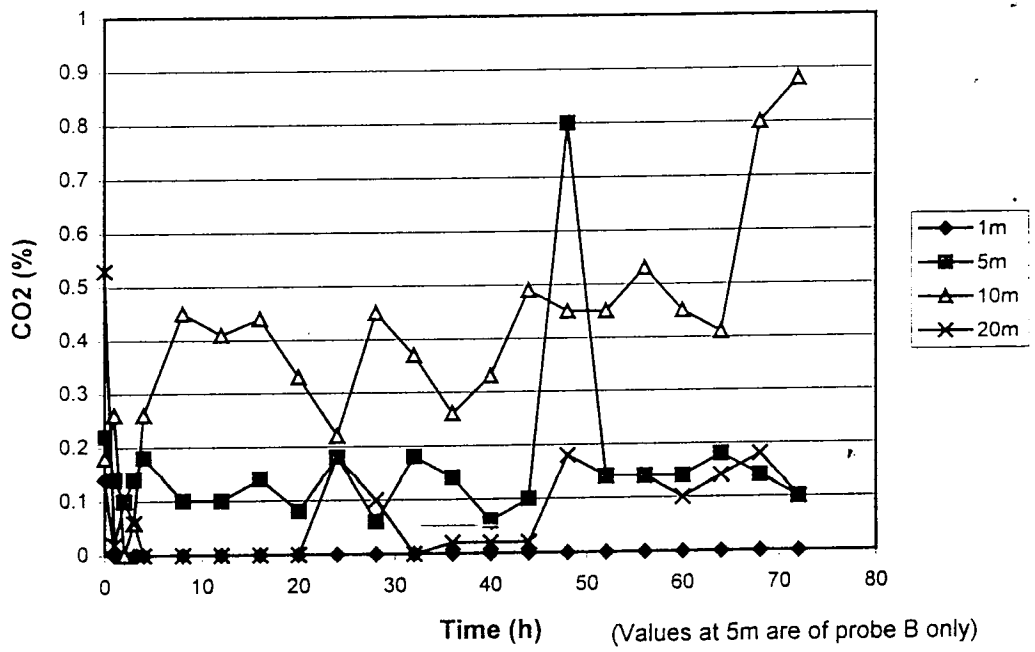
C418\xl\Svevt3-g2

CO2 at Shallow Vapour Probes *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)



(Values at 5m are of probe B only)

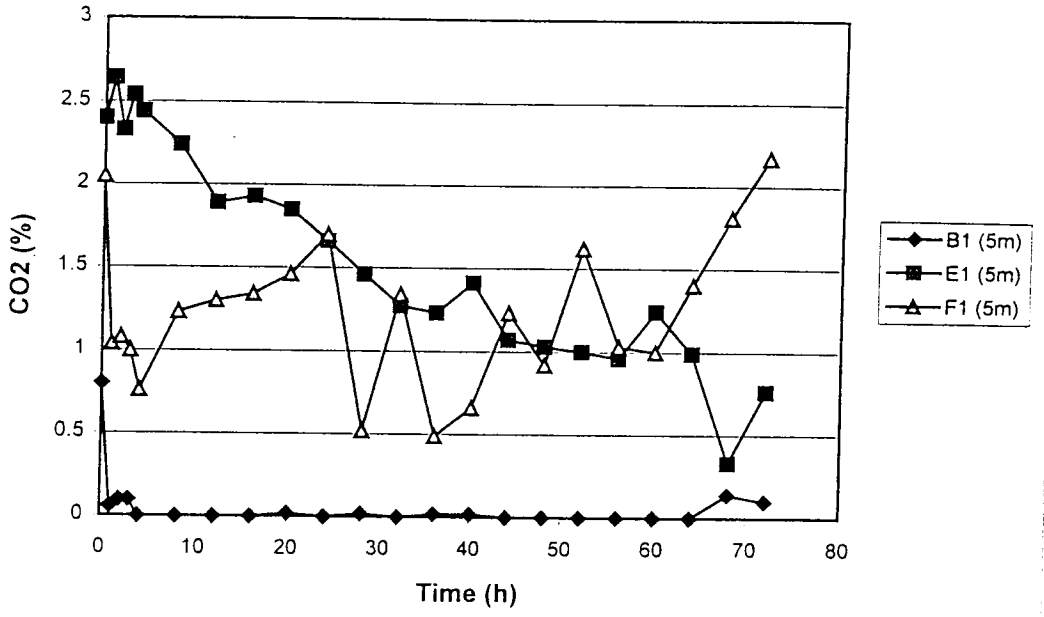
CO2 at Deep Vapour Probes *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)



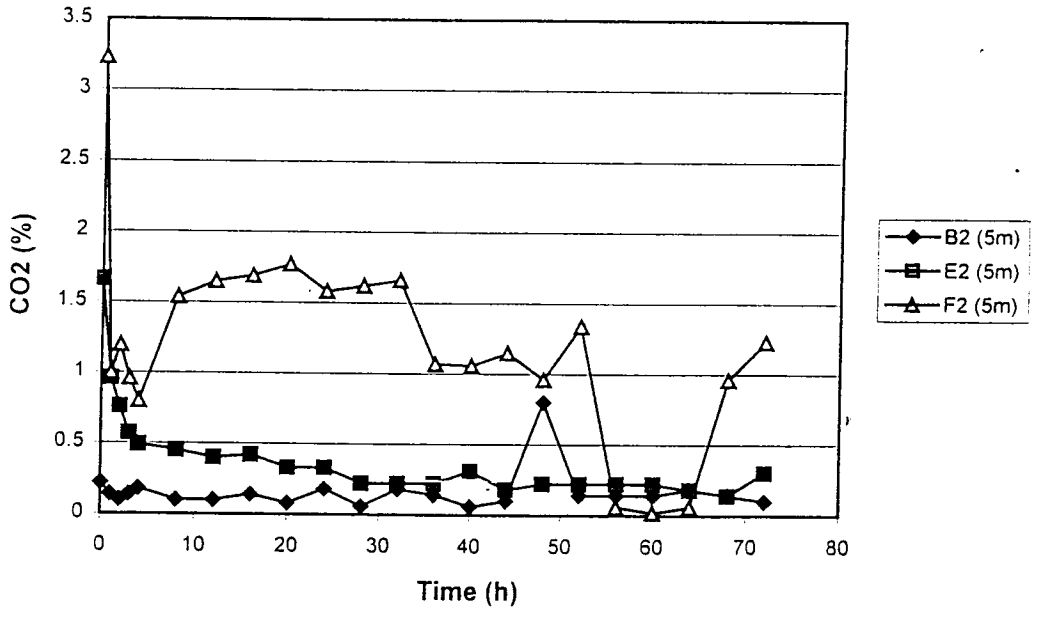
(Values at 5m are of probe B only)

C418\xl\Svevt3-g2

CO2 at Shallow Radial Vapour Probes *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)

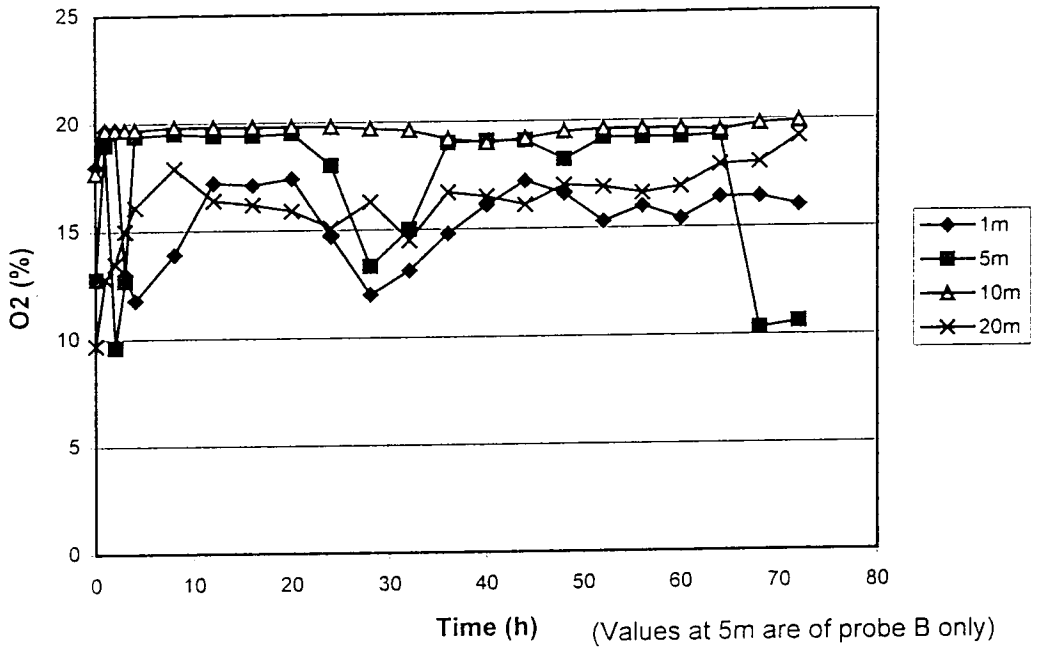


CO2 at Deep Radial Vapour Probes *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)



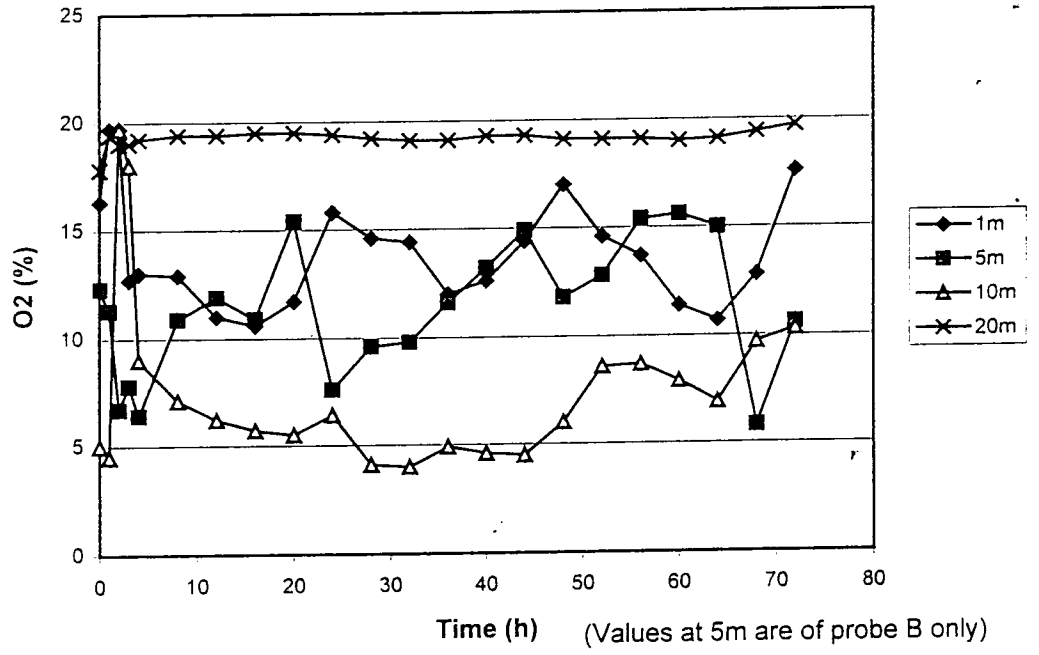
C418\xl\Svevt3-g2

O2 at Shallow Vapour Probes *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)



(Values at 5m are of probe B only)

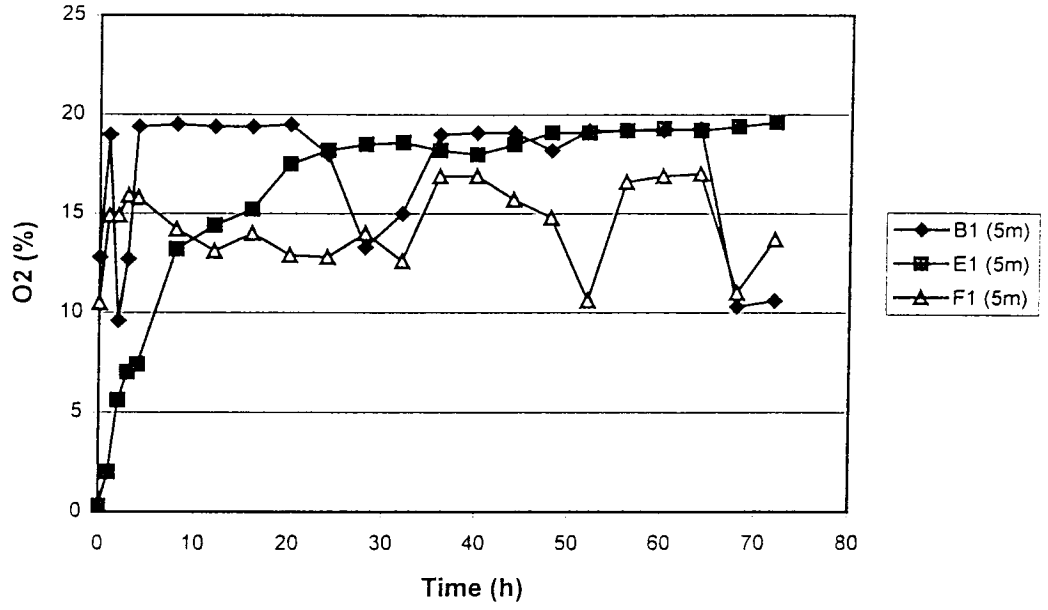
O2 at Deep Vapour Probes *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)



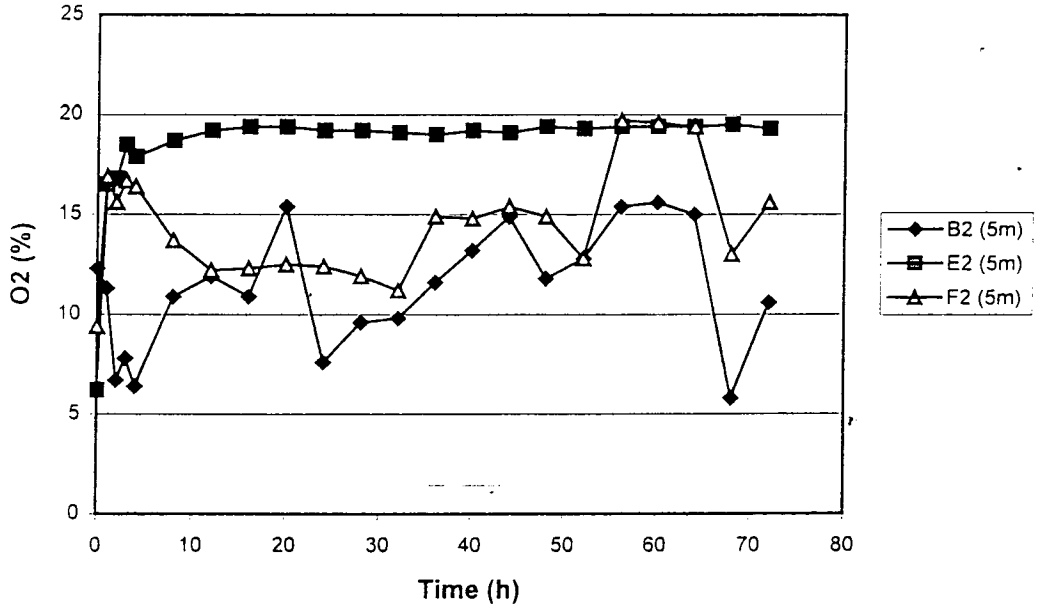
(Values at 5m are of probe B only)

C418\xl\Svevt3-g2

O2 at Shallow Radial Vapour Probes *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)

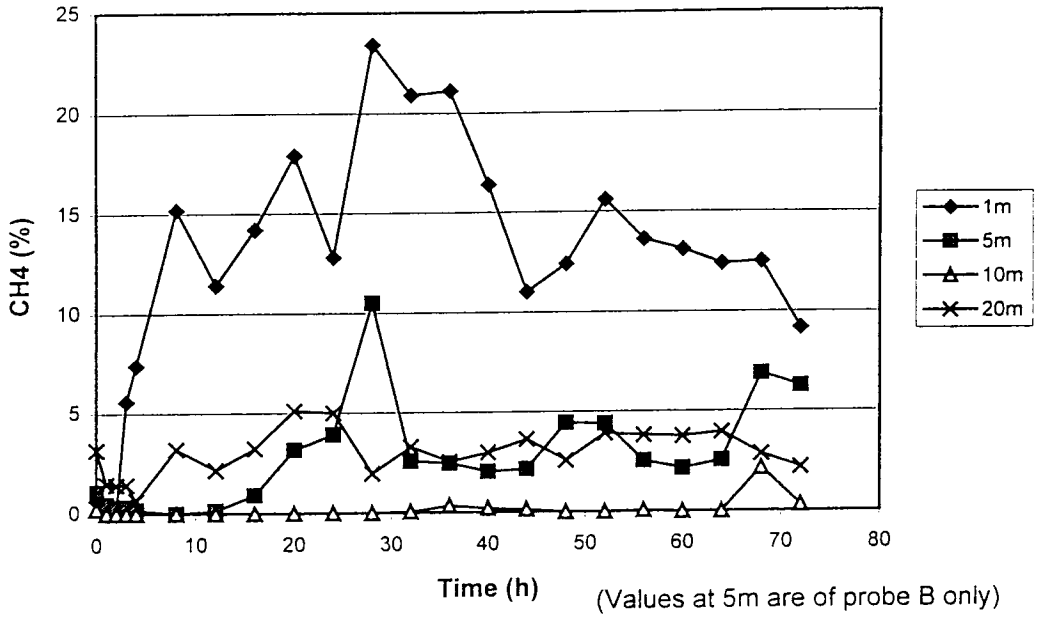


O2 at Deep Radial Vapour Probes *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)



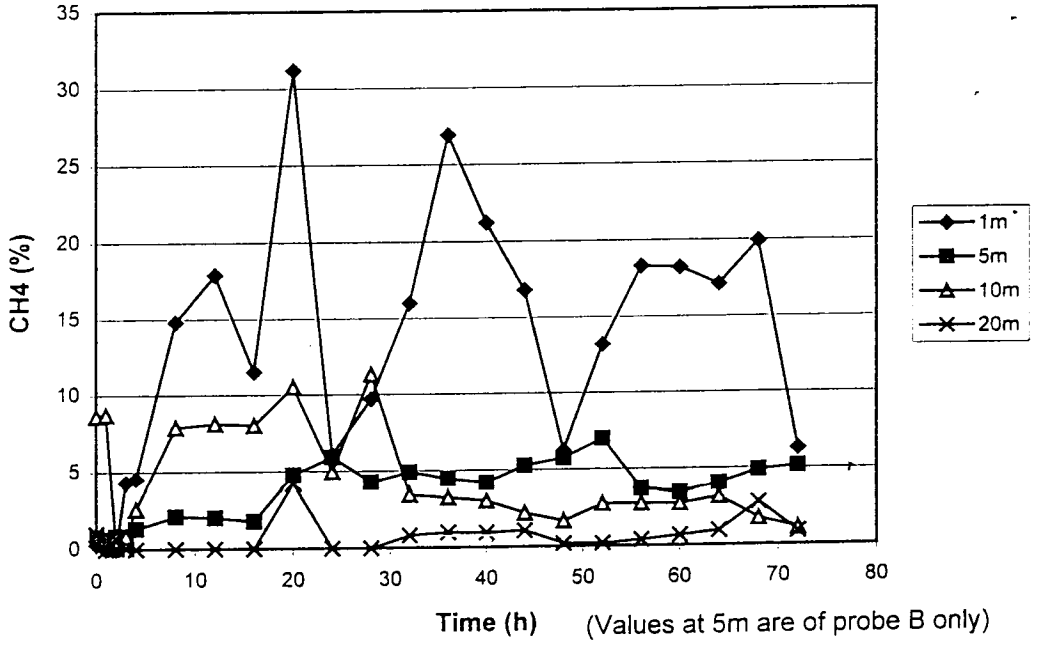
C418\xl\Svevt3-g2

CH4 at Shallow Vapour Probes *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)



(Values at 5m are of probe B only)

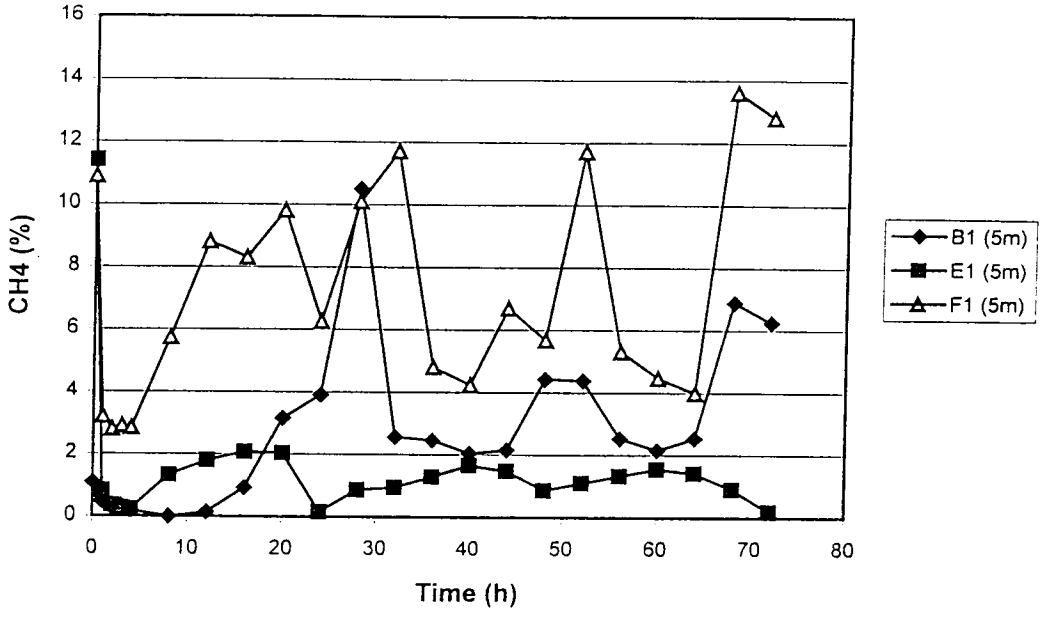
CH4 at Deep Vapour Probes *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)



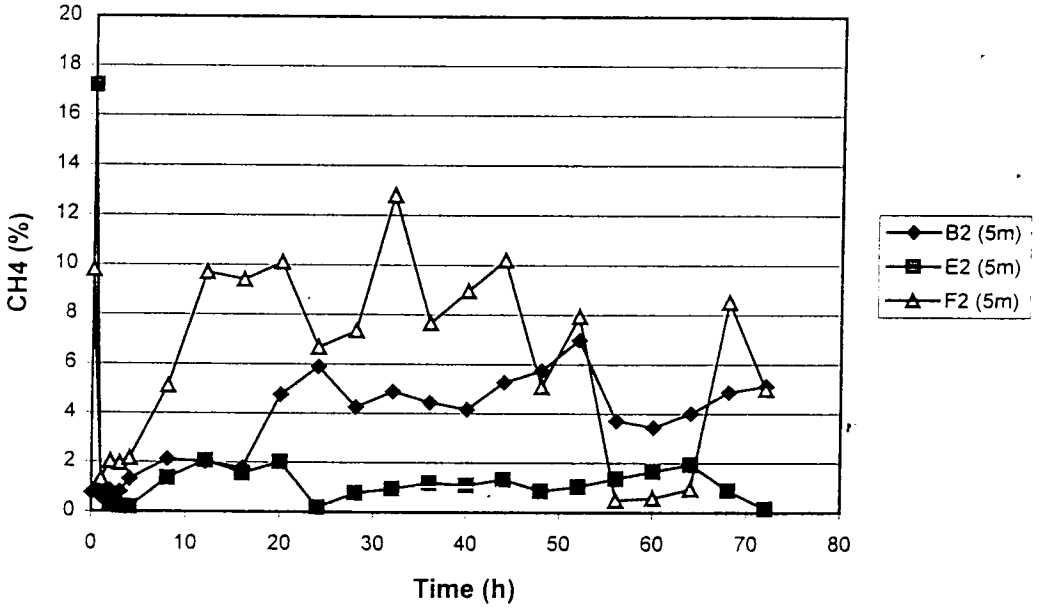
(Values at 5m are of probe B only)

C418\xl\Svevt3-g2

CH4 at Shallow Radial Probes *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)

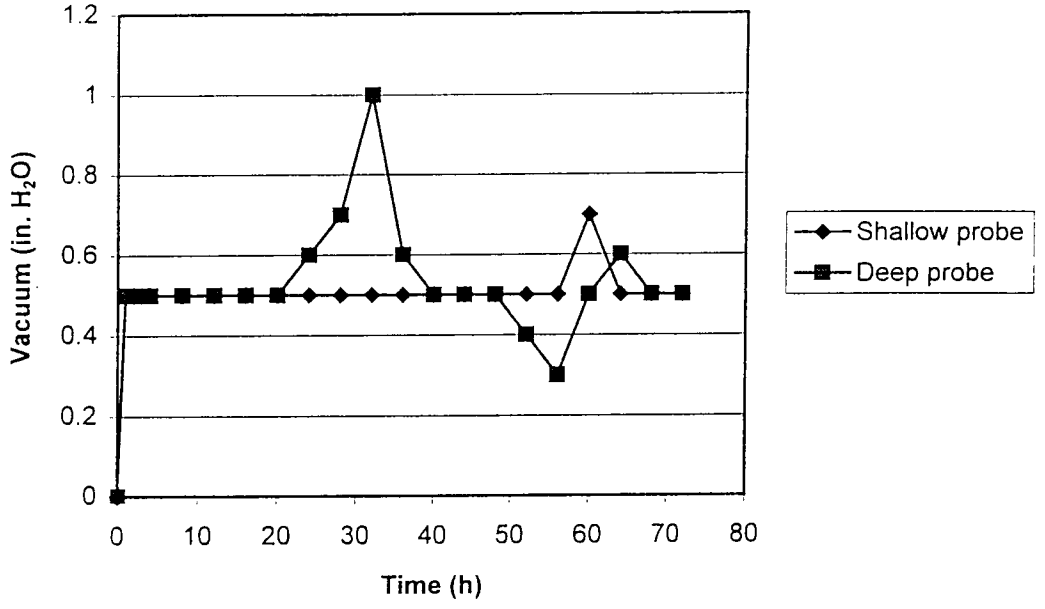


CH4 at Deep Radial Vapour Probes *vs* Time (Long-term SVE Test at VT3, extracted air flow rate = 8.5 - 10.0 cfm)

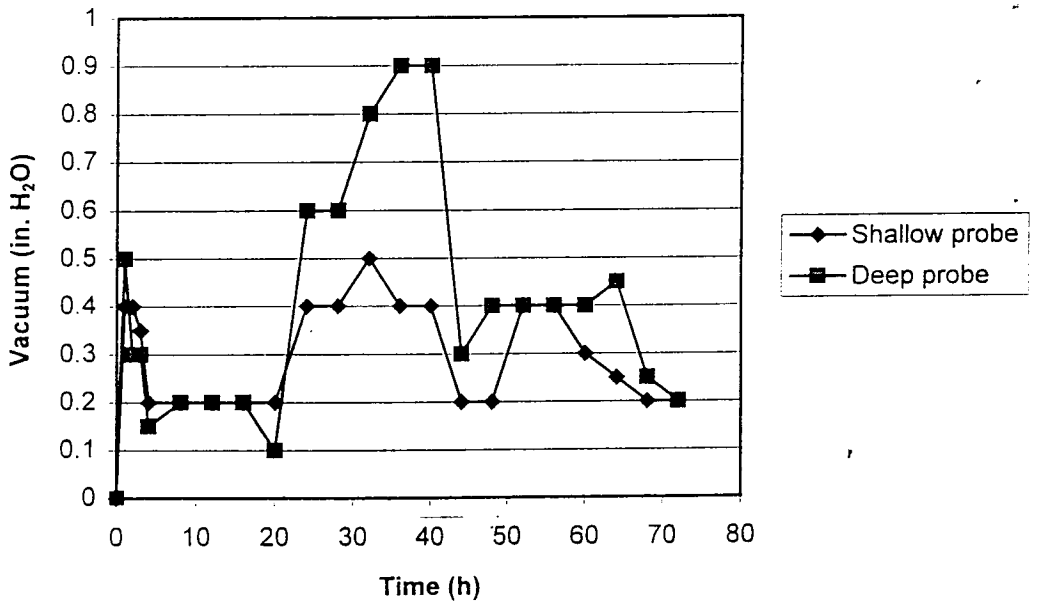


C418\xl\Svevt3-g2

Vacuum at Vapour Probes at 1m from SVE Well *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)

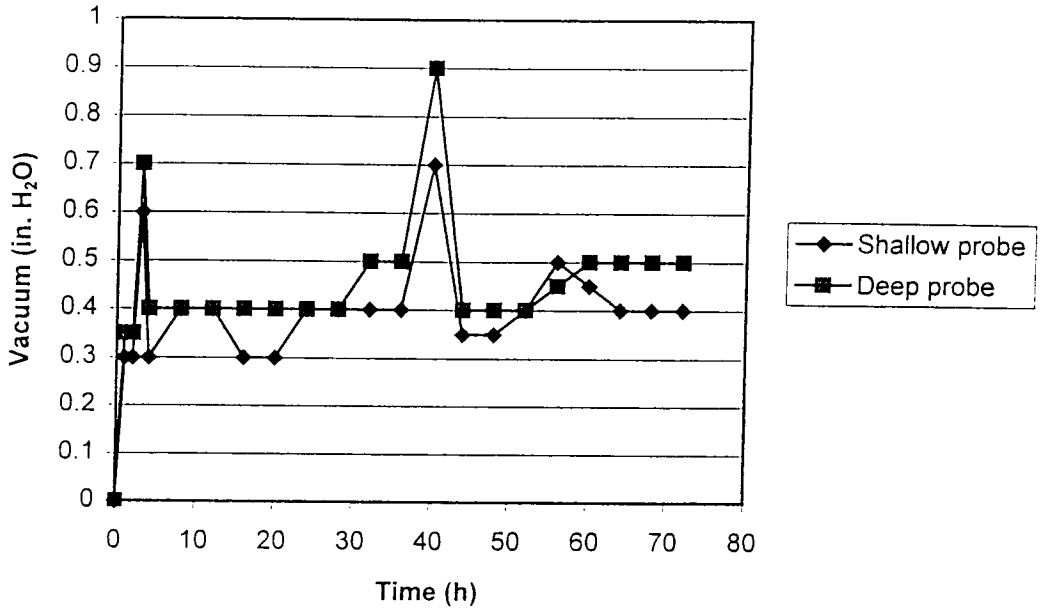


Vacuum at Vapour Probes at 5m (Probes B) from SVE Well *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)

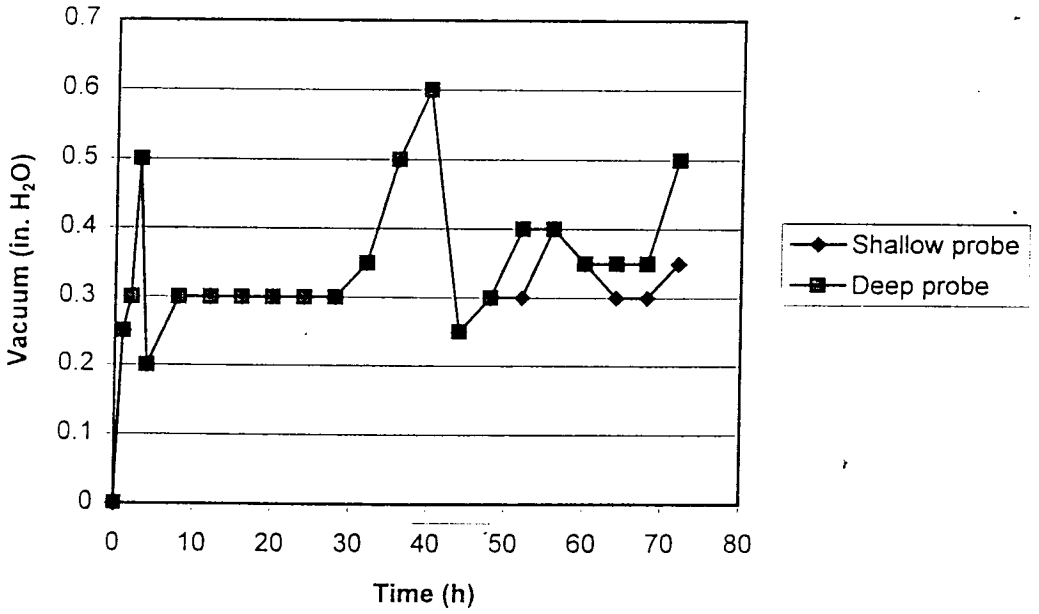


C418\xl\Svevt4-p2

Vacuum at Vapour Probes at 10m from SVE Well *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)

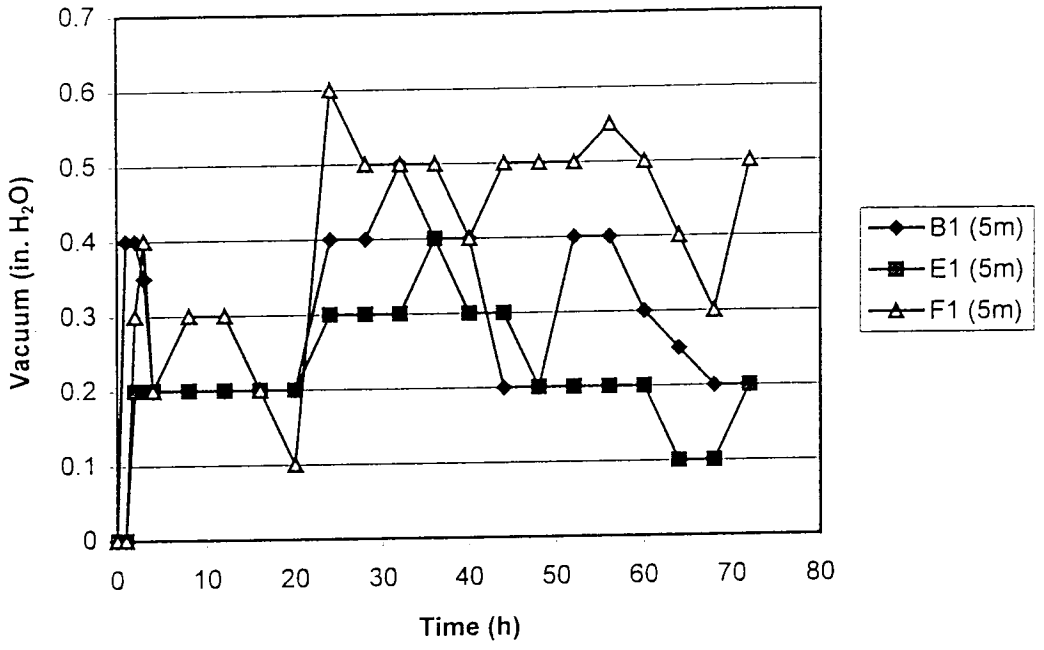


Vacuum at Vapour Probes at 20m from SVE Well *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)

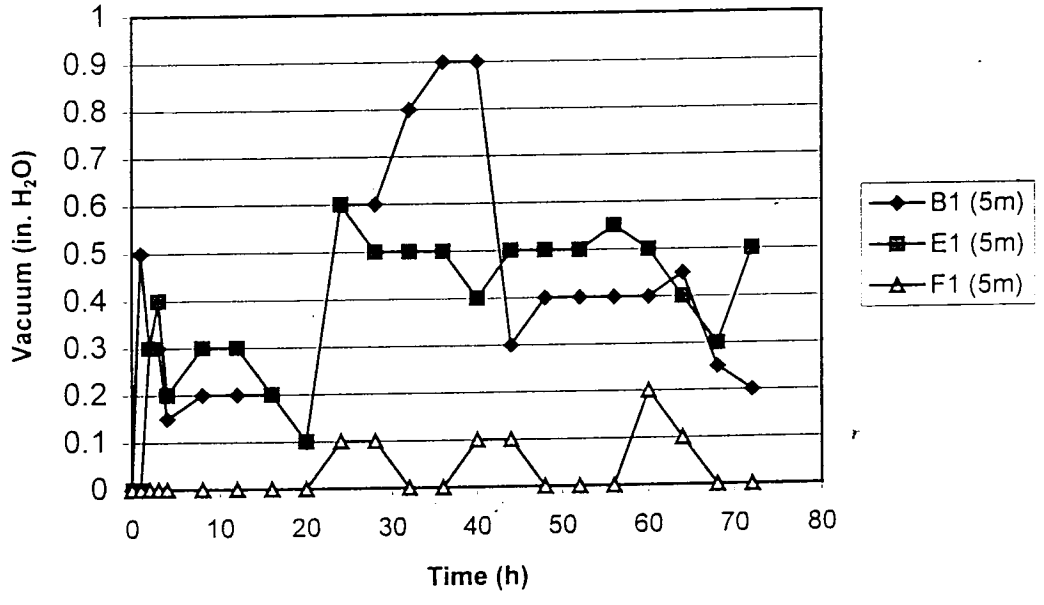


C418\xl\Svevt4-p2

Vacuum at Shallow Radial Probes *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)

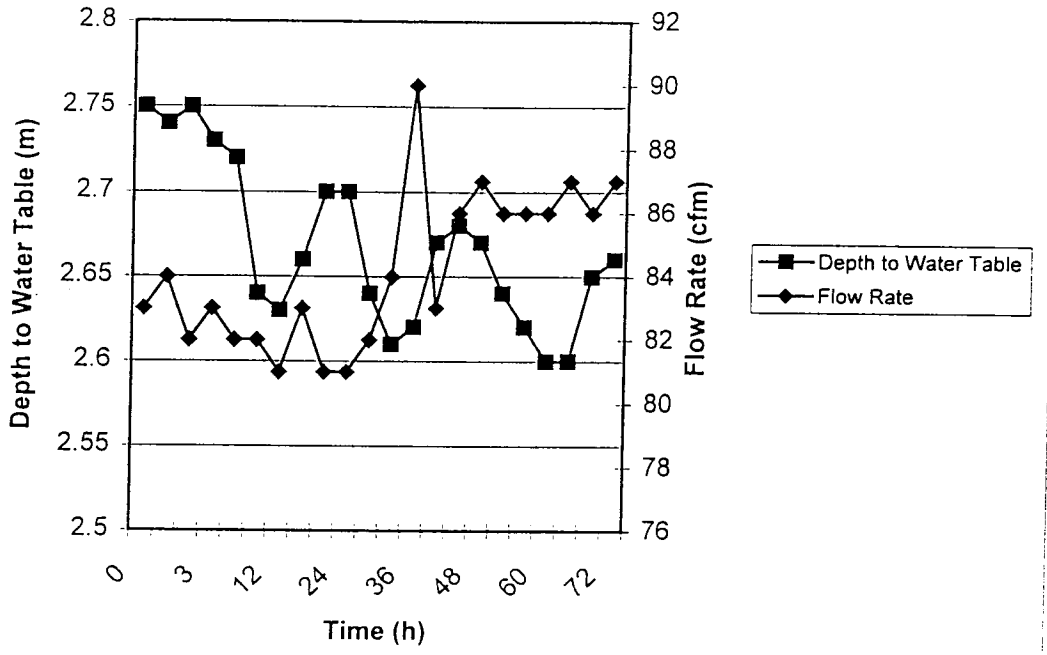


Vacuum at Deep Radial Vapour Probes *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)

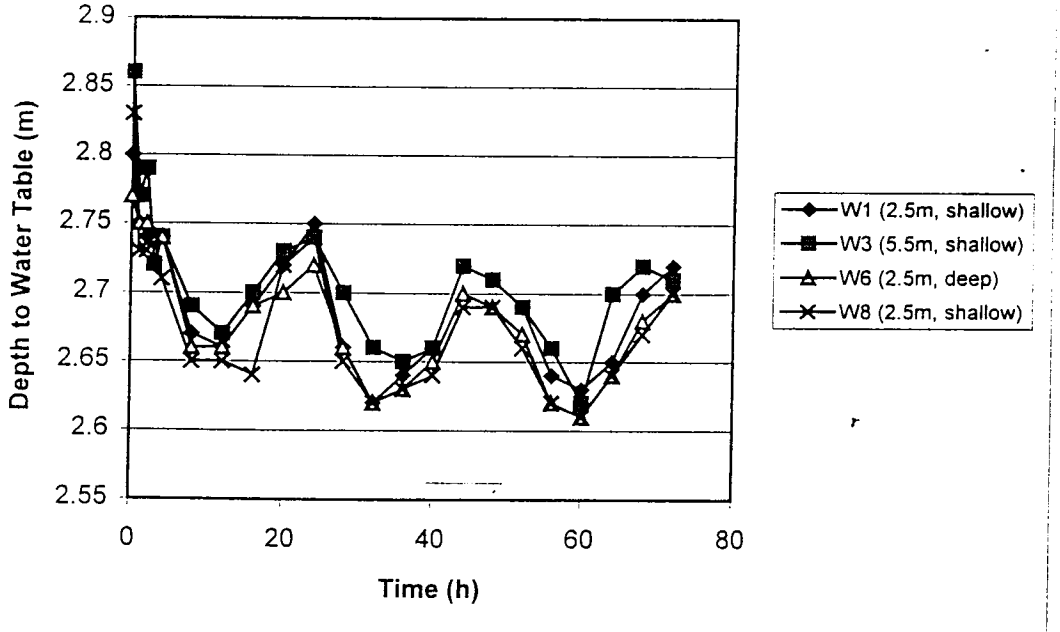


C418\xl\Svevt4-p2

Depth to Water Table at SVE Well *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)

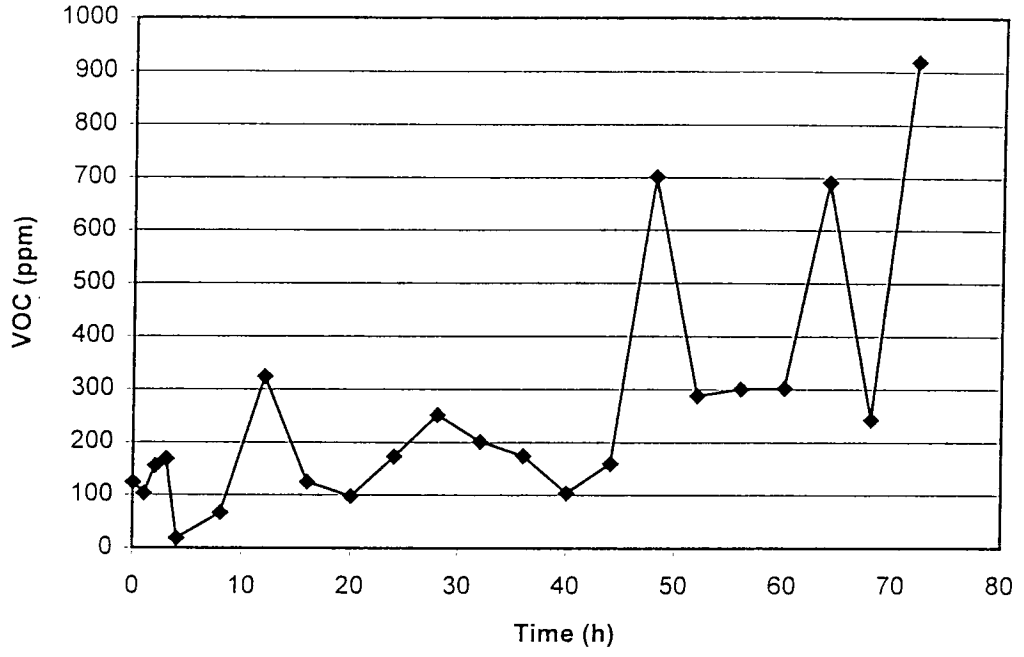


Depth to Water Table at Groundwater Monitoring Wells *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)

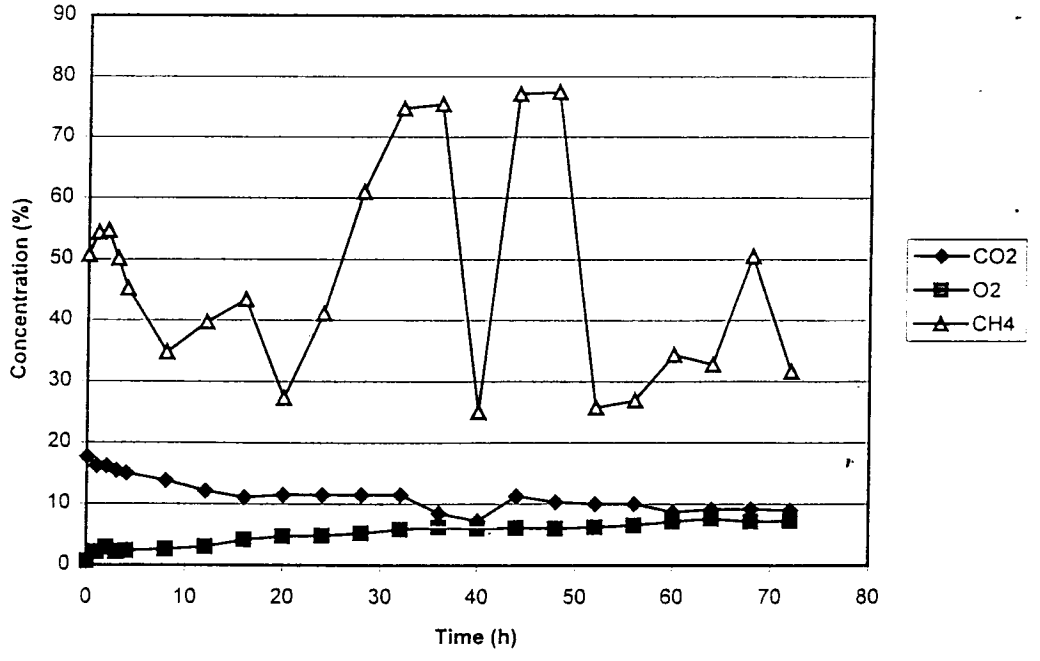


C418\xl\Svevt4-p2

VOC at Blower Outlet *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)

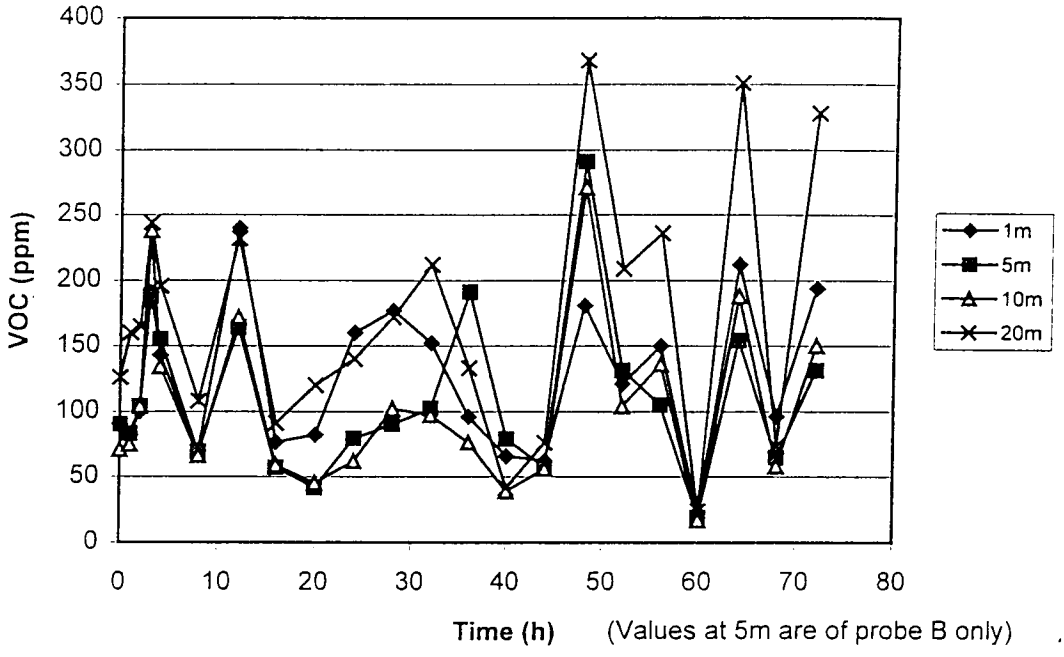


CO2, O2 & CH4 at Blower Outlet *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)



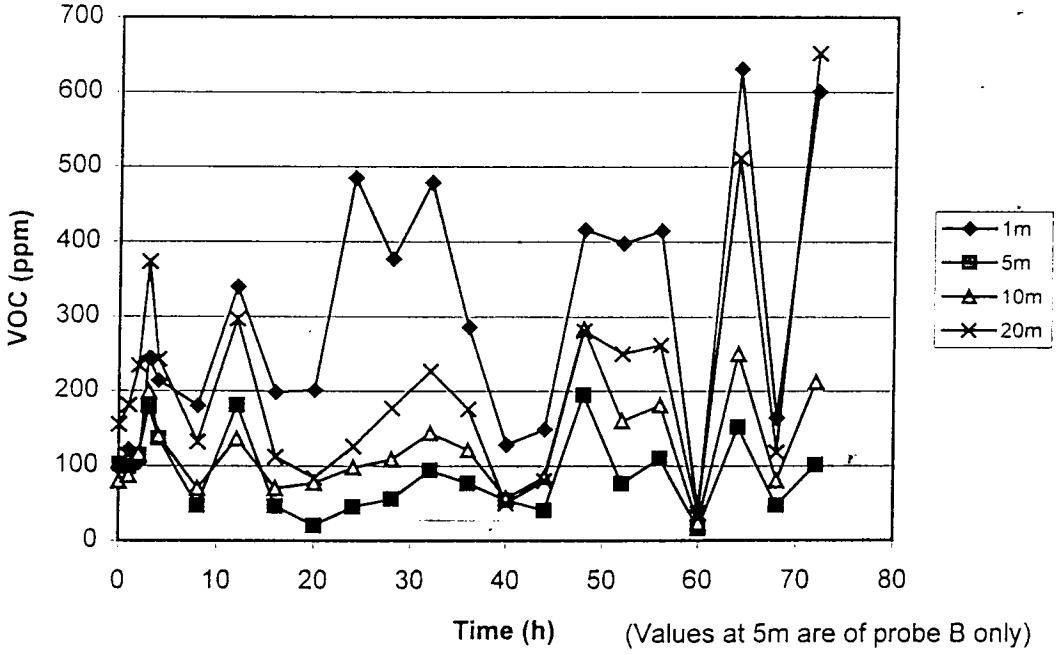
C418\xl\Svevt4-g2

VOC at Shallow Vapour Probes *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)



(Values at 5m are of probe B only)

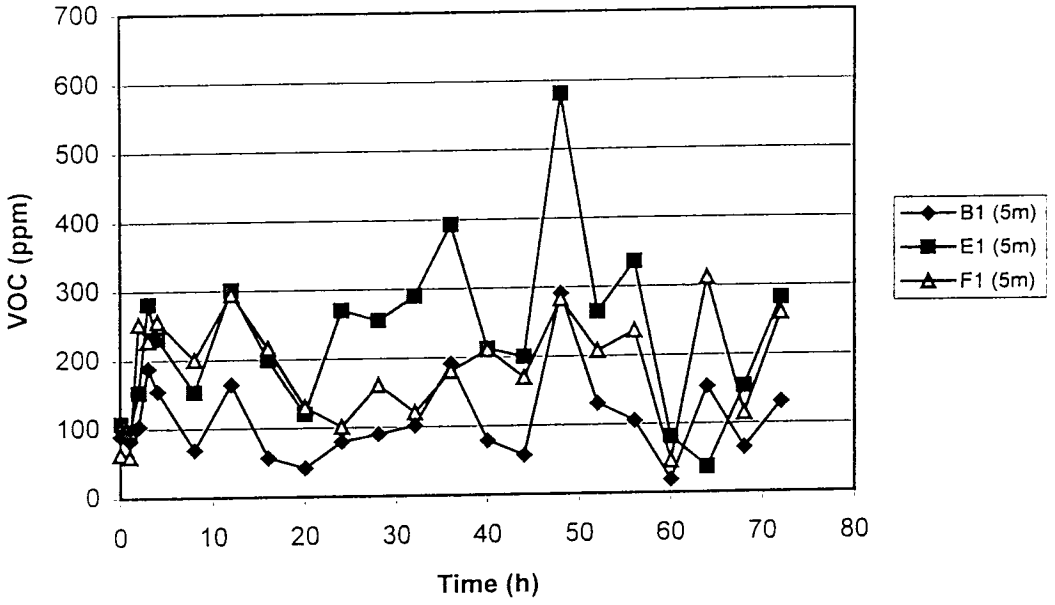
VOC at Deep Vapour Probes vs Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)



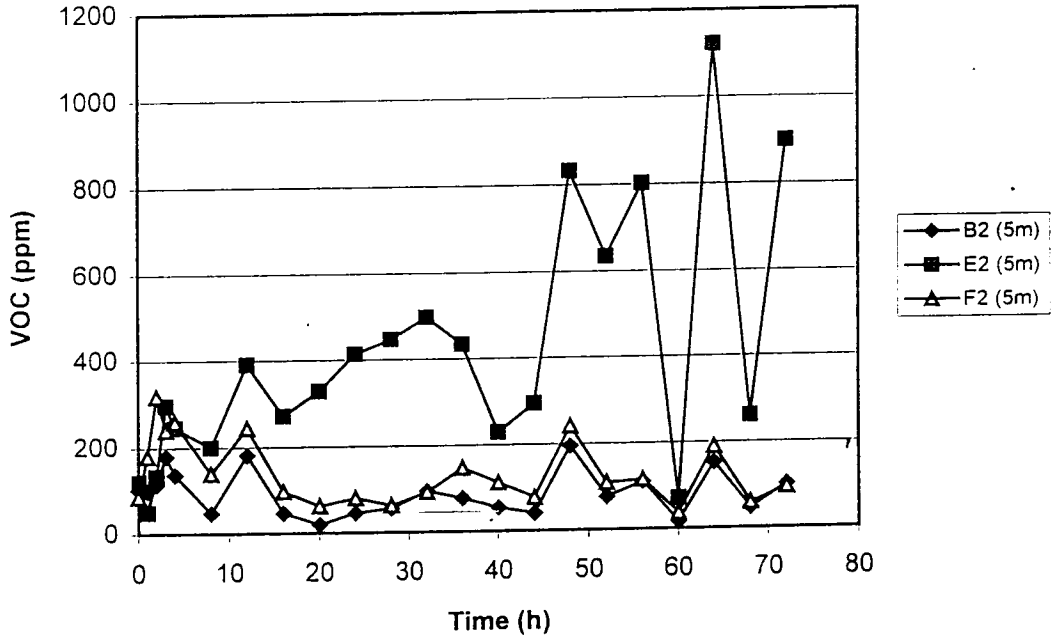
(Values at 5m are of probe B only)

C418\xl\Svevt4-g2

VOC at Shallow Radial Vapour Probes *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)

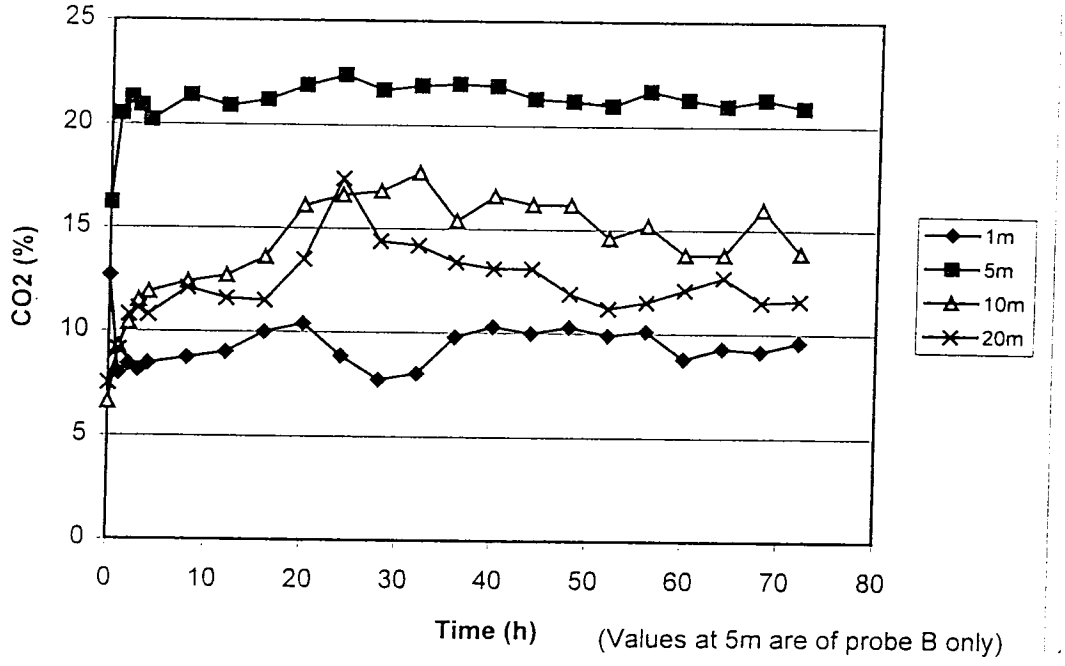


VOC at Deep Radial Vapour Probes *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)



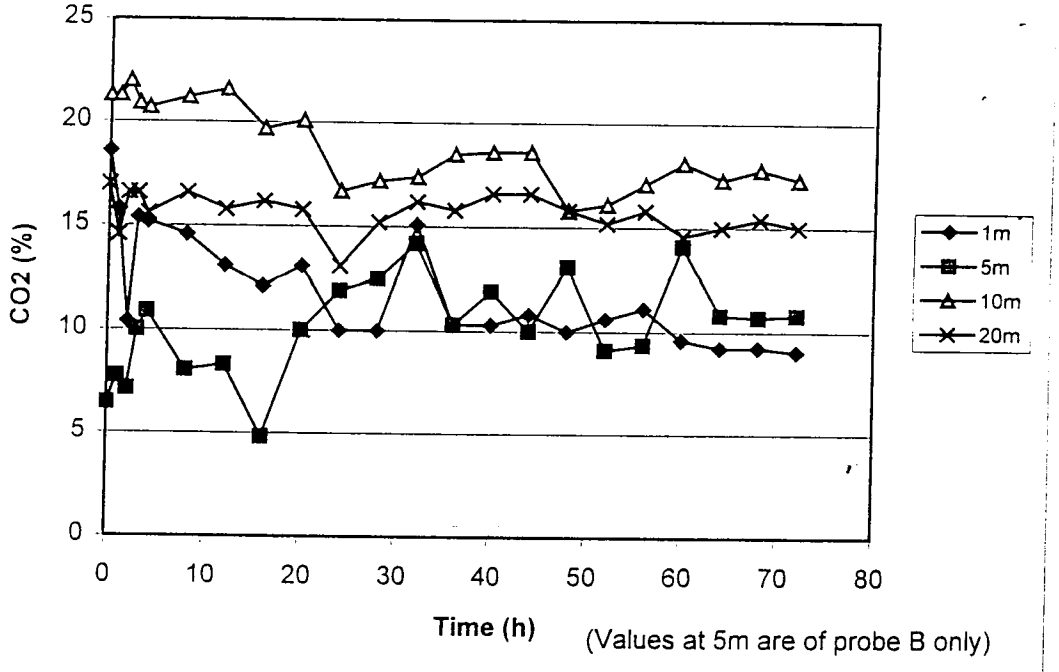
C418\xl\Svevt4-g2

CO2 at Shallow Vapour Probes *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)



(Values at 5m are of probe B only)

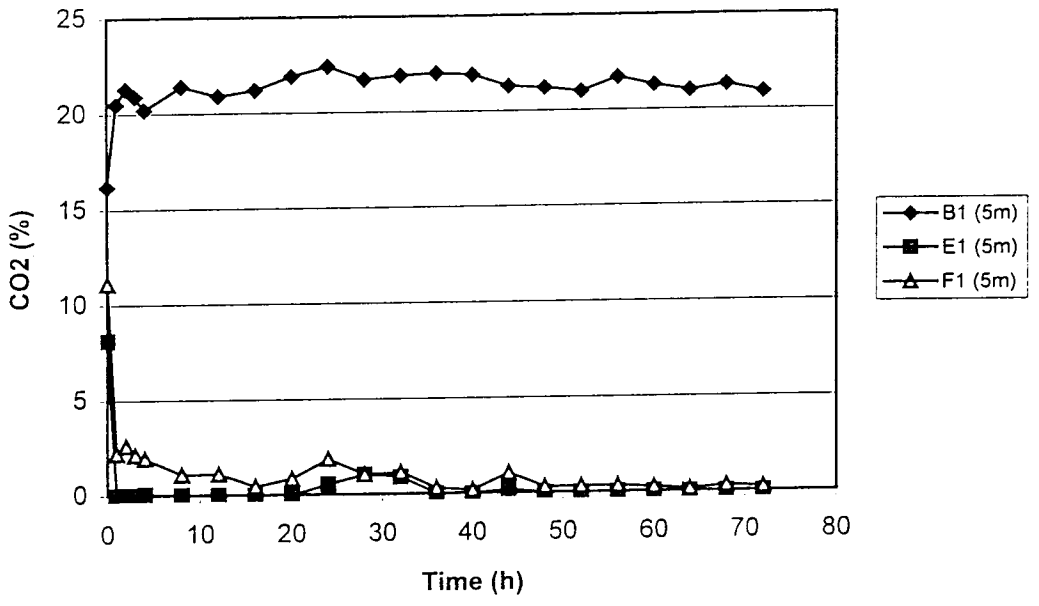
CO2 at Deep Vapour Probes *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)



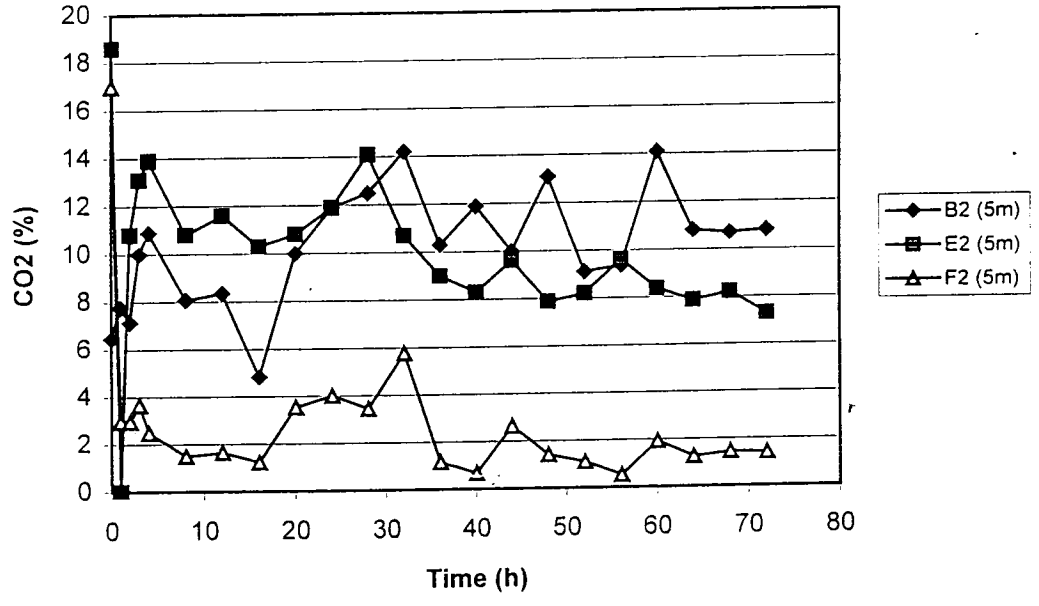
(Values at 5m are of probe B only)

C418\xl\Svevt4-g2

CO2 at Shallow Radial Vapour Probes *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)

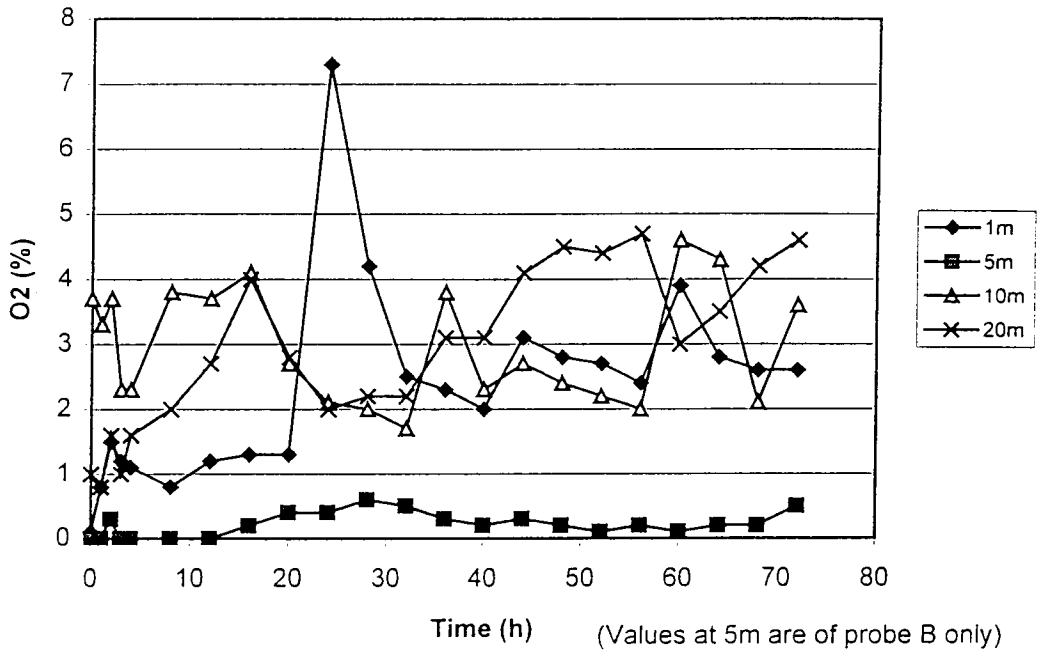


CO2 at Deep Radial Vapour Probes *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)



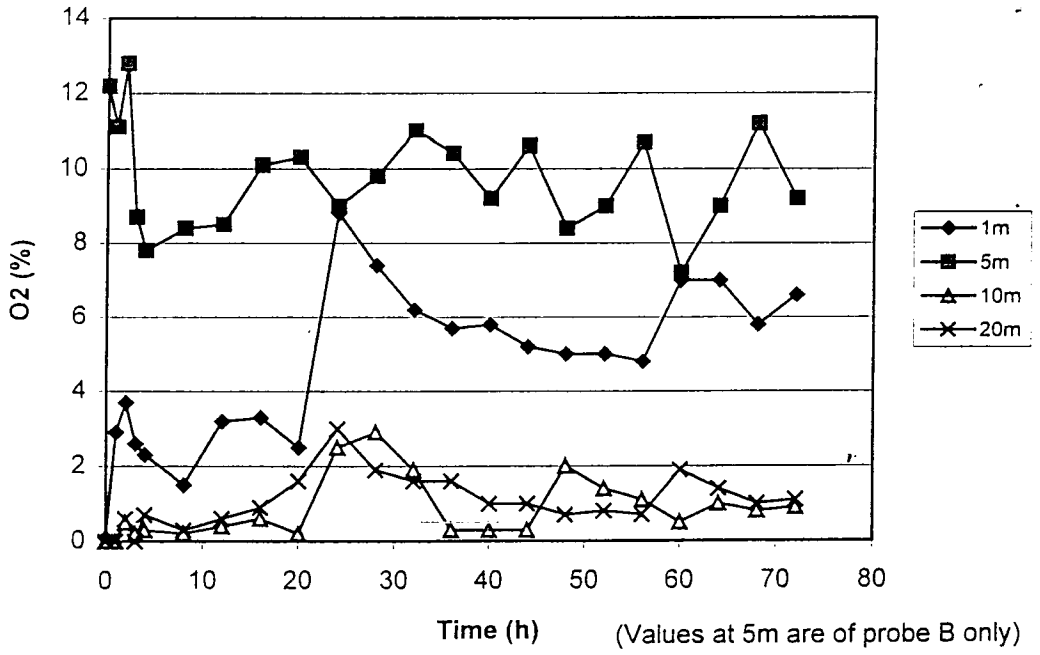
C418\xl\Svevt4-g2

O2 at Shallow Vapour Probes *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)



(Values at 5m are of probe B only)

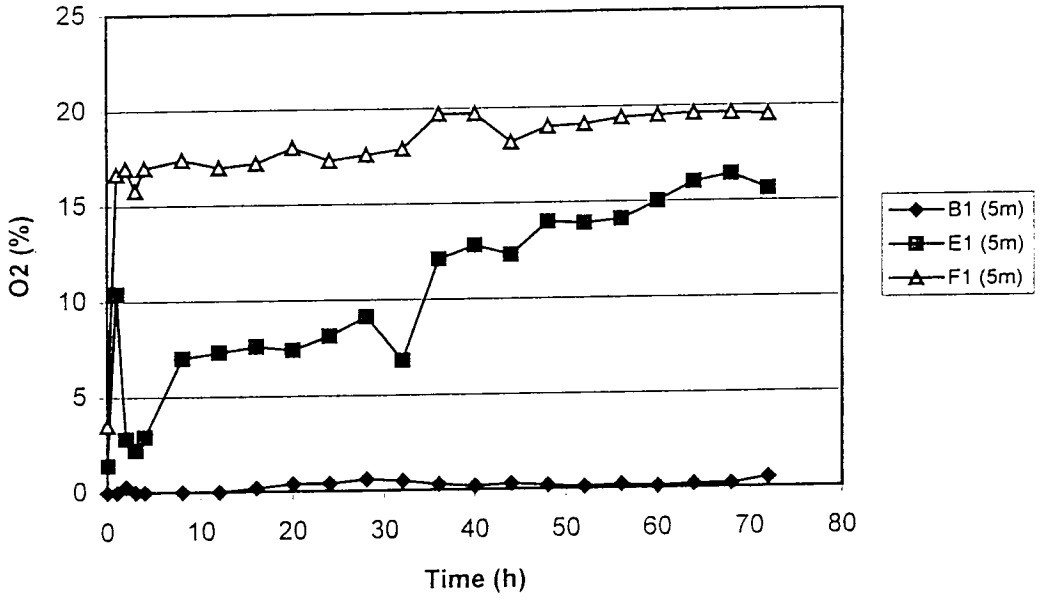
O2 at Deep Vapour Probes *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)



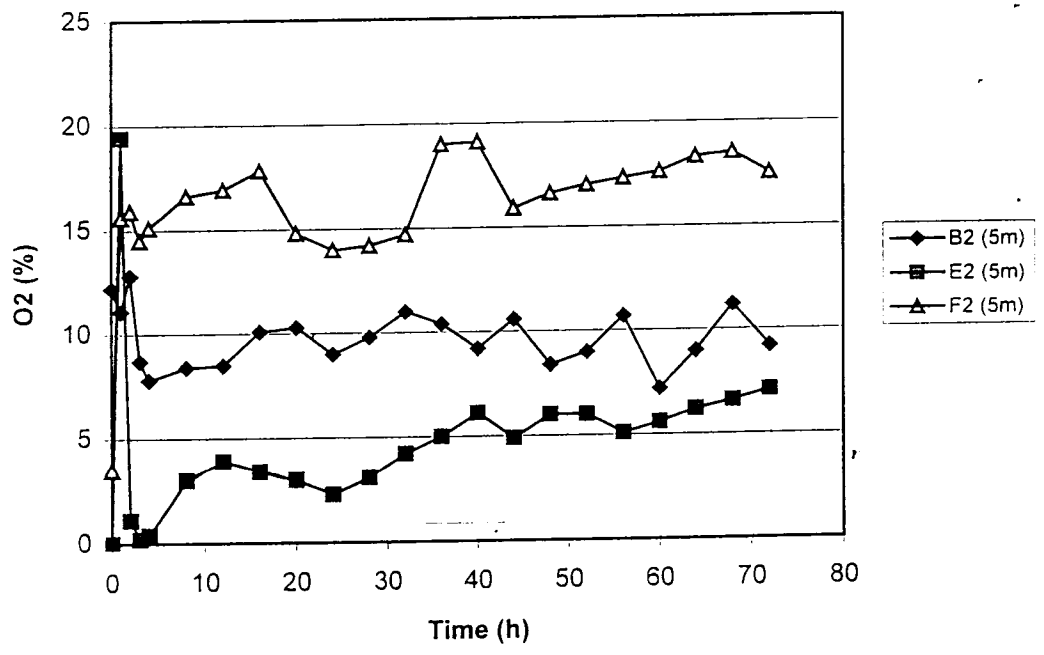
(Values at 5m are of probe B only)

C418\xl\Svevt4-g2

O2 at Shallow Radial Vapour Probes vs Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)

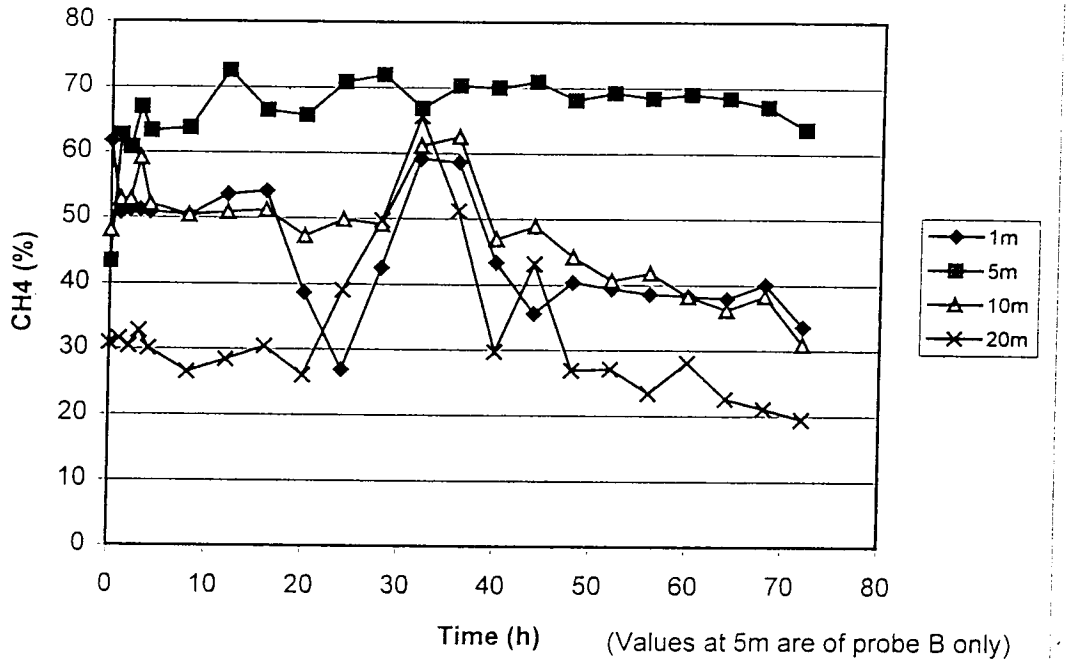


O2 at Deep Radial Vapour Probes *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)



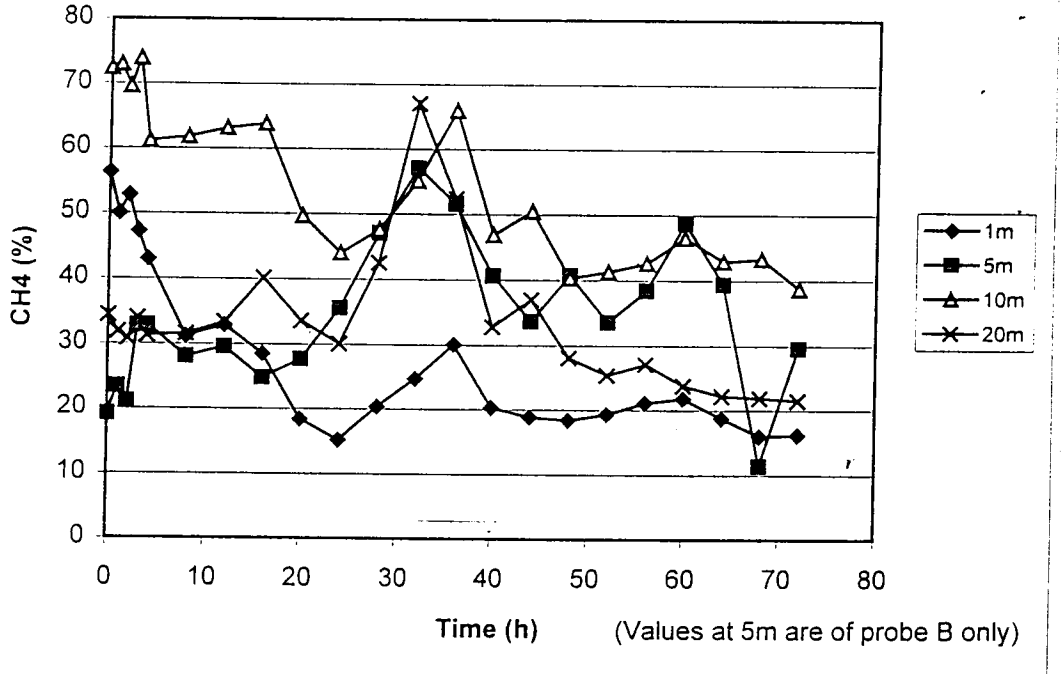
C418\xl\Svevt4-g2

CH4 at Shallow Vapour Probes *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)



(Values at 5m are of probe B only)

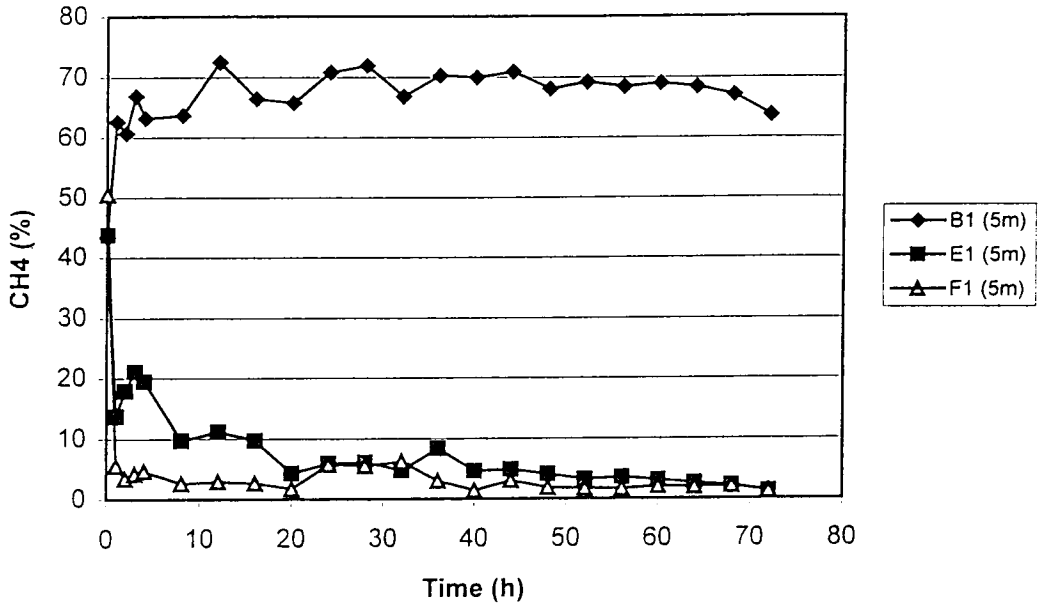
CH4 at Deep Vapour Probes *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)



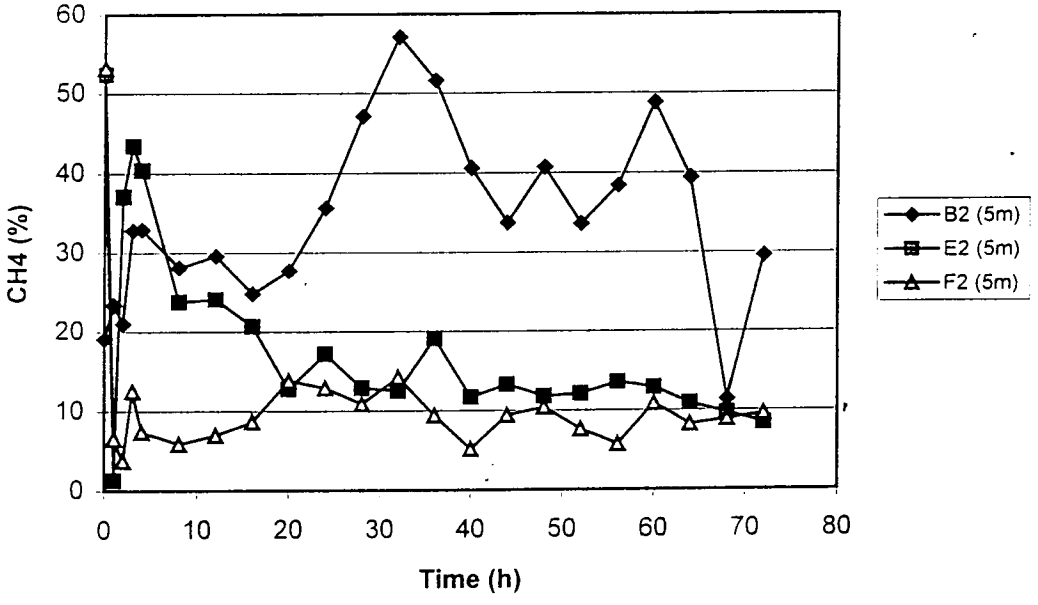
(Values at 5m are of probe B only)

C418\xl\Svevt4-g2

CH4 at Shallow Radial Vapour Probes *vs* Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)



CH4 at Deep Radial Vapour Probes vs Time (Long-term SVE Test at VT4, extracted air flow rate = 81 - 90 cfm)



C418\xl\Svevt4-g2