3 Field Data and Charts of Data of Short-term Air Sparging Tests

FIELD DATA SHEET : AIR SPARGING PILOT TEST (SHORT-TERM)

Date : ..... 29 - 10 - 1998 .....

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

Pressure/AS Well Flowrate : ..... 157.4 - 256.0" H_2O / 10 cfm .....

Sheet (1) of (12)

Time Elapsed (hr:min:sec	AS Well		Depth to Water at Groundwater Wells (m)				Soil Vapour Monitoring Probe Pressure (in H_2O)											
			Distance from Extraction Well (m)				Distance from Extraction Well (m)											
							1m (3A)		5m (3B)		10m (3C)		20m (3D)		5m (3E)		5m (3F)	
	Pressure (in H_2O)	Flowrate (cfm)	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
0:00:00	256.0	10	2.19	2.27	2.11	2.22	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.00	0.00	0.00	0.0	0.0
0:00:30	-	-	-	-	-	-	14.5	5.0	0.0	0.4	0.0	0.00	0.0	0.00	0.25	0.00	0.0	0.0
0:01:00	-	-	-	-	-	-	17.0	5.1	0.0	0.6	0.2	0.30	0.0	0.00	0.25	0.00	0.4	0.0
0:01:30	-	-	-	-	-	-	18.0	5.5	0.2	0.8	0.3	0.30	0.0	0.00	0.50	0.00	0.6	0.0
0:02:00	-	-	-	-	-	-	17.9	5.9	0.4	1.0	0.5	0.50	0.0	0.00	1.00	0.00	0.9	0.0
0:02:30	-	-	-	-	-	-	19.3	6.5	0.6	1.2	0.7	0.70	0.0	0.00	1.25	0.00	1.0	0.0
0:03:00	-	-	-	-	-	-	19.8	7.0	0.6	1.4	0.7	0.70	0.0	0.00	1.25	0.00	1.1	0.0
0:03:30	-	-	-	-	-	-	20.0	7.0	0.6	1.4	0.8	0.80	0.0	0.00	1.25	0.00	1.3	0.0
0:04:00	-	-	-	-	-	-	20.0	7.2	0.8	1.4	0.9	0.85	0.0	0.00	1.25	0.00	1.3	0.0
0:04:30	-	-	-	-	-	-	20.0	7.4	0.8	1.4	1.0	0.90	0.0	0.00	1.25	0.00	1.3	0.0
0:05:00	-	-	-	-	-	-	20.0	7.5	0.8	1.4	1.0	0.90	0.1	0.10	1.25	0.00	1.5	0.0
0:06:00	-	-	-	-	-	-	20.0	7.8	1.0	1.6	1.0	1.00	0.1	0.10	1.25	0.00	1.5	0.0
0:07:00	-	-	-	-	-	-	20.0	7.9	1.0	1.6	1.1	1.00	0.1	0.10	1.25	0.00	1.5	0.0
0:08:00	196.5	10	-	-	-	-	20.0	8.0	1.0	1.6	1.1	1.10	0.1	0.10	1.50	0.00	1.5	0.0
0:09:00	-	-	-	-	-	-	19.9	7.9	1.2	1.6	1.1	1.10	0.1	0.10	1.50	0.00	1.6	0.0
0:10:00	193.0	10	1.98	2.23	1.86	1.70	19.3	7.6	1.2	1.6	1.1	1.15	0.1	0.10	1.50	0.00	1.6	0.0
0:12:00	-	-	-	-	-	-	19.5	7.9	1.2	1.6	1.1	1.20	0.1	0.10	1.50	0.00	1.6	0.0
0:14:00	-	-	-	-	-	-	19.6	8.0	1.3	1.7	1.2	1.25	0.1	0.10	1.50	0.00	1.6	0.1
0:16:00	-	-	-	-	-	-	18.5	7.5	1.4	1.7	1.2	1.25	0.1	0.15	1.75	0.25	1.7	0.1
0:18:00	-	-	-	-	-	-	19.0	7.6	1.4	1.7	1.2	1.30	0.1	0.15	1.75	0.25	1.7	0.3
0:20:00	-	-	-	-	-	-	19.0	7.5	1.5	1.8	1.2	1.30	0.1	0.20	1.75	0.25	1.7	0.3
0:22:00	165.4	10	1.99	2.23	1.88	1.74	18.5	7.2	1.4	1.7	1.2	1.30	0.1	0.20	1.75	0.25	1.7	0.3
0:24:00	-	-	-	-	-	-	18.6	7.1	1.4	1.7	1.2	1.20	0.1	0.10	1.75	0.25	1.7	0.4
0:26:00	161.4	10	-	-	-	-	18.6	7.0	1.3	1.7	1.2	1.20	0.1	0.05	1.75	0.25	1.7	0.4
0:30:00	-	-	-	-	-	-	18.5	6.6	1.2	1.7	1.2	1.15	0.0	0.00	1.75	0.00	1.7	0.3

FIELD DATA SHEET : AIR SPARGING PILOT TEST (SHORT-TERM)

Date : ..... 29 - 10 - 1998 .....

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

Pressure/AS Well Flowrate : ..... 157.4 - 256.0" H_2O / 10 cfm .....

Sheet (2) of (12)

Time Elapsed (hr:min:sec	AS Well		Depth to Water at Groundwater Wells (m)				Soil Vapour Monitoring Probe Pressure (in H_2O)											
			Distance from Extraction Well (m)				Distance from Extraction Well (m)											
							1m (3A)		5m (3B)		10m (3C)		20m (3D)		5m (3E)		5m (3F)	
	Pressure (in H_2O)	Flowrate (cfm)	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
0:35:00	157.5	10	2.03	2.23	1.92	1.85	18.3	6.0	1.1	1.6	1.20	1.15	0.00	0.10	1.75	0	1.50	0
0:40:00	-	-	-	-	-	-	17.0	5.1	0.9	1.3	1.00	1.00	0.10	0.00	1.75	0	-	-
0:45:00	177.2	10	2.04	2.22	1.96	1.88	16.0	4.5	1.0	1.3	0.90	0.90	0.15	0.00	1.50	0	1.30	0
0:50:00	-	-	-	-	-	-	16.0	4.2	0.9	1.4	0.95	0.95	0.15	0.00	1.50	0	1.50	0
0:55:00	-	-	-	-	-	-	17.2	4.2	0.8	1.5	1.00	1.00	0.15	0.00	1.50	0	1.25	0
1:00:00	157.5	10	-	-	-	-	16.6	3.7	0.9	1.5	1.00	1.00	0.15	0.00	1.50	0	1.25	0
1:15:00	161.4	10	2.14	2.23	2.03	1.93	17.2	3.8	1.4	1.5	1.00	1.10	0.17	0.00	1.80	0	1.50	0
1:30:00	157.5	10	-	-	-	-	18.2	3.6	1.2	1.6	1.00	0.80	0.15	0.15	1.80	0	1.50	0
1:45:00	161.4	10	2.04	2.23	2.04	1.99	17.1	2.9	0.7	1.5	1.00	0.70	0.15	0.15	1.50	0	1.50	0
2:00:00	157.5	10	-	-	-	-	17.8	2.6	0.7	1.5	1.00	0.70	0.15	0.15	1.75	0	1.50	0
2:15:00	157.5	10	2.10	2.23	2.07	2.07	16.1	1.8	0.9	1.4	1.00	0.70	0.15	0.15	1.75	0	1.50	0
2:30:00	161.4	10	-	-	-	-	16.4	1.6	0.9	1.5	1.00	0.80	0.10	0.10	1.75	0	1.50	0
2:45:00	161.4	10	2.15	2.23	2.10	2.06	15.7	1.0	0.8	1.3	0.90	1.00	0.10	0.10	1.50	0	1.50	0
3:00:00	161.4	10	2.18	2.23	2.10	2.05	16.0	0.6	0.8	1.4	0.90	0.70	0.10	0.10	1.75	0	1.50	0
3:15:00	165.4	10	-	-	-	-	16.0	0.5	0.8	1.3	0.90	0.60	0.10	0.10	1.75	0	1.50	0
3:30:00	157.4	10	2.17	2.23	2.07	2.06	15.5	0.0	0.7	1.4	0.90	0.50	0.10	0.10	1.75	0	1.50	0

FIELD DATA SHEET : AIR SPARGING PILOT TEST (SHORT-TERM)

Date : ..... 29 - 10 - 1998 ..... Location/SVE ID : ..... VT3 .....

Pressure/AS Well Flowrate : ..... 157.4 - 256.0" H_2O / 10 cfm ..... Sheet (3) of (12)

Time Elapsed (hr:min:sec)					0:00:00	0:30:00	After Test
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	1m	Shallow Probe A1	VOC (ppm)	67.5	60.0	107
				CO_2 (%)	0.88	0.03	0.02
				O_2 (%)	16.0	20.1	20.0
				CH_4 (%)	0.99	0.33	0.40
			Deep Probe A2	VOC (ppm)	5.4	14.8	15.2
				CO_2 (%)	0.06	0.03	0.03
				O_2 (%)	20.8	20.8	20.8
				CH_4 (%)	0.01	ND	ND
		5m	Shallow Probe B1	VOC (ppm)	60.0	65.0	101
				CO_2 (%)	0.06	0.10	0.10
				O_2 (%)	3.8	18.4	18.0
				CH_4 (%)	12.5	3.61	4.71
			Deep Probe B2	VOC (ppm)	56.0	54.0	109
				CO_2 (%)	0.02	0.10	0.11
				O_2 (%)	15.0	15.0	15.0
				CH_4 (%)	4.35	6.40	7.70
		10m	Shallow Probe C1	VOC (ppm)	5.3	3.0	17.8
				CO_2 (%)	0.06	0.02	0.02
				O_2 (%)	19.5	19.5	19.0
				CH_4 (%)	0.35	0.16	0.20
			Deep Probe C2	VOC (ppm)	97.0	41.0	96.1
				CO_2 (%)	0.33	0.33	0.30
				O_2 (%)	3.40	2.70	3.70
				CH_4 (%)	10.6	8.27	9.21
		20m	Shallow Probe D1	VOC (ppm)	20.0	5.8	31.7
				CO_2 (%)	0.65	0.53	0.10
				O_2 (%)	9.00	15.0	16.0
				CH_4 (%)	5.88	2.78	3.01
			Deep Probe D2	VOC (ppm)	7.8	15.8	22.3
				CO_2 (%)	0.68	0.51	0.27
				O_2 (%)	17.0	18.3	18.0
				CH_4 (%)	2.70	1.60	0.17
		5m	Shallow Probe E1	VOC (ppm)	120	95.0	99.5
				CO_2 (%)	1.86	0.58	0.37
				O_2 (%)	1.70	17.0	17.0
				CH_4 (%)	4.03	2.69	2.53
			Deep Probe E2	VOC (ppm)	6.4	4.7	23.2
				CO_2 (%)	0.02	0.02	0.02
				O_2 (%)	20.8	20.3	20.4
				CH_4 (%)	20.7	ND	0.01
		5m	Shallow Probe F1	VOC (ppm)	15.1	22.1	52.8
				CO_2 (%)	1.62	0.10	0.08
				O_2 (%)	1.30	14.0	13.0
				CH_4 (%)	38.8	11.5	12.2
			Deep Probe F2	VOC (ppm)	7.4	5.5	44.5
				CO_2 (%)	0.10	0.02	0.02
				O_2 (%)	20.8	20.2	20.2
				CH_4 (%)	0.16	ND	ND
GW Wells	Distance from Extraction Well (m)	2.5m	Shallow W1	Free Product Thickness	ND	ND	ND
				DO (mg/L)	0.17	2.40	2.68
			Deep W2	Free Product Thickness	ND	ND	ND
				DO (mg/L)	0.29	0.27	0.34
		5.5m	Shallow W3	Free Product Thickness	ND	ND	ND
				DO (mg/L)	0.21	0.20	0.20
			Deep W4	Free Product Thickness	ND	ND	ND
				DO (mg/L)	0.36	0.73	0.55
		2.5m	Deep W5	Free Product Thickness	ND	ND	ND
				DO (mg/L)	0.30	0.29	0.45
			Shallow W6	Free Product Thickness	ND	ND	ND
				DO (mg/L)	0.29	1.10	1.50
		2.5m	Deep W7	Free Product Thickness	ND	ND	ND
				DO (mg/L)	0.16	0.28	0.32
			Shallow W8	Free Product Thickness	ND	ND	ND
				DO (mg/L)	0.28	2.62	3.12

FIELD DATA SHEET : AIR SPARGING PILOT TEST (SHORT-TERM)

Date : ..... 29 - 10 - 1998 ..... Location/SVE ID : ..... VT3 .....

Pressure/AS Well Flowrate : ..... 157.4 - 256.0" H_2O / 10 cfm ..... Sheet (4) of (12)

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.

FIELD DATA SHEET : AIR SPARGING PILOT TEST (SHORT-TERM)

Date : ..... 30 - 10 - 1998 .....

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

Pressure/AS Well Flowrate : ..... 153.5 - 216.5" H_2O / 4 cfm .....

Sheet (5) of (12)

Time Elapsed hr:min:sec	AS Well		Depth to Water at Groundwater Wells (m)				Soil Vapour Monitoring Probe Pressure (in H_2O)											
			Distance from Extraction Well (m)				Distance from Extraction Well (m)											
							1m (3A)		5m (3B)		10m (3C)		20m (3D)		5m (3E)		5m (3F)	
	Pressure (in H_2O)	Flowrate (cfm)	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
0:00:00	216.5	4	2.25	2.33	2.17	2.32	0.0	0.0 *	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0
0:00:30	-	-	-	-	-	-	4.0	0.5 *	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0	0.20	0
0:01:00	-	-	-	-	-	-	5.4	1.3 *	0.15	0.30	0.00	0.00	0.00	0.00	0.10	0	0.20	0
0:01:30	-	-	-	-	-	-	5.4	1.3 *	0.30	0.35	0.10	0.10	0.00	0.00	0.10	0	0.25	0
0:02:00	-	-	-	-	-	-	5.6	1.3 *	0.30	0.35	0.10	0.10	0.00	0.00	0.25	0	0.25	0
0:02:30	-	-	-	-	-	-	5.6	1.3 *	0.35	0.40	0.20	0.15	0.05	0.00	0.30	0	0.30	0
0:03:00	-	-	-	-	-	-	6.0	1.5 *	0.40	0.45	0.20	0.15	0.05	0.00	0.30	0	0.50	0
0:03:30	-	-	-	-	-	-	5.7	1.5 *	0.40	0.45	0.20	0.20	0.05	0.00	0.30	0	0.50	0
0:04:00	-	-	-	-	-	-	5.7	1.5 *	0.40	0.45	0.20	0.20	0.05	0.00	0.30	0	0.60	0
0:04:30	-	-	-	-	-	-	5.2	1.4 *	0.40	0.45	0.20	0.20	0.05	0.00	0.30	0	0.60	0
0:05:00	-	-	-	-	-	-	5.0	1.3 *	0.40	0.45	0.25	0.20	0.05	0.00	0.30	0	0.60	0
0:06:00	-	-	-	-	-	-	4.6	1.1 *	0.35	0.40	0.20	0.15	0.05	0.00	0.30	0	0.60	0
0:07:00	-	-	-	-	-	-	5.0	1.2 *	0.30	0.40	0.20	0.10	0.05	0.00	0.30	0	0.60	0
0:08:00	177.2	4	2.18	2.28	2.09	2.13	5.6	1.5 *	0.40	0.45	0.20	0.10	0.05	0.00	0.30	0	0.60	0
0:09:00	-	-	-	-	-	-	5.7	1.5 *	0.40	0.45	0.25	0.10	0.05	0.00	0.50	0	0.60	0
0:10:00	-	-	-	-	-	-	5.7	1.5 *	0.40	0.45	0.30	0.15	0.05	0.00	0.50	0	0.60	0
0:12:00	-	-	-	-	-	-	5.6	1.5 *	0.40	0.45	0.30	0.10	0.10	0.00	0.50	0	0.60	0
0:14:00	165.4	4	-	-	-	-	5.9	1.5 *	0.40	0.50	0.30	0.15	0.10	0.05	0.50	0	0.60	0
0:16:00	-	-	-	-	-	-	5.6	1.5 *	0.40	0.50	0.30	0.15	0.10	0.05	0.50	0	0.70	0
0:18:00	-	-	-	-	-	-	5.6	1.5 *	0.40	0.50	0.30	0.10	0.10	0.05	0.50	0	0.70	0
0:20:00	157.5	4	-	-	-	-	6.0	1.6 *	0.40	0.50	0.30	0.15	0.10	0.05	0.50	0	0.70	0
0:22:00	-	-	-	-	-	-	5.6	1.5 *	0.40	0.50	0.30	0.20	0.10	0.05	0.50	0	0.70	0
0:24:00	-	-	-	-	-	-	5.9	1.5 *	0.40	0.50	0.30	0.20	0.10	0.05	0.50	0	0.70	0
0:26:00	-	-	-	-	-	-	6.0	1.5 *	0.40	0.50	0.30	0.20	0.10	0.05	0.50	0	0.70	0
0:30:00	157.5	4	-	-	-	-	5.0	1.5 *	0.40	0.50	0.30	0.15	0.10	0.05	0.50	0	0.70	0

FIELD DATA SHEET : AIR SPARGING PILOT TEST (SHORT-TERM)

Date : ..... 30 - 10 - 1998 .....

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

Pressure/AS Well Flowrate : ..... 153.5 - 216.5" H_2O / 4 cfm .....

Sheet (6) of (12)

Time Elapsed hr:min:sec	AS Well		Depth to Water at Groundwater Wells (m)				Soil Vapour Monitoring Probe Pressure (in H_2O)											
			Distance from Extraction Well (m)				Distance from Extraction Well (m)											
							1m (3A)		5m (3B)		10m (3C)		20m (3D)		5m (3E)		5m (3F)	
	Pressure (in H_2O)	Flowrate (cfm)	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
0:35:00	153.5	4	2.22	2.31	2.15	2.13	6.0	1.1 *	0.40	0.50	0.30	0.10	0.10	0.05	0.50	0	0.70	0
0:40:00	-	-	-	-	-	-	6.5	1.0 *	0.45	0.50	0.30	0.10	0.10	0.10	0.50	0	0.70	0
0:45:00	157.5	4	2.21	2.31	2.15	2.14	6.5	1.0 *	0.45	0.50	0.30	0.10	0.10	0.05	0.50	0	0.70	0
0:50:00	-	-	-	-	-	-	6.5	1.0 *	0.45	0.50	0.30	0.10	0.10	0.05	0.50	0	0.70	0
0:55:00	153.5	4	-	-	-	-	6.0	0.5 *	0.45	0.50	0.30	0.10	0.10	0.05	0.50	0	0.70	0
1:00:00	157.5	4	2.24	2.31	2.17	2.16	6.0	0.0 *	0.45	0.50	0.30	0.10	0.10	0.05	0.50	0	0.70	0
1:15:00	157.5	4	2.24	2.30	2.17	2.16	6.0	0.0 *	0.45	0.50	0.30	0.10	0.10	0.05	0.50	0	0.70	0

Remarks

* As the deep probe A2 was marginally plugged by groundwater, the corresponding data were not used for interpretation.

FIELD DATA SHEET : AIR SPARGING PILOT TEST (SHORT-TERM)

Date : ..... 30 - 10 - 1998 ..... Location/SVE ID : ..... VT3 .....

Pressure/AS Well Flowrate : .... 153.5-216.5" H_2O / 4 cfm ... Sheet (7) of (12)

Time Elapsed					Before Test	After Test
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	1m	Shallow Probe A1	VOC (ppm)	90.8	58.0
				CO_2 (%)	0.33	0.10
				O_2 (%)	20.0	19.7
				CH_4 (%)	1.42	0.01
			Deep Probe A2	VOC (ppm)	4.5 *	5.5 *
				CO_2 (%)	0.02 *	0.02 *
				O_2 (%)	20.5 *	20.5 *
				CH_4 (%)	3 *	0.01 *
		5m	Shallow Probe B1	VOC (ppm)	134	89.5
				CO_2 (%)	0.57	0.22
				O_2 (%)	13.5	19.0
				CH_4 (%)	2.45	0.19
			Deep Probe B2	VOC (ppm)	117	86.0
				CO_2 (%)	0.18	0.22
				O_2 (%)	14.8	17.5
				CH_4 (%)	2.32	0.31
		10m	Shallow Probe C1	VOC (ppm)	10.8	3.3
				CO_2 (%)	0.02	0.02
				O_2 (%)	20.0	19.7
				CH_4 (%)	0.50	0.01
			Deep Probe C2	VOC (ppm)	112	84.0
				CO_2 (%)	0.57	0.46
				O_2 (%)	3.00	3.70
				CH_4 (%)	15.6	4.90
		20m	Shallow Probe D1	VOC (ppm)	29.5	12.4
				CO_2 (%)	0.49	0.33
				O_2 (%)	10.4	15.0
				CH_4 (%)	12.5	3.09
			Deep Probe D2	VOC (ppm)	17.3	7.2
				CO_2 (%)	0.53	0.72
				O_2 (%)	18.0	16.7
				CH_4 (%)	2.82	1.95
		5m	Shallow Probe E1	VOC (ppm)	156	110
				CO_2 (%)	1.42	1.00
				O_2 (%)	12.0	13.0
				CH_4 (%)	1.20	0.23
			Deep Probe E2	VOC (ppm)	11.9	5.3
				CO_2 (%)	0.01	0.01
				O_2 (%)	20.3	20.5
				CH_4 (%)	32.5	ND
		5m	Shallow Probe F1	VOC (ppm)	36	32.5
				CO_2 (%)	0.16	0.14
				O_2 (%)	17.4	15.9
				CH_4 (%)	3.00	1.98
			Deep Probe F2	VOC (ppm)	20.8	9.1
				CO_2 (%)	1.31	0.02
				O_2 (%)	14.0	20.5
				CH_4 (%)	2.93	0.01
GW Wells	Distance from Extraction Well (m)	2.5m	Shallow W1	Free Product Thickness	ND	ND
				DO (mg/L)	0.18	1.68
			Deep W2	Free Product Thickness	ND	ND
				DO (mg/L)	0.26	0.38
		5.5m	Shallow W3	Free Product Thickness	ND	ND
				DO (mg/L)	0.21	0.22
			Deep W4	Free Product Thickness	ND	ND
				DO (mg/L)	0.25	0.95
		2.5m	Deep W5	Free Product Thickness	ND	ND
				DO (mg/L)	0.22	0.23
			Shallow W6	Free Product Thickness	ND	ND
				DO (mg/L)	0.23	0.50
		2.5m	Deep W7	Free Product Thickness	ND	ND
				DO (mg/L)	0.17	0.24
			Shallow W8	Free Product Thickness	ND	ND
				DO (mg/L)	0.27	1.44

FIELD DATA SHEET : AIR SPARGING PILOT TEST (SHORT-TERM)

Date : ..... 30 - 10 - 1998 ..... Location/SVE ID : ..... VT3 .....

Pressure/AS Well Flowrate : ... 153.5-216.5" H_2O / 4 cfm ... Sheet (8) of (12)

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.

FIELD DATA SHEET : AIR SPARGING PILOT TEST (SHORT-TERM)

Date : ..... 30 - 10 - 1998 .....

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

Pressure/AS Well Flowrate : ..... 157.5 - 216.5" H_2O / 2 cfm .....

Sheet (9) of (12)

Time Elapsed hr:min:sec	AS Well		Depth to Water at Groundwater Wells (m)				Soil Vapour Monitoring Probe Pressure (in H_2O)											
			Distance from Extraction Well (m)				Distance from Extraction Well (m)											
							1m (3A)		5m (3B)		10m (3C)		20m (3D)		5m (3E)		5m (3F)	
	Pressure (in H_2O)	Flowrate (cfm)	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
0:00:00	216.5	2	2.26	2.32	2.21	2.27	0.0	0.0 *	0.00	0.00	0.0	0.00	0.00	0.00	0.0	0	0.0	0
0:00:30	-	-	-	-	-	-	3.0	0.5 *	0.00	0.10	0.0	0.00	0.05	0.00	0.0	0	0.0	0
0:01:00	-	-	-	-	-	-	4.0	0.5 *	0.15	0.20	0.0	0.00	0.05	0.00	0.0	0	0.0	0
0:01:30	-	-	-	-	-	-	4.5	1.0 *	0.15	0.25	0.1	0.10	0.05	0.00	0.0	0	0.0	0
0:02:00	-	-	-	-	-	-	5.0	1.0 *	0.20	0.30	0.1	0.10	0.10	0.00	0.1	0	0.1	0
0:02:30	-	-	-	-	-	-	4.5	1.0 *	0.20	0.30	0.2	0.10	0.10	0.00	0.1	0	0.1	0
0:03:00	-	-	-	-	-	-	4.5	1.0 *	0.25	0.30	0.2	0.15	0.10	0.00	0.1	0	0.1	0
0:03:30	-	-	-	-	-	-	4.5	1.0 *	0.25	0.35	0.2	0.15	0.10	0.00	0.1	0	0.1	0
0:04:00	-	-	-	-	-	-	4.5	1.0 *	0.25	0.35	0.2	0.15	0.10	0.00	0.1	0	0.1	0
0:04:30	-	-	-	-	-	-	4.5	1.0 *	0.25	0.35	0.2	0.15	0.10	0.00	0.1	0	0.1	0
0:05:00	-	-	-	-	-	-	4.0	1.0 *	0.25	0.35	0.2	0.15	0.10	0.00	0.1	0	0.1	0
0:06:00	165.4	2	-	-	-	-	4.0	0.6 *	0.20	0.30	0.2	0.20	0.10	0.00	0.2	0	0.1	0
0:07:00	-	-	-	-	-	-	4.0	0.6 *	0.20	0.30	0.2	0.20	0.10	0.00	0.2	0	0.1	0
0:08:00	-	-	-	-	-	-	4.0	0.6 *	0.20	0.30	0.2	0.20	0.10	0.00	0.2	0	0.1	0
0:09:00	-	-	-	-	-	-	4.0	0.6 *	0.20	0.30	0.2	0.20	0.10	0.00	0.2	0	0.1	0
0:10:00	157.5	2	2.22	2.31	2.16	2.20	4.0	0.6 *	0.25	0.35	0.2	0.20	0.10	0.00	0.2	0	0.1	0
0:12:00	-	-	-	-	-	-	4.0	0.5 *	0.25	0.30	0.2	0.15	0.10	0.00	0.2	0	0.1	0
0:14:00	-	-	-	-	-	-	4.0	0.5 *	0.20	0.30	0.2	0.15	0.10	0.00	0.2	0	0.1	0
0:16:00	161.4	2	-	-	-	-	4.0	0.5 *	0.20	0.30	0.2	0.15	0.10	0.00	0.2	0	0.1	0
0:18:00	-	-	-	-	-	-	4.0	0.5 *	0.20	0.30	0.2	0.20	0.10	0.00	0.2	0	0.1	0
0:20:00	161.4	2	2.22	2.31	2.16	2.2	4.0	0.5 *	0.20	0.30	0.2	0.20	0.10	0.00	0.2	0	0.1	0
0:22:00	-	-	-	-	-	-	4.0	0.5 *	0.20	0.30	0.2	0.20	0.10	0.00	0.2	0	0.1	0
0:24:00	157.5	2	-	-	-	-	4.0	0.5 *	0.20	0.30	0.2	0.15	0.10	0.00	0.2	0	0.1	0
0:26:00	-	-	-	-	-	-	4.0	0.5 *	0.20	0.30	0.2	0.15	0.10	0.00	0.2	0	0.1	0
0:30:00	157.5	2	2.23	2.3	2.15	2.21	4.0	0.5 *	0.20	0.30	0.2	0.15	0.10	0.00	0.2	0	0.1	0

FIELD DATA SHEET : AIR SPARGING PILOT TEST (SHORT-TERM)

Date : ..... 30 - 10 - 1998 .....

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

Pressure/AS Well Flowrate : ..... 157.5 - 216.5" H_2O / 2 cfm .....

Sheet (10) of (12)

Time Elapsed hr:min:sec	AS Well		Depth to Water at Groundwater Wells (m)				Soil Vapour Monitoring Probe Pressure (in H_2O)											
			Distance from Extraction Well (m)				Distance from Extraction Well (m)											
							1m (3A)		5m (3B)		10m (3C)		20m (3D)		5m (3E)		5m (3F)	
	Pressure (in H_2O)	Flowrate (cfm)	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
0:35:00	157.5	2	-	-	-	-	4.0	0.5 *	0.20	0.30	0.2	0.15	0.10	0.00	0.2	0	0.1	0
0:40:00	157.5	2	2.23	2.30	2.15	2.20	4.5	0.5 *	0.20	0.30	0.2	0.15	0.10	0.05	0.2	0	0.1	0
0:45:00	157.5	2	-	-	-	-	4.0	0.5 *	0.20	0.30	0.2	0.20	0.10	0.05	0.2	0	0.1	0
0:50:00	157.5	2	-	-	-	-	4.5	0.5 *	0.20	0.30	0.2	0.20	0.10	0.05	0.2	0	0.1	0
0:55:00	157.5	2	2.23	2.30	2.17	2.20	4.0	0.3 *	0.20	0.30	0.2	0.25	0.10	0.10	0.2	0	0.1	0
1:00:00	157.5	2	-	-	-	-	4.0	0.3 *	0.20	0.30	0.2	0.30	0.10	0.10	0.2	0	0.1	0
1:15:00	157.5	2	2.23	2.30	2.17	2.20	4.0	0.0 *	0.25	0.35	0.2	0.30	0.10	0.10	0.2	0	0.1	0
1:30:00	157.5	2	-	-	-	-	4.0	0.0 *	0.20	0.30	0.2	0.30	0.10	0.10	0.2	0	0.1	0
1:45:00	157.5	2	-	-	-	-	4.0	0.0 *	0.20	0.30	0.2	0.30	0.10	0.10	0.2	0	0.1	0
2:00:00	157.5	2	2.24	2.30	2.18	2.21	4.0	0.0 *	0.20	0.30	0.2	0.30	0.10	0.10	0.2	0	0.1	0

Remark :

* As the deep probe A2 was marginally plugged by groundwater, the corresponding data were not used for interpretation.

FIELD DATA SHEET : AIR SPARGING PILOT TEST (SHORT-TERM)

Date : ..... 30 - 10 - 1998 ..... Location/SVE ID : ..... VT3 .....

Pressure/AS Well Flowrate : ...157.5 - 216.5" H_2O / 2 cfm ... Sheet (11) of (12)

Time Elapsed					Before Test	After Test
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	1m	Shallow Probe A1	VOC (ppm)	58.0	75.0
				CO_2 (%)	0.10	0.01
				O_2 (%)	19.7	20.0
				CH_4 (%)	0.01	0.31
			Deep Probe A2	VOC (ppm)	5.5 *	17.1 *
				CO_2 (%)	0.02 *	ND
				O_2 (%)	20.5 *	20.4 *
				CH_4 (%)	0.01 *	0.01 *
		5m	Shallow Probe B1	VOC (ppm)	89.5	110
				CO_2 (%)	0.22	0.14
				O_2 (%)	19.0	19.2
				CH_4 (%)	0.19	0.50
			Deep Probe B2	VOC (ppm)	86.0	105
				CO_2 (%)	0.22	0.18
				O_2 (%)	17.5	17.9
				CH_4 (%)	0.31	1.13
		10m	Shallow Probe C1	VOC (ppm)	3.3	19.0
				CO_2 (%)	0.02	0.01
				O_2 (%)	19.7	20.0
				CH_4 (%)	0.01	0.11
			Deep Probe C2	VOC (ppm)	84.0	90.0
				CO_2 (%)	0.46	0.45
				O_2 (%)	3.70	3.60
				CH_4 (%)	4.90	5.13
		20m	Shallow Probe D1	VOC (ppm)	12.4	35.0
				CO_2 (%)	0.33	0.57
				O_2 (%)	15.0	11.9
				CH_4 (%)	3.09	7.59
			Deep Probe D2	VOC (ppm)	7.2	30.0
				CO_2 (%)	0.72	0.68
				O_2 (%)	16.7	16.7
				CH_4 (%)	1.95	2.11
		5m	Shallow Probe E1	VOC (ppm)	110	185
				CO_2 (%)	1.00	0.57
				O_2 (%)	13.0	17.6
				CH_4 (%)	0.23	0.66
			Deep Probe E2	VOC (ppm)	5.3	14.7
				CO_2 (%)	0.01	0.01
				O_2 (%)	20.5	20.4
				CH_4 (%)	ND	ND
		5m	Shallow Probe F1	VOC (ppm)	32.5	62.0
				CO_2 (%)	0.14	0.10
				O_2 (%)	15.9	17.0
				CH_4 (%)	1.98	2.11
			Deep Probe F2	VOC (ppm)	9.1	18.1
				CO_2 (%)	0.02	0.18
				O_2 (%)	20.5	19.2
				CH_4 (%)	0.01	0.39
GW Wells	Distance from Extraction Well (m)	2.5m	Shallow W1	Free Product Thickness	ND	ND
				DO (mg/L)	1.68	1.70
			Deep W2	Free Product Thickness	ND	ND
				DO (mg/L)	0.38	0.45
		5.5m	Shallow W3	Free Product Thickness	ND	ND
				DO (mg/L)	0.22	0.25
			Deep W4	Free Product Thickness	ND	ND
				DO (mg/L)	0.95	0.45
		2.5m	Deep W5	Free Product Thickness	ND	ND
				DO (mg/L)	0.23	0.25
			Shallow W6	Free Product Thickness	ND	ND
				DO (mg/L)	0.50	0.75
		2.5m	Deep W7	Free Product Thickness	ND	ND
				DO (mg/L)	0.24	0.27
			Shallow W8	Free Product Thickness	ND	ND
				DO (mg/L)	1.44	2.20

FIELD DATA SHEET : AIR SPARGING PILOT TEST (SHORT-TERM)

Date : ..... 30 - 10 - 1998 ..... Location/SVE ID : ..... VT3 .....

Pressure/AS Well Flowrate : ...157.5 - 216.5" H_2O / 2 cfm ... Sheet (12) of (12) .

Remarks :

1. ND -- not detected (detection limit: CO_2, O_2, CH_4 < 0.01%; VOC < 0.1 ppm)
2. Gas was measured with a small pump.

FIELD DATA SHEET : AIR SPARGING PILOT TEST (SHORT-TERM)

Date : ..... 21 - 10 - 1998 .....

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

Pressure/AS Well Flowrate : .....138.4" H_2O / 10 cfm .....

Sheet (1) of (9)

Time Elapsed hr:min:sec	AS Well		Depth to Water at Groundwater Wells (m)				Soil Vapour Monitoring Probe Pressure (in H_2O)											
			Distance from Extraction Well (m)				Distance from Extraction Well (m)											
							1m (3A)		5m (3B)		10m (3C)		20m (3D)		5m (3E)		5m (3F)	
	Pressure (in H_2O)	Flowrate (cfm)	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
0:00:00	138.4	10	2.73	2.68	2.73	2.72	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0:00:30	-	-	-	-	-	-	0	0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.2
0:01:00	-	-	-	-	-	-	0	0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.2
0:01:30	-	-	-	-	-	-	0	0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.2
0:02:00	-	-	-	-	-	-	0	0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.2
0:02:30	-	-	-	-	-	-	0	0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.2
0:03:00	-	-	-	-	-	-	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2
0:03:30	-	-	-	-	-	-	0	0	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
0:04:00	-	-	-	-	-	-	0	0	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
0:04:30	-	-	-	-	-	-	0	0	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
0:05:00	-	-	-	-	-	-	0	0	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
0:06:00	-	-	-	-	-	-	0	0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
0:07:00	-	-	-	-	-	-	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
0:08:00	-	-	-	-	-	-	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
0:09:00	-	-	-	-	-	-	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
0:10:00	138.4	10	2.73	2.72	2.71	2.71	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
0:12:00	-	-	-	-	-	-	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
0:14:00	-	-	-	-	-	-	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
0:16:00	-	-	-	-	-	-	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
0:18:00	-	-	-	-	-	-	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
0:20:00	138.4	10	2.73	2.72	2.73	2.71	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
0:22:00	-	-	-	-	-	-	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
0:24:00	-	-	-	-	-	-	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
0:26:00	-	-	-	-	-	-	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
0:30:00	138.4	10	2.73	2.72	2.74	2.71	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
0:35:00	-	-	-	-	-	-	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
0:40:00	138.4	10	-	-	-	-	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.0	0.0
0:45:00	-	-	-	-	-	-	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.0	0.0
0:50:00	138.4	10	-	-	-	-	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.0	0.0
0:55:00	-	-	-	-	-	-	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.0	0.0
1:00:00	138.4	10	2.74	2.73	2.73	2.74	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.0	0.0

FIELD DATA SHEET : AIR SPARGING PILOT TEST (SHORT-TERM)

Date : ..... 20 - 10 - 1998 ..... Location/SVE ID : ..... VT4 .....

Pressure/AS Well Flowrate : .....138.4" H_2O / 10 cfm ..... Sheet (2) of (9)

Time Elapsed (min:sec)					00:00	30:00	1:00:00
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	1m	Shallow Probe A1 (painted)	VOC (ppm)	80.5	95.3	141
				CO_2 (%)	3.38	3.48	0.02
				O_2 (%)	15.2	13.4	20.9
				CH_4 (%)	19.5	17.6	0.86
			Deep Probe A2	VOC (ppm)	198	526	237
				CO_2 (%)	5.96	0.96	0.01
				O_2 (%)	12.4	20.9	21.6
				CH_4 (%)	21.5	3.15	0.31
		5m	Shallow Probe B1 (painted)	VOC (ppm)	295	415	220
				CO_2 (%)	0.10	0.11	0.01
				O_2 (%)	20.8	21.5	21.7
				CH_4 (%)	2.56	0.62	0.46
			Deep Probe B2	VOC (ppm)	85.3	224	298
				CO_2 (%)	ND	0.05	0.03
				O_2 (%)	21.6	21.7	21.1
				CH_4 (%)	0.94	0.27	0.66
		10m	Shallow Probe C1 (painted)	VOC (ppm)	128	240	283
				CO_2 (%)	ND	ND	0.10
				O_2 (%)	21.8	21.8	21.3
				CH_4 (%)	1.13	0.43	0.72
			Deep Probe C2	VOC (ppm)	188	363	124
				CO_2 (%)	ND	ND	0.03
				O_2 (%)	21.0	21.4	21.7
				CH_4 (%)	0.98	0.66	0.19
		20m	Shallow Probe D1 (painted)	VOC (ppm)	257	358	63.6
				CO_2 (%)	0.03	ND	3.50
				O_2 (%)	21.0	21.3	13.7
				CH_4 (%)	1.52	0.50	16.4
			Deep Probe D2	VOC (ppm)	130	198	229
				CO_2 (%)	ND	ND	0.77
				O_2 (%)	21.7	21.2	21.0
				CH_4 (%)	0.54	1.02	2.26
		5m	Shallow Probe E1 (painted)	VOC (ppm)	55.5	109	96.1
				CO_2 (%)	ND	0.45	0.88
				O_2 (%)	21.6	20.0	18.9
				CH_4 (%)	1.07	2.66	3.83
			Deep Probe E2	VOC (ppm)	213	225	148
				CO_2 (%)	5.38	7.18	6.90
				O_2 (%)	12.6	9.8	10.4
				CH_4 (%)	12.9	13.3	12.5
		5m	Shallow Probe F1 (painted)	VOC (ppm)	115	44.4	51.3
				CO_2 (%)	4.85	3.78	5.60
				O_2 (%)	12.5	13.8	11.2
				CH_4 (%)	8.70	20.3	20.7
			Deep Probe F2	VOC (ppm)	38.6	28.1	21.6
				CO_2 (%)	1.78	4.11	6.90
				O_2 (%)	18.9	13.3	10.4
				CH_4 (%)	13.7	22.7	38.4
GW Wells	Distance from Extraction Well (m)	2.5m	Shallow W1	Free Product Thickness	ND	ND	ND
				DO (mg/L)	0.26	0.39	0.30
			Deep W2	Free Product Thickness	ND	ND	ND
				DO (mg/L)	0.26	0.50	0.55
		5.5m	Shallow W3	Free Product Thickness	ND	ND	ND
				DO (mg/L)	0.30	0.33	0.35
			Deep W4	Free Product Thickness	ND	ND	ND
				DO (mg/L)	0.25	0.29	0.33
		2.5m	Shallow W5	Free Product Thickness	ND	ND	ND
				DO (mg/L)	0.22	0.47	0.39
			Deep W6	Free Product Thickness	ND	ND	ND
				DO (mg/L)	0.28	0.63	0.47
		2.5m	Deep W7	Free Product Thickness	ND	ND	ND
				DO (mg/L)	0.33	0.33	0.39
			Shallow W8	Free Product Thickness	ND	ND	ND
				DO (mg/L)	0.30	0.31	0.38

FIELD DATA SHEET : AIR SPARGING PILOT TEST (SHORT-TERM)

Date : ..... 20 - 10 - 1998 ..... Location/SVE ID : ..... VT4 .....

Pressure/AS Well Flowrate : .....138.4" H_2O / 10 cfm ..... Sheet (3) of (9)

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.

FIELD DATA SHEET : AIR SPARGING PILOT TEST (SHORT-TERM)

Date : ..... 20 - 10 - 1998 .....

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

Pressure/AS Well Flowrate : .....138.4" H_2O / 4 cfm .....

Sheet (4) of (9)

Time Elapsed (min:sec)	AS Well		Depth to Water at Groundwater Wells (m)				Soil Vapour Monitoring Probe Pressure (in H_2O)											
			Distance from Extraction Well (m)				Distance from Extraction Well (m)											
							1m (3A)		5m (3B)		10m (3C)		20m (3D)		5m (3E)		5m (3F)	
	Pressure (in H_2O)	Flowrate (cfm)	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
00:00	138.4	4	2.75	2.74	2.75	2.74	0	0	0	0.0	0	0	0	0.00	0	0	0	0
00:30	-	-	-	-	-	-	0	0	0	0.0	0	0	0	0.00	0	0	0	0
01:00	-	-	-	-	-	-	0	0	0	0.3	0	0	0	0.00	0	0	0	0
01:30	-	-	-	-	-	-	0	0	0	0.3	0	0	0	0.00	0	0	0	0
02:00	-	-	-	-	-	-	0	0	0	0.3	0	0	0	0.00	0	0	0	0
02:30	-	-	-	-	-	-	0	0	0	0.3	0	0	0	0.00	0	0	0	0
03:00	-	-	-	-	-	-	0	0	0	0.2	0	0	0	0.00	0	0	0	0
03:30	-	-	-	-	-	-	0	0	0	0.2	0	0	0	0.00	0	0	0	0
04:00	-	-	-	-	-	-	0	0	0	0.2	0	0	0	0.00	0	0	0	0
04:30	-	-	-	-	-	-	0	0	0	0.2	0	0	0	0.00	0	0	0	0
05:00	-	-	-	-	-	-	0	0	0	0.2	0	0	0	0.00	0	0	0	0
06:00	-	-	-	-	-	-	0	0	0	0.2	0	0	0	0.10	0	0	0	0
07:00	-	-	-	-	-	-	0	0	0	0.1	0	0	0	0.10	0	0	0	0
08:00	-	-	-	-	-	-	0	0	0	0.1	0	0	0	0.10	0	0	0	0
09:00	-	-	-	-	-	-	0	0	0	0.0	0	0	0	0.10	0	0	0	0
10:00	138.4	4	-	-	-	-	0	0	0	0.0	0	0	0	0.10	0	0	0	0
12:00	-	-	-	-	-	-	0	0	0	0.0	0	0	0	0.15	0	0	0	0
14:00	-	-	-	-	-	-	0	0	0	0.3	0	0	0	0.10	0	0	0	0
16:00	-	-	-	-	-	-	0	0	0	0.2	0	0	0	0.10	0	0	0	0
18:00	-	-	-	-	-	-	0	0	0	0.1	0	0	0	0.10	0	0	0	0
20:00	-	-	-	-	-	-	0	0	0	0.1	0	0	0	0.10	0	0	0	0
22:00	-	-	-	-	-	-	0	0	0	0.1	0	0	0	0.10	0	0	0	0
24:00	-	-	-	-	-	-	0	0	0	0.0	0	0	0	0.10	0	0	0	0
26:00	-	-	-	-	-	-	0	0	0	0.3	0	0	0	0.10	0	0	0	0
30:00	138.4	4	2.75	2.73	2.73	2.73	0	0	0	0.1	0	0	0	0.10	0	0	0	0

FIELD DATA SHEET : AIR SPARGING PILOT TEST (SHORT-TERM)

Date : ..... 20 - 10 - 1998 ..... Location/SVE ID : ..... VT4 .....

Pressure/AS Well Flowrate : .....138.4" H_2O / 4 cfm ..... Sheet (5) of (9)

Time Elapsed (min:sec)					00:00	30:00
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	1m	Shallow Probe A1 (painted)	VOC (ppm)	408	446
				CO_2 (%)	0.84	0.10
				O_2 (%)	19.9	21.0
				CH_4 (%)	6.42	1.02
			Deep Probe A2	VOC (ppm)	1165	1001
				CO_2 (%)	0.80	1.31
				O_2 (%)	20.4	19.6
				CH_4 (%)	2.76	3.57
		5m	Shallow Probe B1 (painted)	VOC (ppm)	317	410
				CO_2 (%)	0.25	0.26
				O_2 (%)	20.2	18.9
				CH_4 (%)	1.70	4.56
			Deep Probe B2	VOC (ppm)	139	140
				CO_2 (%)	0.10	0.06
				O_2 (%)	20.5	20.9
				CH_4 (%)	0.47	0.35
		10m	Shallow Probe C1 (painted)	VOC (ppm)	198	235
				CO_2 (%)	ND	0.05
				O_2 (%)	21.5	20.6
				CH_4 (%)	0.96	2.23
			Deep Probe C2	VOC (ppm)	240	402
				CO_2 (%)	0.03	0.14
				O_2 (%)	20.4	18.9
				CH_4 (%)	0.59	1.21
		20m	Shallow Probe D1 (painted)	VOC (ppm)	175	363
				CO_2 (%)	0.10	0.18
				O_2 (%)	20.8	20.3
				CH_4 (%)	1.13	1.50
			Deep Probe D2	VOC (ppm)	257	386
				CO_2 (%)	ND	0.14
				O_2 (%)	21.9	18.5
				CH_4 (%)	ND	1.80
		5m	Shallow Probe E1 (painted)	VOC (ppm)	232	168
				CO_2 (%)	1.74	0.92
				O_2 (%)	16.4	18.0
				CH_4 (%)	7.45	6.65
			Deep Probe E2	VOC (ppm)	150	431
				CO_2 (%)	5.07	5.53
				O_2 (%)	14.9	13.8
				CH_4 (%)	9.40	11.8
		5m	Shallow Probe F1 (painted)	VOC (ppm)	69.5	59.4
				CO_2 (%)	7.60	4.60
				O_2 (%)	8.80	13.0
				CH_4 (%)	38.0	14.9
			Deep Probe F2	VOC (ppm)	72.4	41.2
				CO_2 (%)	6.00	11.0
				O_2 (%)	10.5	6.00
				CH_4 (%)	14.5	3.72
GW Wells	Distance from Extraction Well (m)	2.5m	Shallow W1	Free Product Thickness	ND	ND
				DO (mg/L)	0.25	0.31
			Deep W2	Free Product Thickness	ND	ND
				DO (mg/L)	0.24	0.33
		5.5m	Shallow W3	Free Product Thickness	ND	ND
				DO (mg/L)	0.23	0.24
			Deep W4	Free Product Thickness	ND	ND
				DO (mg/L)	0.33	0.4
		2.5m	Shallow W5	Free Product Thickness	ND	ND
				DO (mg/L)	0.31	0.30
			Deep W6	Free Product Thickness	ND	ND
				DO (mg/L)	0.32	0.35
		2.5m	Deep W7	Free Product Thickness	ND	ND
				DO (mg/L)	0.33	0.33
			Shallow W8	Free Product Thickness	ND	ND
				DO (mg/L)	0.27	0.28

FIELD DATA SHEET : AIR SPARGING PILOT TEST (SHORT-TERM)

Date : ..... 20 - 10 - 1998 ..... Location/SVE ID : ..... VT4 .....

Pressure/AS Well Flowrate : .....138.4" H_2O / 4 cfm ..... Sheet (6) of (9)

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.

FIELD DATA SHEET : AIR SPARGING PILOT TEST (SHORT-TERM)

Date : ..... 20 - 10 - 1998 .....

Pressure/AS Well Flowrate : .....160.5 - 193.8" H_2O / 2 cfm .....

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

Sheet (7) of (9)

Time Elapsed (min:sec	AS Well		Depth to Water at Groundwater Wells (m)				Soil Vapour Monitoring Probe Pressure (in H_2O)											
			Distance from Extraction Well (m)				Distance from Extraction Well (m)											
							1m (3A)		5m (3B)		10m (3C)		20m (3D)		5m (3E)		5m (3F)	
	Pressure (in H_2O)	Flowrate (cfm)	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
00:00	193.8	2	2.73	2.72	2.73	2.72	0	0	0	0	0	0	0	0	0	0	0	0
00:30	-	-	-	-	-	-	0	0	0	0	0	0	0	-0.3	0	0	0	0
01:00	-	-	-	-	-	-	0	0	0	0	0	0	0	-0.3	0	0	0	0
01:30	-	-	-	-	-	-	0	0	0	0	0	0	0	-0.3	0	0	0	0
02:00	-	-	-	-	-	-	0	0	0	0	0	0	0	-0.3	0	0	0	0
02:30	-	-	-	-	-	-	0	0	0	0	0	0	0	-0.3	0	0	0	0
03:00	-	-	-	-	-	-	0	0	0	0	0	0	0	-0.3	0	0	0	0
03:30	-	-	-	-	-	-	0	0	0	0	0	0	0	-0.3	0	0	0	0
04:00	-	-	-	-	-	-	0	0	0	0	0	0	0	-0.3	0	0	0	0
04:30	-	-	-	-	-	-	0	0	0	0	0	0	0	-0.3	0	0	0	0
05:00	-	-	-	-	-	-	0	0	0	0	0	0	0	-0.3	0	0	0	0
06:00	-	-	-	-	-	-	0	0	0	0	0	0	0	-0.3	0	0	0	0
07:00	-	-	-	-	-	-	0	0	0	0	0	0	0	-0.3	0	0	0	0
08:00	-	-	-	-	-	-	0	0	0	0	0	0	0	-0.3	0	0	0	0
09:00	-	-	-	-	-	-	0	0	0	0	0	0	0	-0.3	0	0	0	0
10:00	193.8	2	2.75	2.72	2.74	2.73	0	0	0	0	0	0	0	-0.3	0	0	0	0
12:00	-	-	-	-	-	-	0	0	0	0	0	0	0	-0.3	0	0	0	0
14:00	-	-	-	-	-	-	0	0	0	0	0	0	0	-0.3	0	0	0	0
16:00	-	-	-	-	-	-	0	0	0	0	0	0	0	-0.3	0	0	0	0
18:00	-	-	-	-	-	-	0	0	0	0	0	0	0	-0.3	0	0	0	0
20:00	166.1	2	2.74	2.72	2.73	2.72	0	0	0	0	0	0	0	-0.3	0	0	0	0
22:00	-	-	-	-	-	-	0	0	0	0	0	0	0	-0.3	0	0	0	0
24:00	-	-	-	-	-	-	0	0	0	0	0	0	0	-0.3	0	0	0	0
26:00	-	-	-	-	-	-	0	0	0	0	0	0	0	-0.3	0	0	0	0
30:00	160.5	2	2.75	2.72	2.73	2.73	0	0	0	0	0	0	0	-0.3	0	0	0	0

FIELD DATA SHEET : AIR SPARGING PILOT TEST (SHORT-TERM)

Date : ..... 21 - 10 - 1998 ..... Location/SVE ID : ..... VT7 .....

Pressure/AS Well Flowrate : .....160.5 - 193.8" H_2O / 2 cfm .. Sheet (8) of (9)

Time Elapsed (min:sec)					00:00	30:00
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	1m	Shallow Probe A1 (painted)	VOC (ppm)	85.2	198
				CO_2 (%)	2.24	2.76
				O_2 (%)	13.0	10.6
				CH_4 (%)	29.5	13.2
			Deep Probe A2	VOC (ppm)	153	408
				CO_2 (%)	11.6	6.75
				O_2 (%)	3.50	10.3
				CH_4 (%)	25.4	8.46
		5m	Shallow Probe B1 (painted)	VOC (ppm)	111	209
				CO_2 (%)	1.20	1.23
				O_2 (%)	14.3	13.7
				CH_4 (%)	13.6	8.66
			Deep Probe B2	VOC (ppm)	84.2	92.5
				CO_2 (%)	1.39	1.90
				O_2 (%)	17.2	14.0
				CH_4 (%)	2.58	3.13
		10m	Shallow Probe C1 (painted)	VOC (ppm)	103	150
				CO_2 (%)	0.57	0.35
				O_2 (%)	18.3	17.5
				CH_4 (%)	6.90	5.56
			Deep Probe C2	VOC (ppm)	103	123
				CO_2 (%)	1.23	1.20
				O_2 (%)	12.9	11.6
				CH_4 (%)	6.73	6.26
		20m	Shallow Probe D1 (painted)	VOC (ppm)	141	175
				CO_2 (%)	1.08	0.96
				O_2 (%)	16.8	15.7
				CH_4 (%)	4.07	3.87
			Deep Probe D2	VOC (ppm)	111	219
				CO_2 (%)	1.50	1.27
				O_2 (%)	12.1	11.0
				CH_4 (%)	5.80	2.62
		5m	Shallow Probe E1 (painted)	VOC (ppm)	103	112
				CO_2 (%)	1.00	2.01
				O_2 (%)	16.3	13.0
				CH_4 (%)	7.53	7.33
			Deep Probe E2	VOC (ppm)	126	177
				CO_2 (%)	15.1	15.0
				O_2 (%)	1.00	1.00
				CH_4 (%)	22.7	19.9
		5m	Shallow Probe F1 (painted)	VOC (ppm)	20.3	34.0
				CO_2 (%)	10.4	11.2
				O_2 (%)	6.60	4.10
				CH_4 (%)	43.8	47.8
			Deep Probe F2	VOC (ppm)	10.7	34.4
				CO_2 (%)	13.7	11.6
				O_2 (%)	5.90	4.30
				CH_4 (%)	52.5	39.5
GW Wells	Distance from Extraction Well (m)	2.5m	Shallow W1	Free Product Thickness	ND	ND
				DO (mg/L)	0.35	0.40
			Deep W2	Free Product Thickness	ND	ND
				DO (mg/L)	0.46	0.50
		5.5m	Shallow W3	Free Product Thickness	ND	ND
				DO (mg/L)	0.33	0.35
			Deep W4	Free Product Thickness	ND	ND
				DO (mg/L)	0.32	0.32
		2.5m	Shallow W5	Free Product Thickness	ND	ND
				DO (mg/L)	0.34	0.40
			Deep W6	Free Product Thickness	ND	ND
				DO (mg/L)	0.33	0.36
		2.5m	Deep W7	Free Product Thickness	ND	ND
				DO (mg/L)	0.23	0.33
			Shallow W8	Free Product Thickness	ND	ND
				DO (mg/L)	0.24	0.33

FIELD DATA SHEET : AIR SPARGING PILOT TEST (SHORT-TERM)

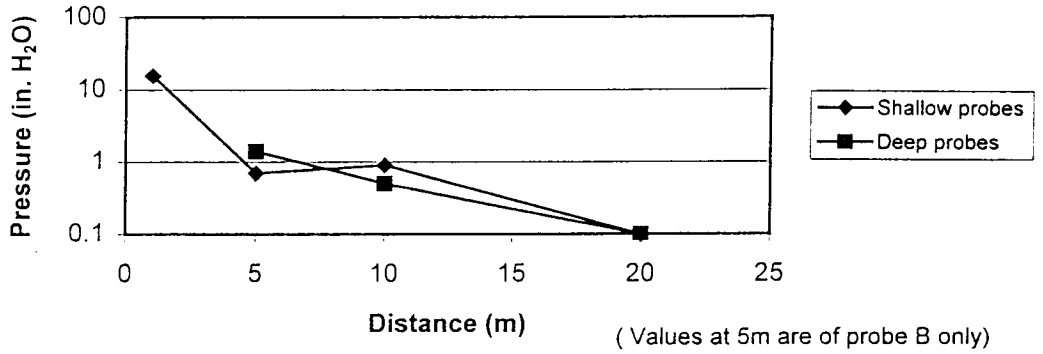
Date : ..... 21 - 10 - 1998 ..... Location/SVE ID : ..... VT4 .....

Pressure/AS Well Flowrate : .....160.5 - 193.8" H_2O / 2 cfm .. Sheet (9) of (9)

Remarks :

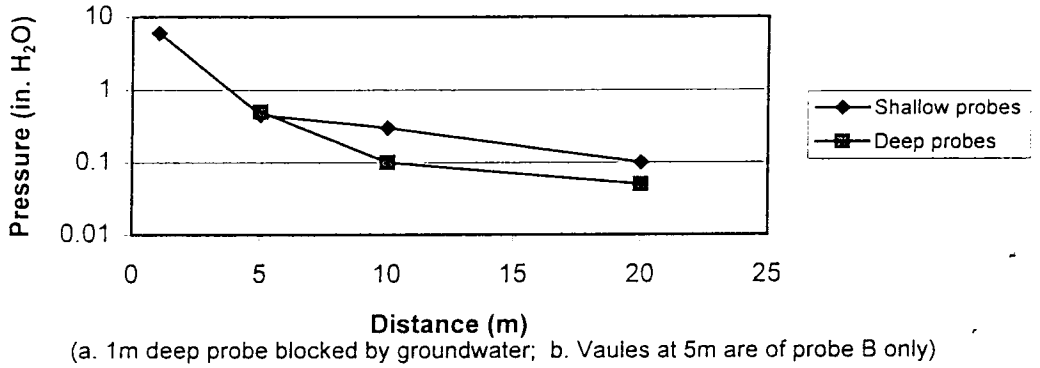
1. ND -- not detected (detection limit: CO_2, O_2, CH_4 < 0.01% VOC < 0.1ppm)
2. Gas was measured with a small pump.

Steady State Pressure at Vapour Probes *vs* Distance from AS well (Short Term AS Test at VT3, AS well flow rate = 10 cfm)



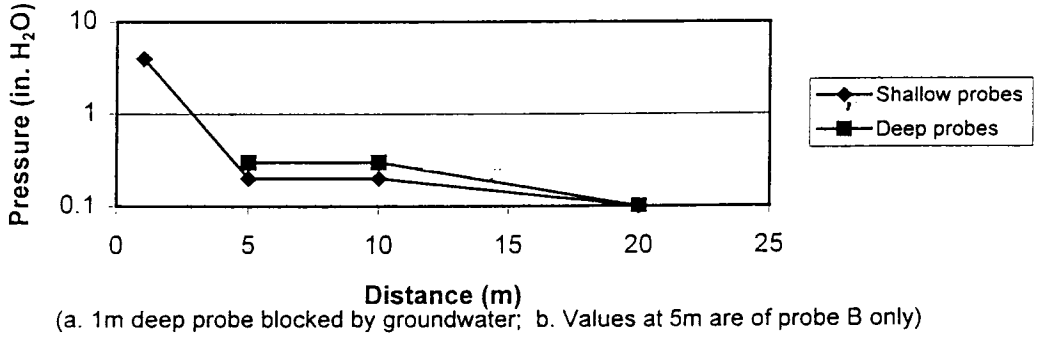
(Values at 5m are of probe B only)

Steady State Pressure at Vapour Probes *vs* Distance from AS well (Short Term AS Test at VT3, AS well flow rate = 4 cfm)



(a. 1m deep probe blocked by groundwater; b. Vaules at 5m are of probe B only)

Steady State Pressure at Vapour Probes *vs* Distance from AS well (Short Term AS Test at VT3, AS well flow rate = 2 cfm)



(a. 1m deep probe blocked by groundwater; b. Values at 5m are of probe B only)

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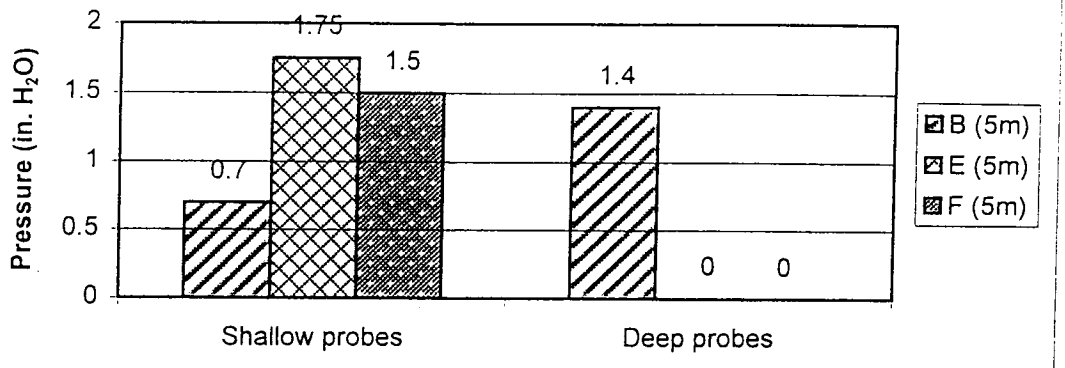
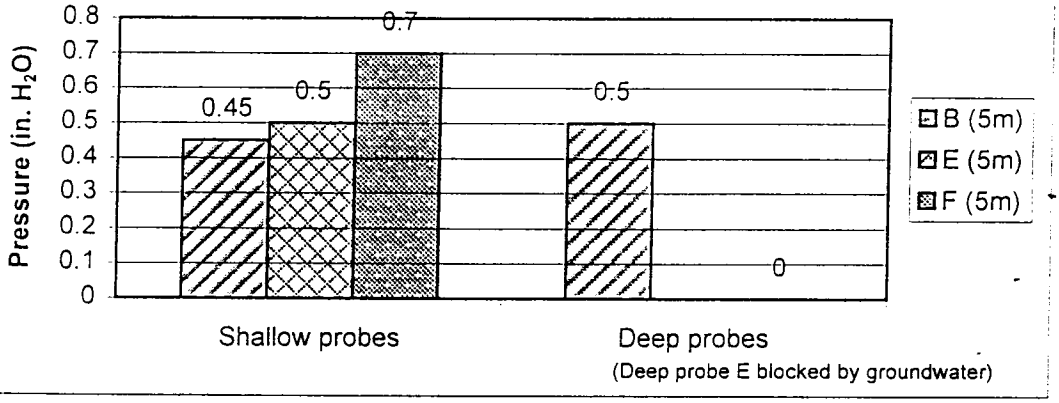
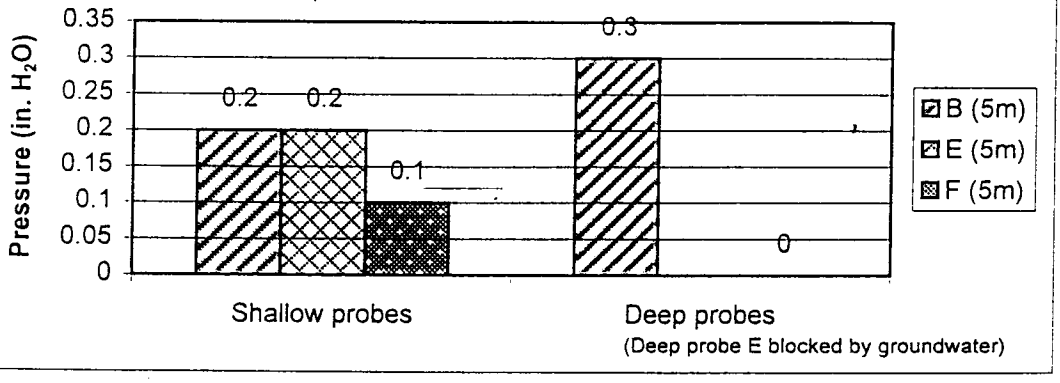
Steady State Pressure at Radial Vapour Probes *vs* Direction from AS Well (Short Term AS Test at VT3, AS well flow rate = 10 cfm)



Steady State Pressue at Radial Vapour Probes *vs* Direction from AS Well (Short Term AS Test at VT3, AS well flow rate = 4 cfm)



Steady State Pressure at Radial Vapour Probes *vs* Direction from AS Well (Short Term AS Test at VT3, AS well flow rate = 2 cfm)



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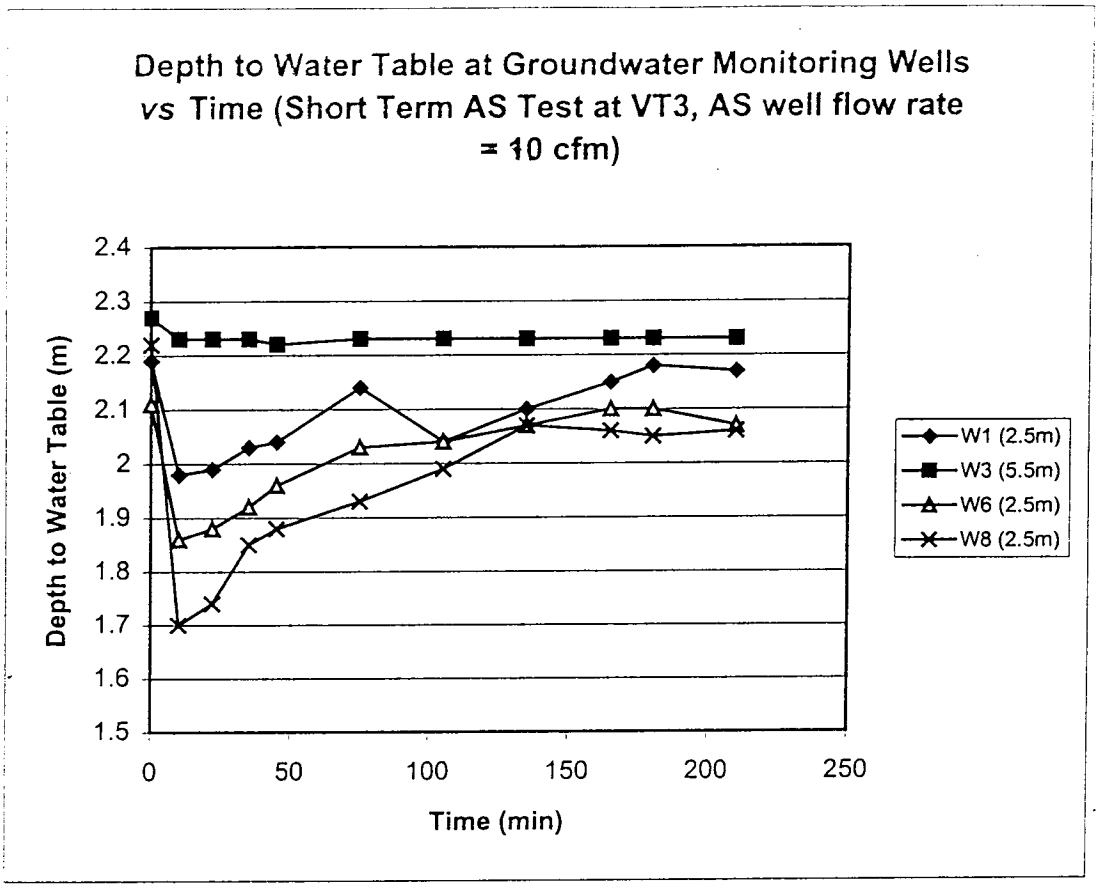
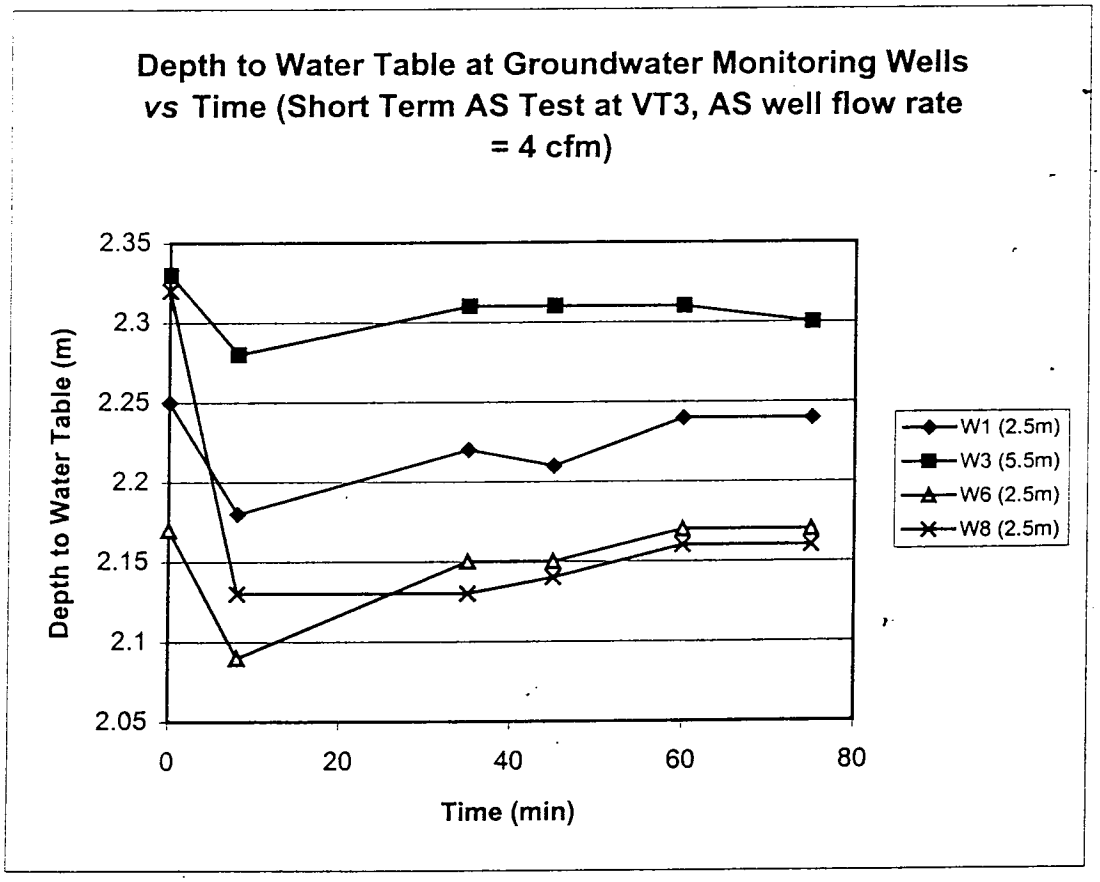

Depth to Water Table at Groundwater Monitoring Wells vs Time (Short Term AS Test at VT3, AS well flow rate = 10 cfm)
Depth to Water Table (m)
2.4
2.3
2.2
2.1
2
1.9
1.8
1.7
1.6
1.5
0
50
100
150
200
250
Time (min)
W1 (2.5m)
W3 (5.5m)
W6 (2.5m)
W8 (2.5m)


Depth to Water Table at Groundwater Monitoring Wells vs Time (Short Term AS Test at VT3, AS well flow rate = 4 cfm)
Depth to Water Table (m)
2.35
2.3
2.25
2.2
2.15
2.1
2.05
0
20
40
60
80
Time (min)
W1 (2.5m)
W3 (5.5m)
W6 (2.5m)
W8 (2.5m)

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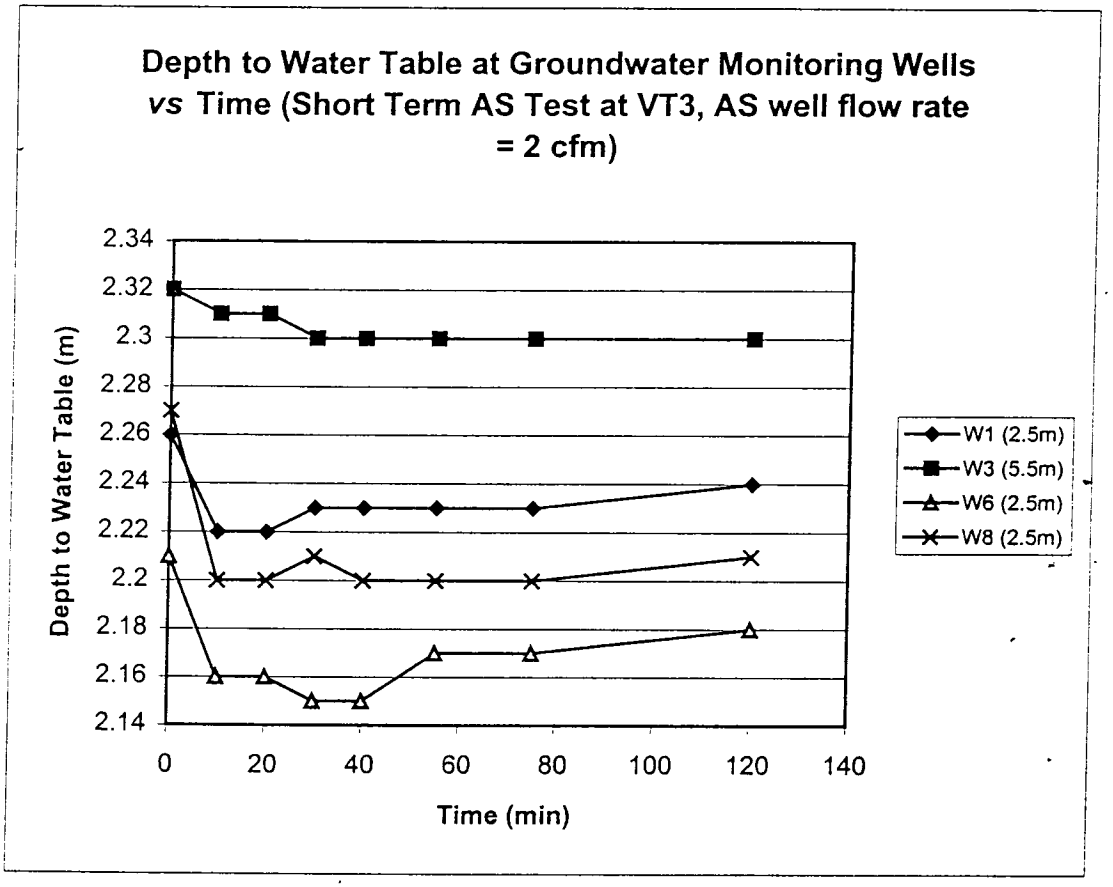
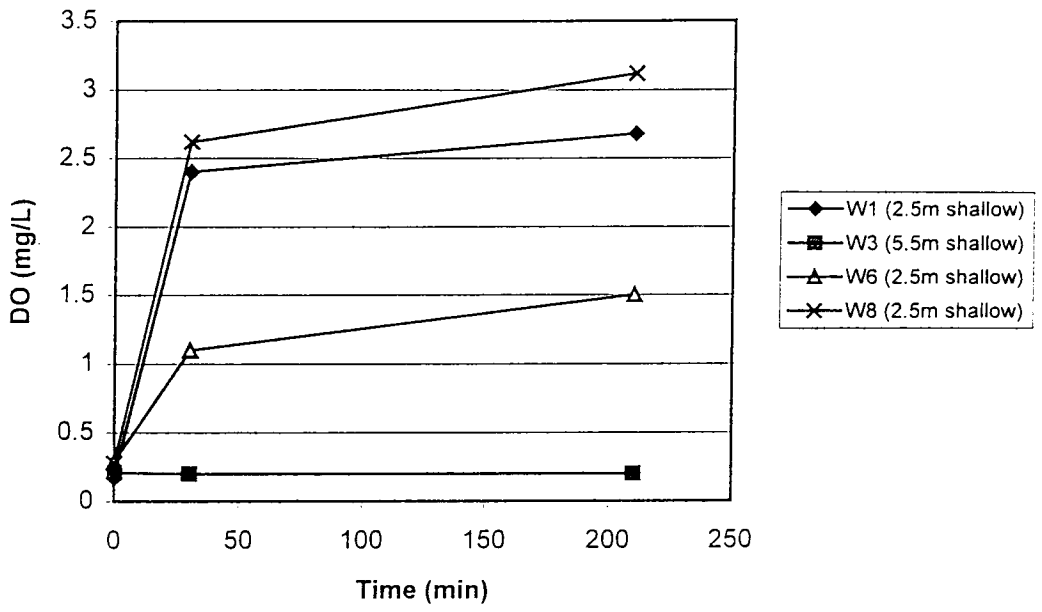
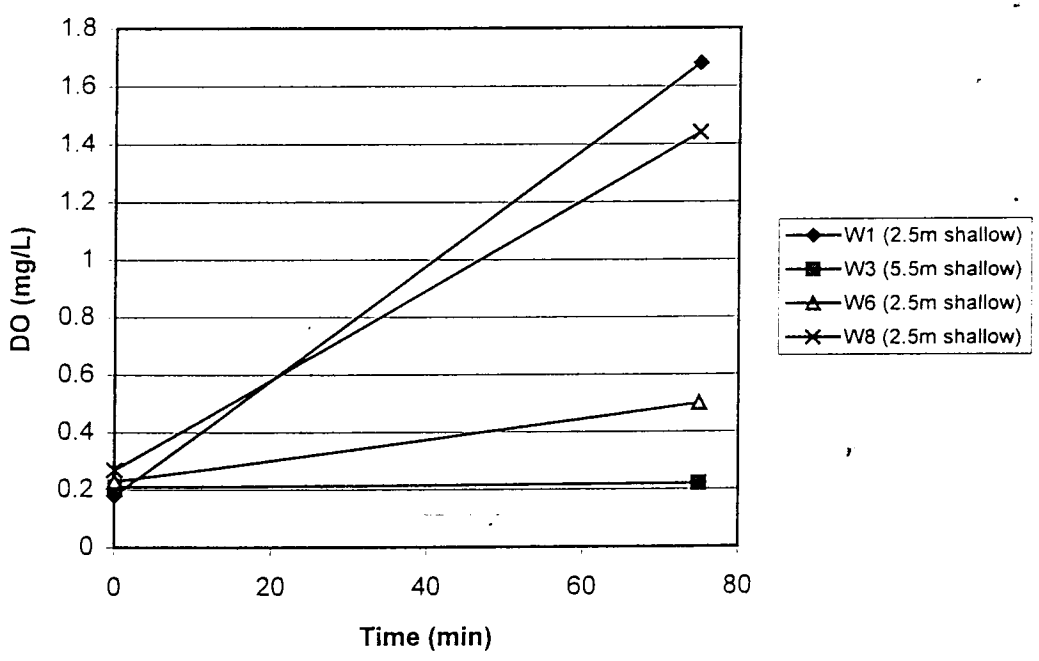

Depth to Water Table at Groundwater Monitoring Wells vs Time (Short Term AS Test at VT3, AS well flow rate = 2 cfm)
Depth to Water Table (m)
2.34
2.32
2.3
2.28
2.26
2.24
2.22
2.2
2.18
2.16
2.14
0
20
40
60
80
100
120
140
Time (min)
W1 (2.5m)
W3 (5.5m)
W6 (2.5m)
W8 (2.5m)

C418\ASvt3-p





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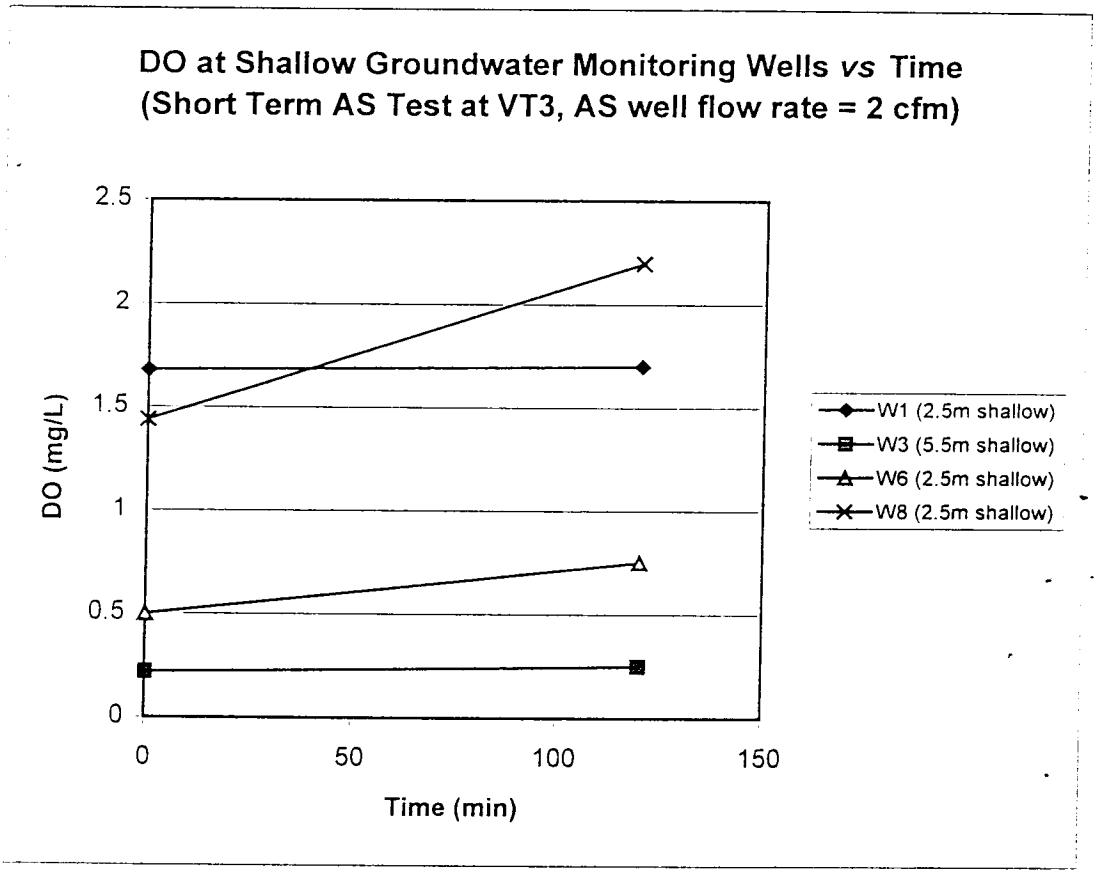

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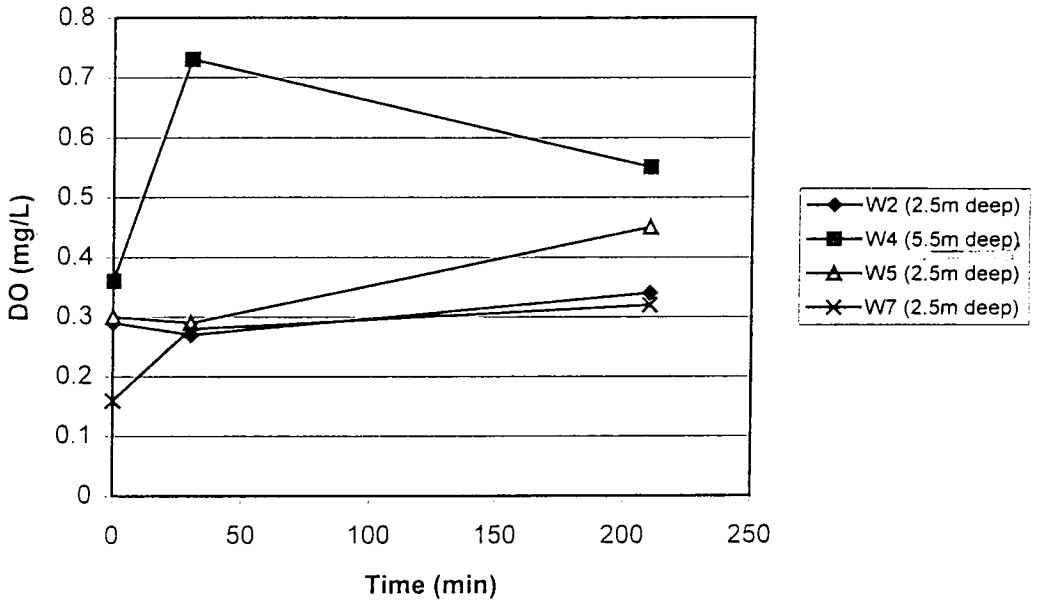
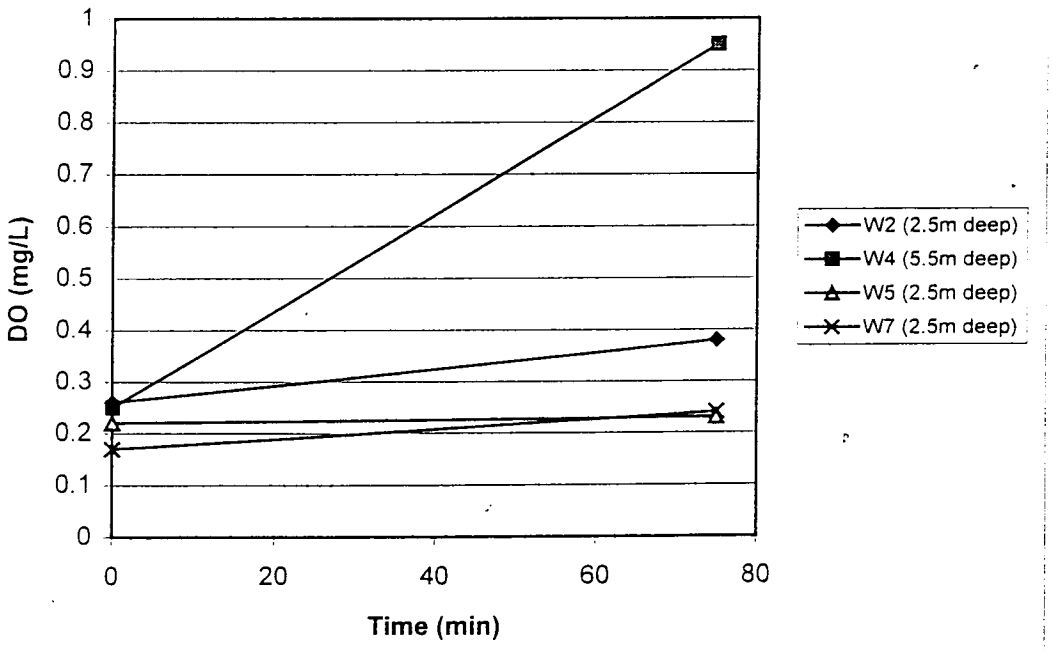
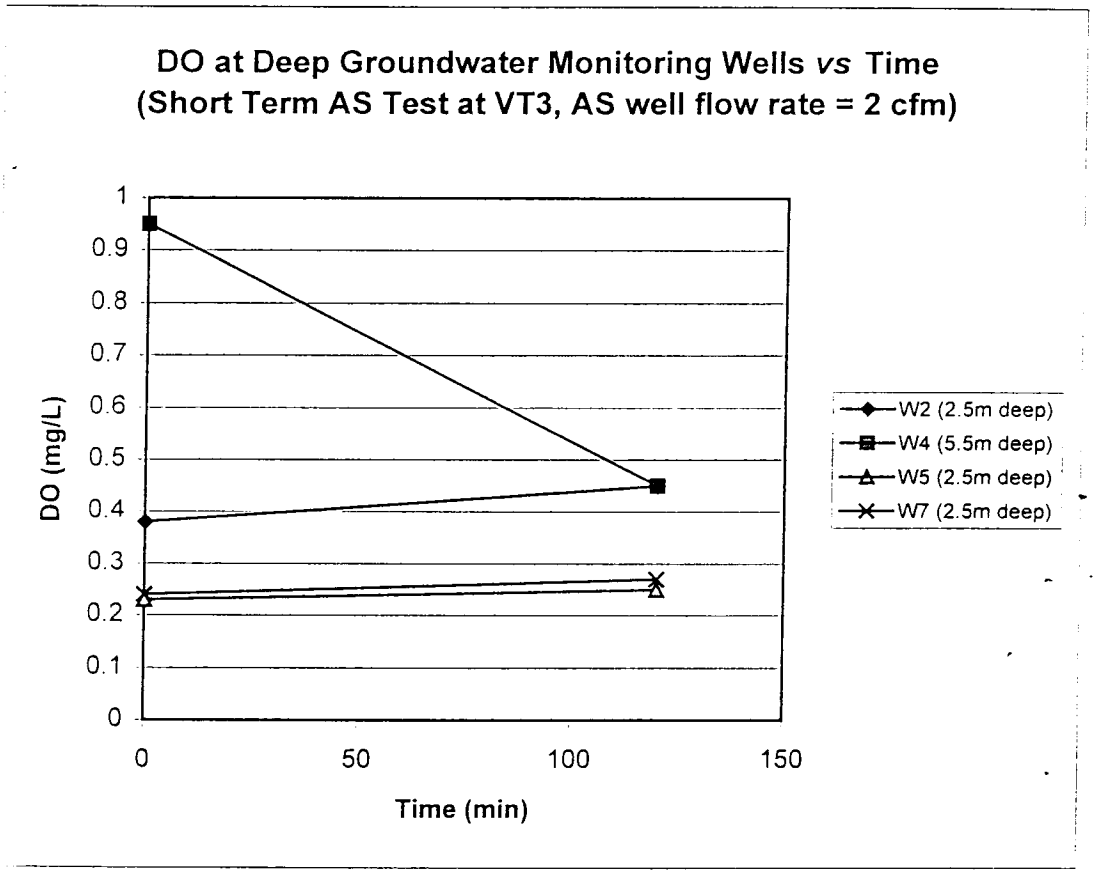
DO at Deep Groundwater Monitoring Wells *vs* Time
(Short Term AS Test at VT3, AS well flow rate = 10 cfm)



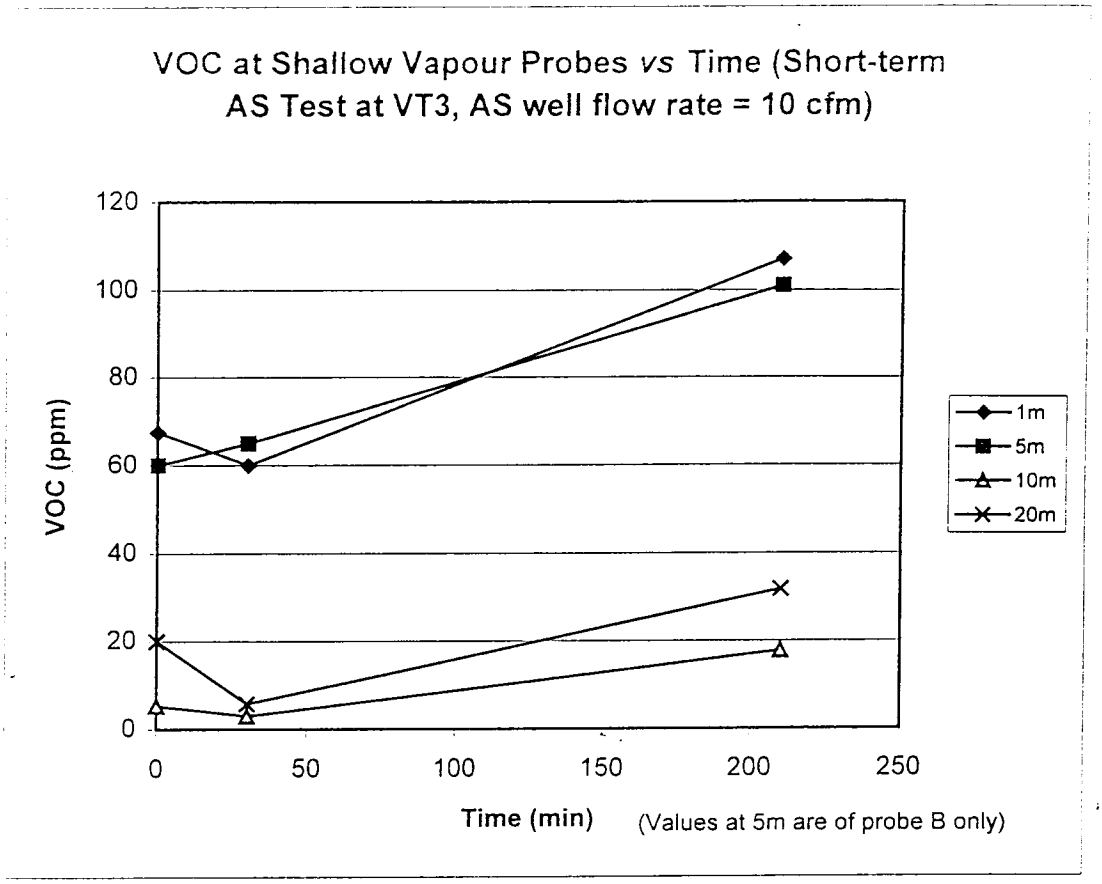
DO at Deep Groundwater Monitoring Wells *vs* Time
(Short Term AS Test at VT3, AS well flow rate = 4 cfm)

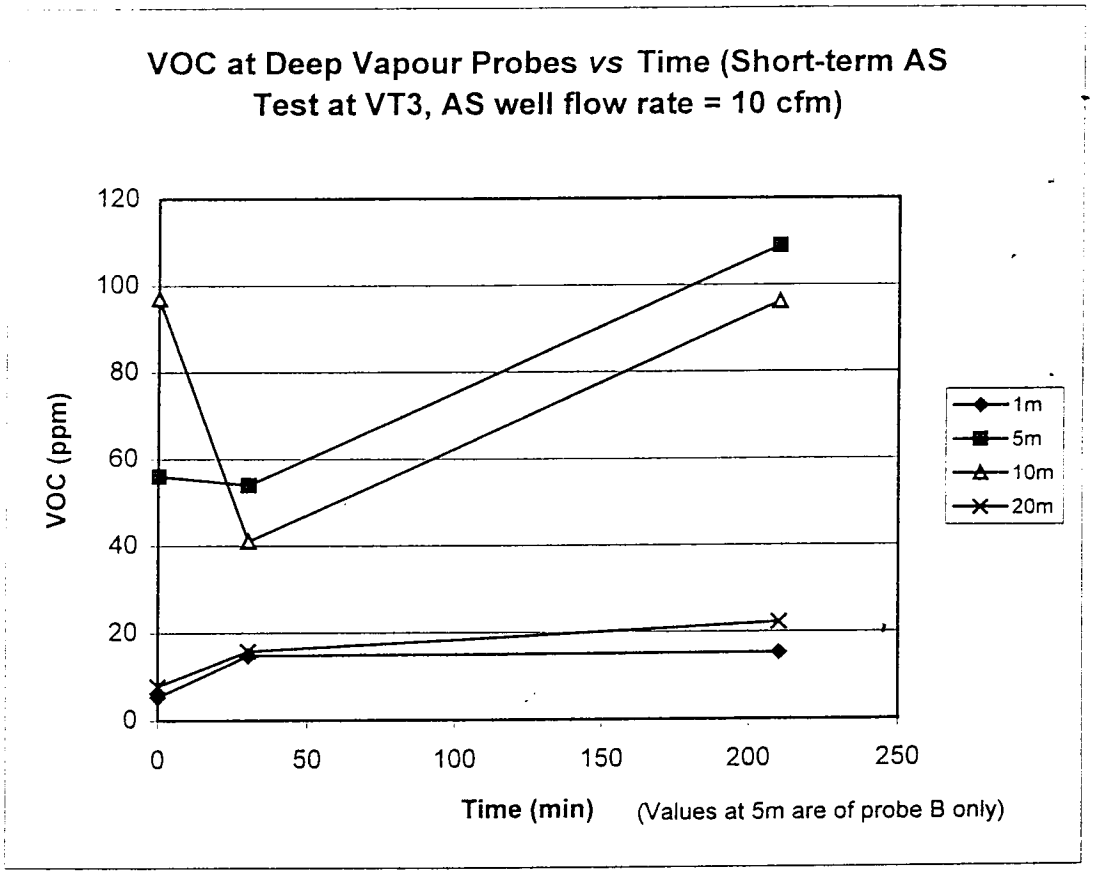


C418\xl\Asvt3-g4



C418\xi\Asvt3-g4





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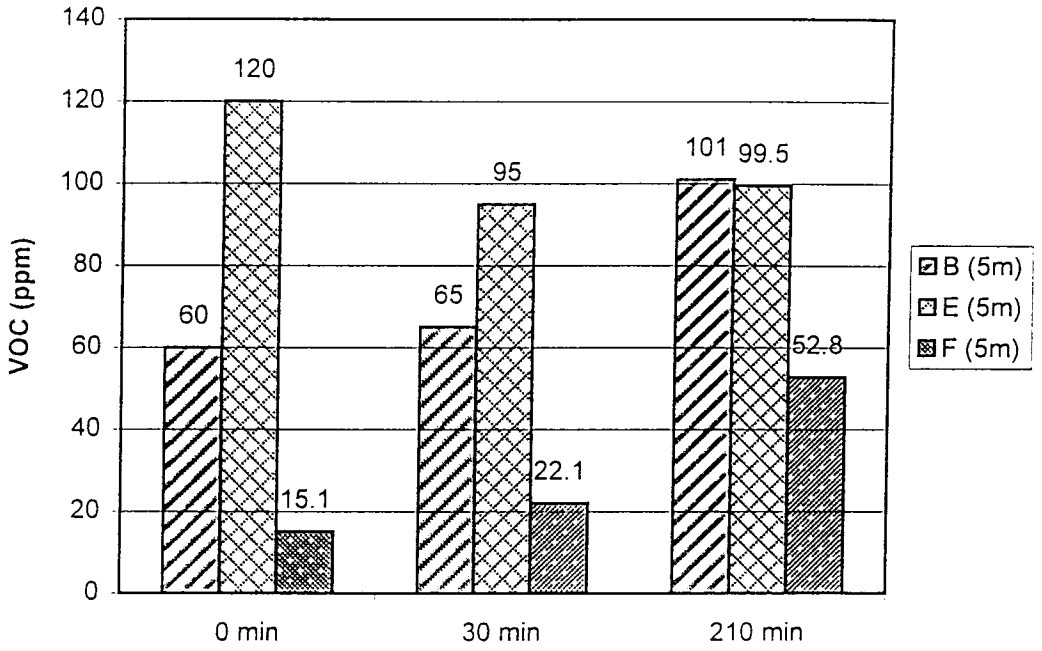
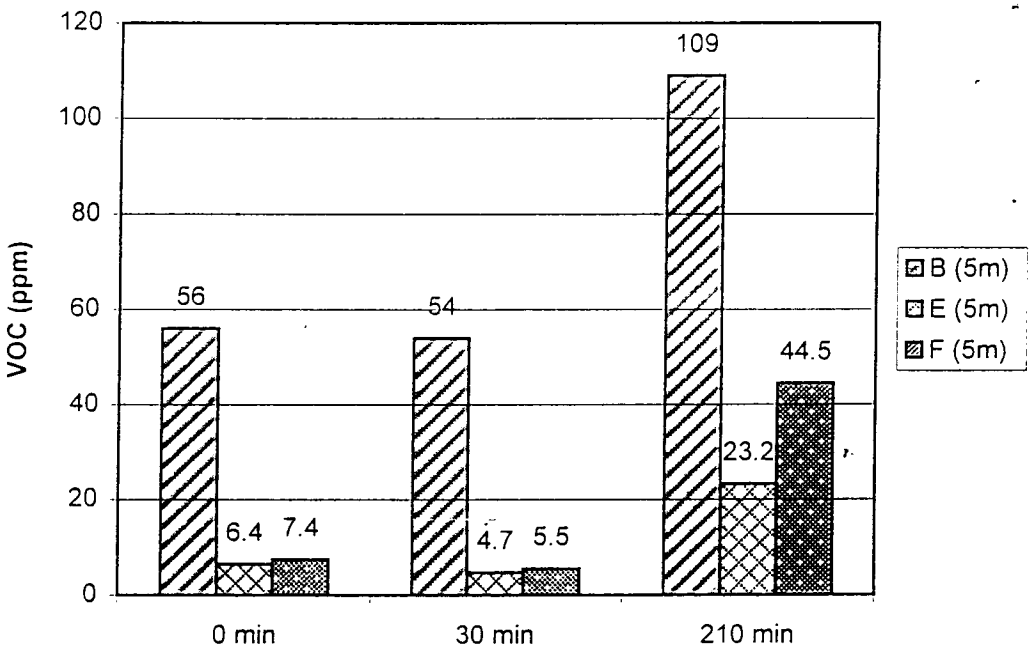
VOC at Shallow Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 10 cfm)



VOC at Deep Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 10 cfm)



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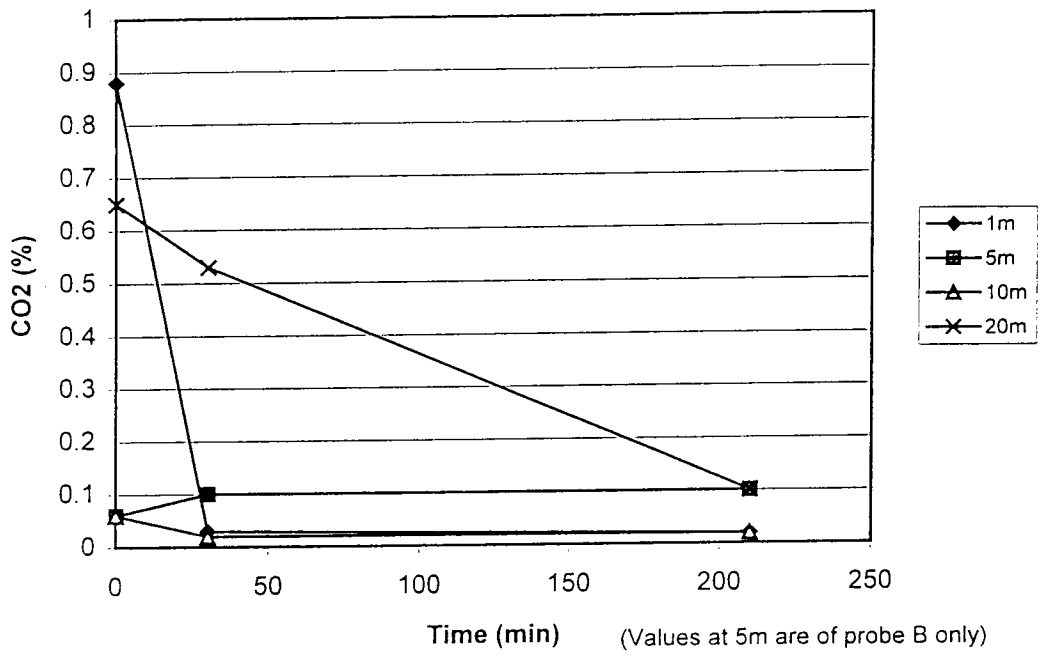
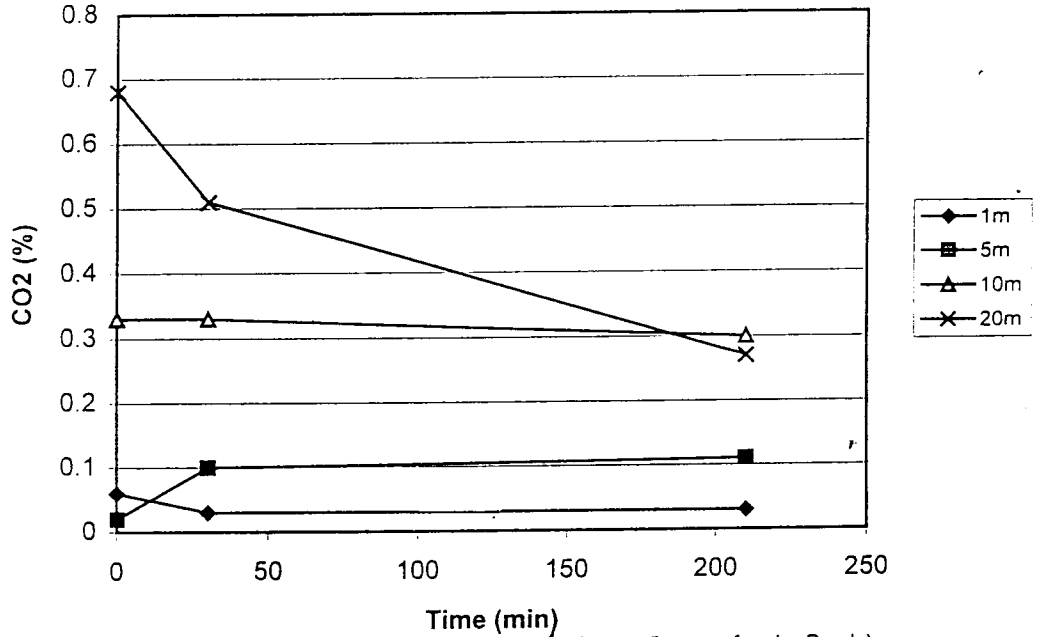
CO2 at Shallow Vapour Probes *vs* Time (Short-term AS Test at VT3, AS Well flow rate = 10 cfm)



(Values at 5m are of probe B only)

CO2 at Deep Vapour Probes *vs* Time (Short-term AS Test at VT3, AS Well flow rate = 10 cfm)



(Values at 5m are of probe B only)

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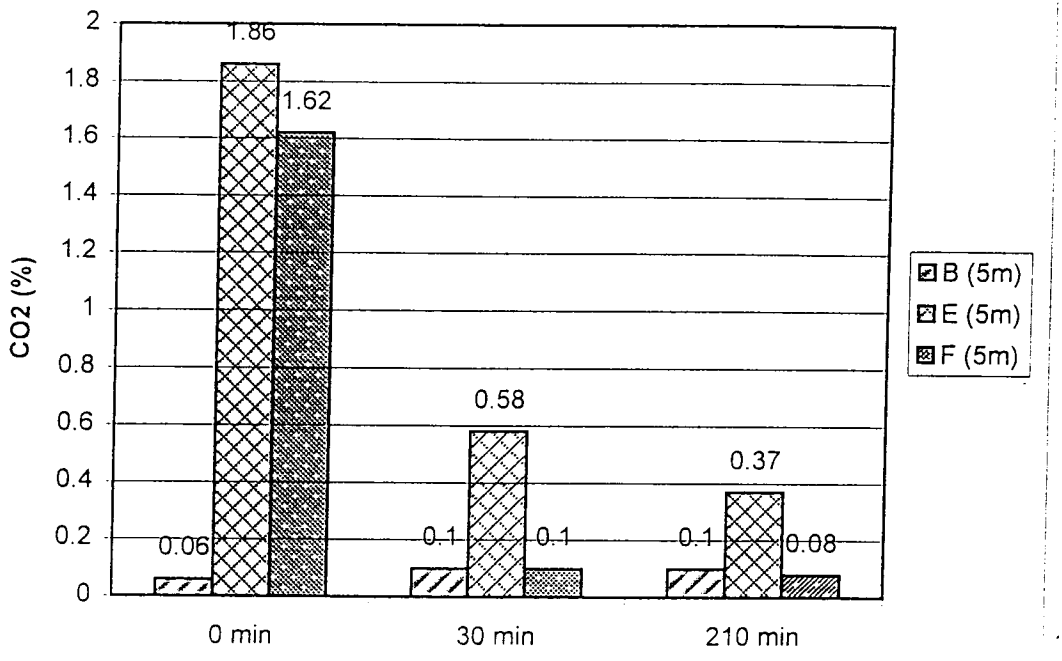
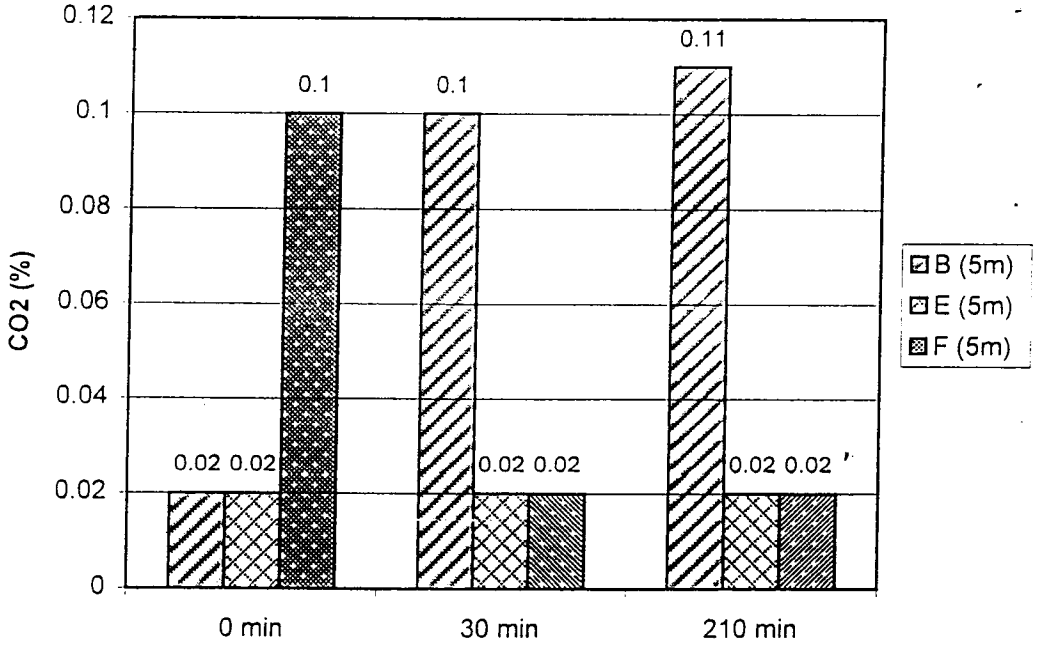
CO2 at Shallow Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 10 cfm)



CO2 at Deep Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 10 cfm)



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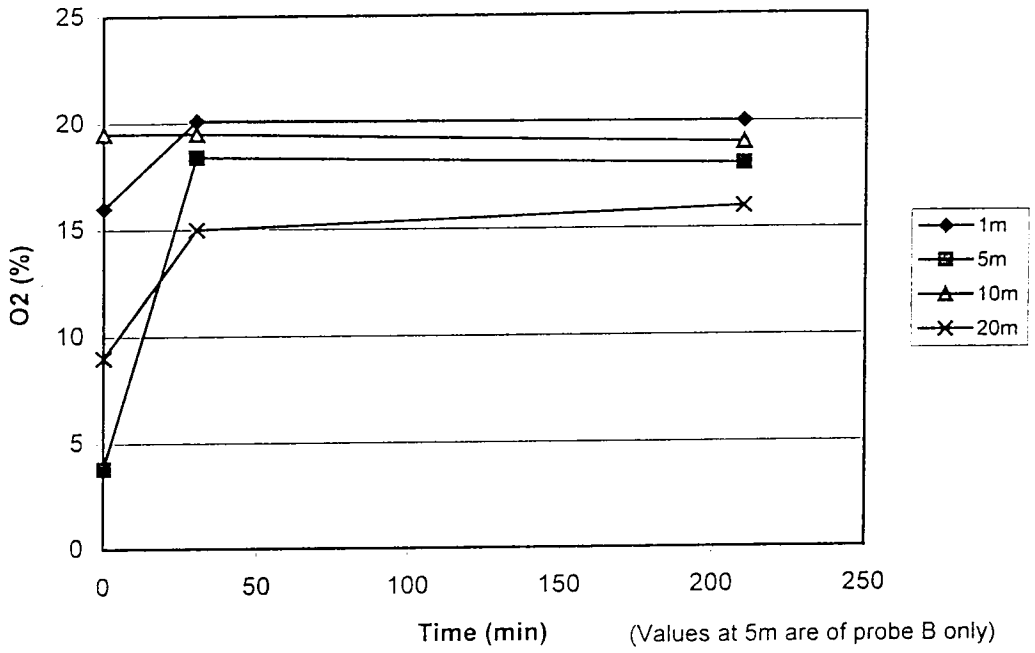
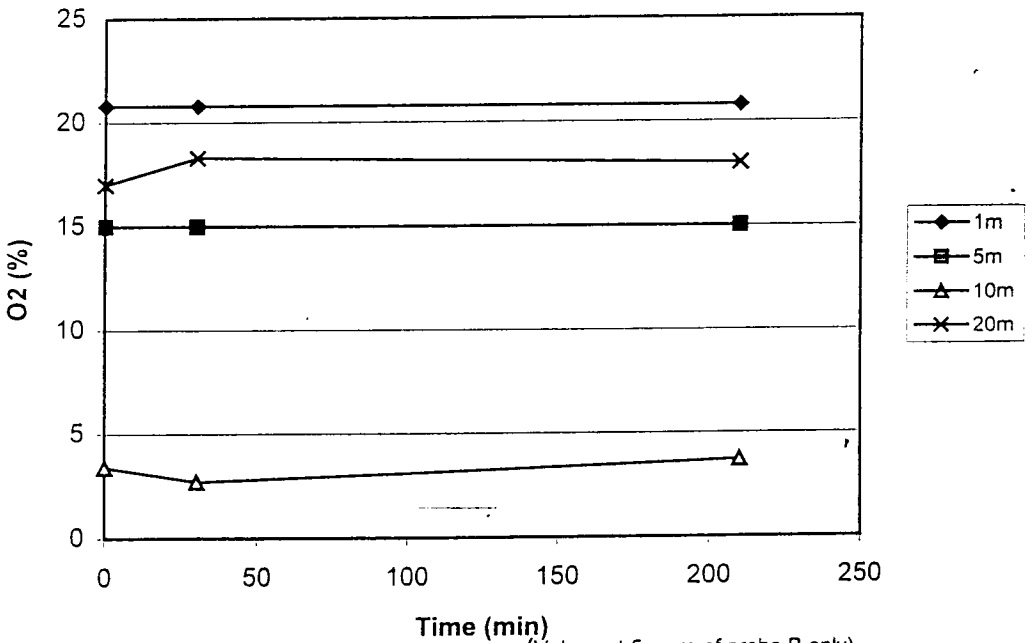
O2 at Shallow Vapour Probes *vs* Time (Short-term AS Test at VT3, AS Well flowrate = 10 cfm)



(Values at 5m are of probe B only)

O2 at Deep Vapour Probes *vs* Time (Short-term AS Test at VT3, AS Well flow rate = 10 cfm)



(Values at 5m are of probe B only)

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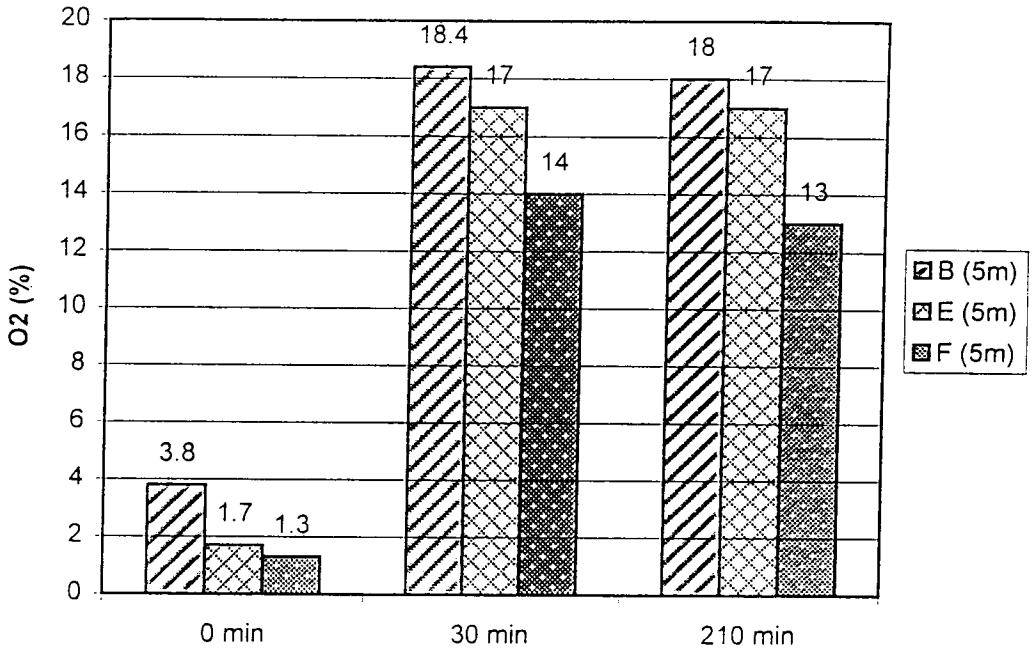
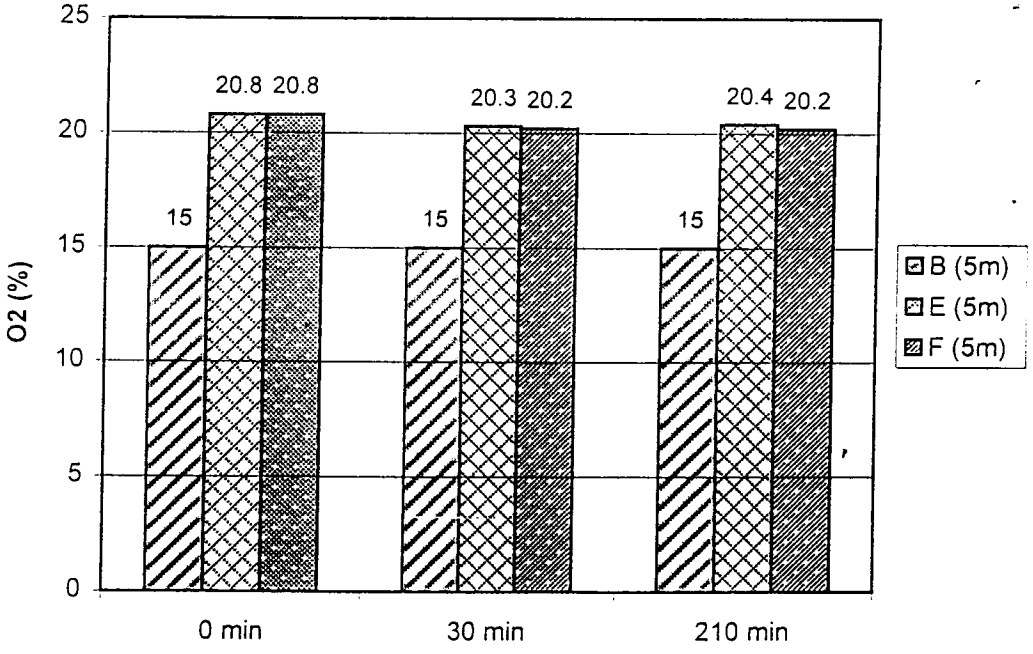
O2 at Shallow Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 10 cfm)



O2 at Deep Radial Vapour Probes *vs* Tme (Short-term AS Test at VT3, AS well flow rate = 10 cfm)



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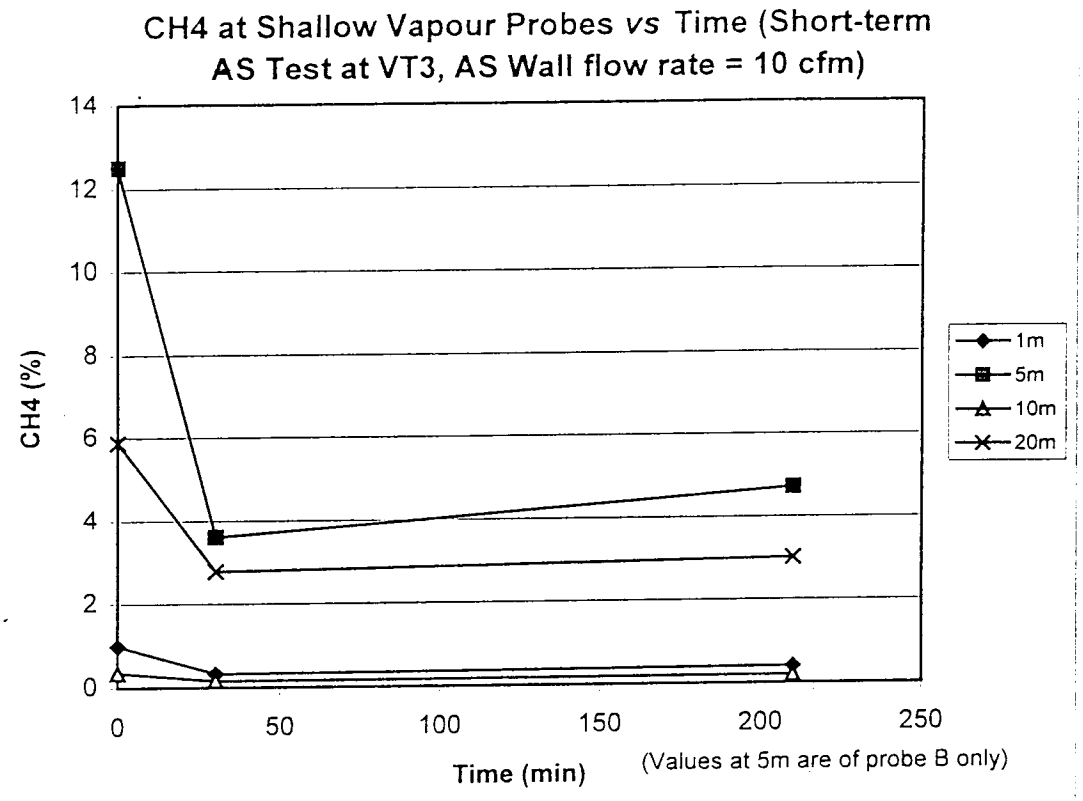

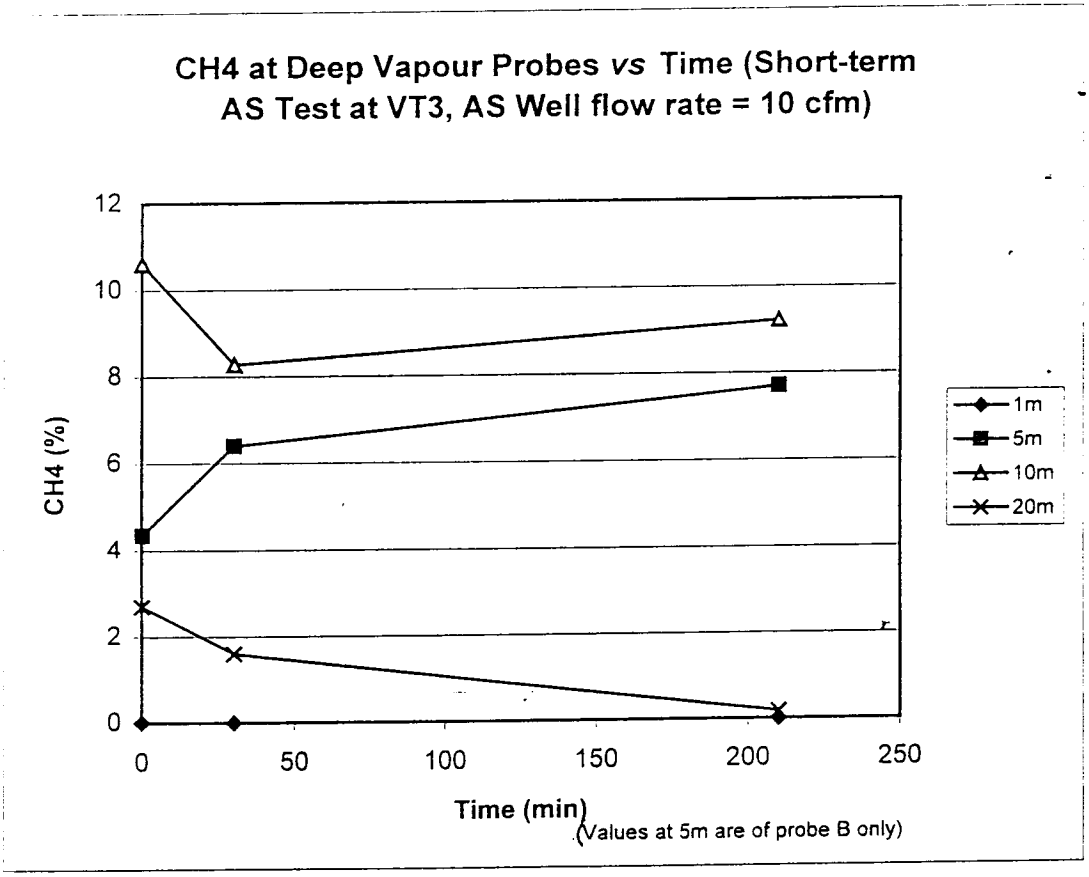

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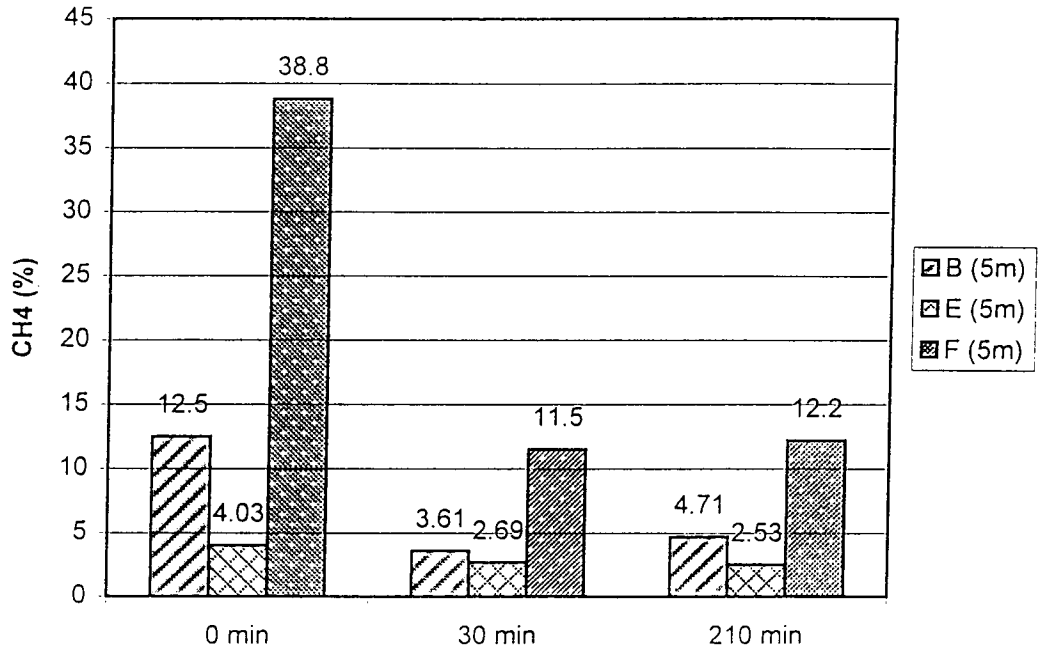
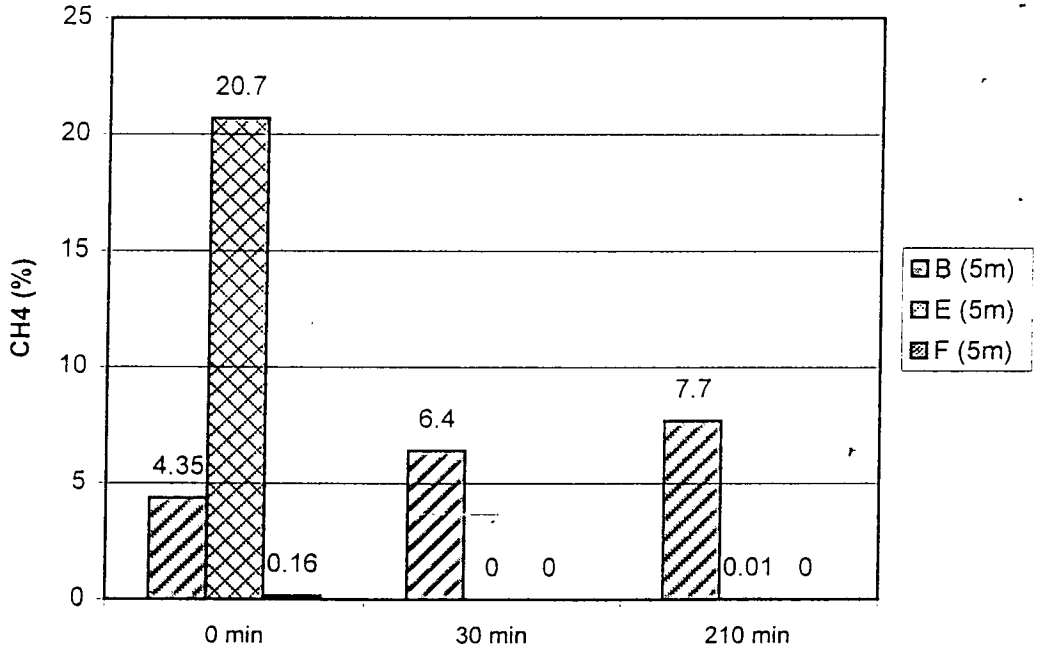
CH4 at Shallow Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 10 cfm)

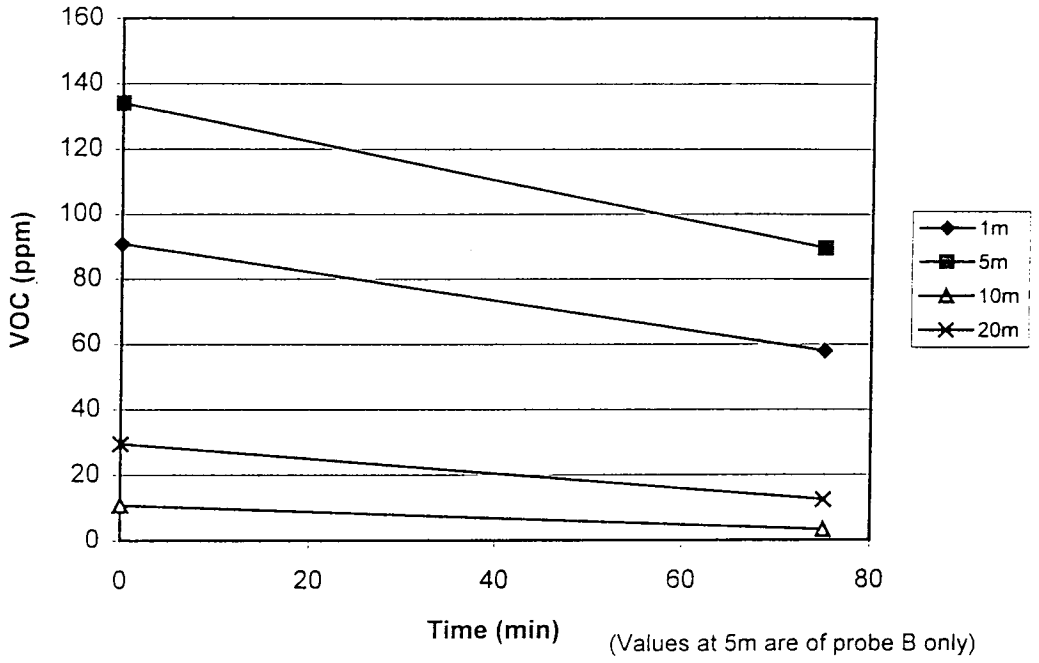


CH4 at Deep Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 10 cfm)



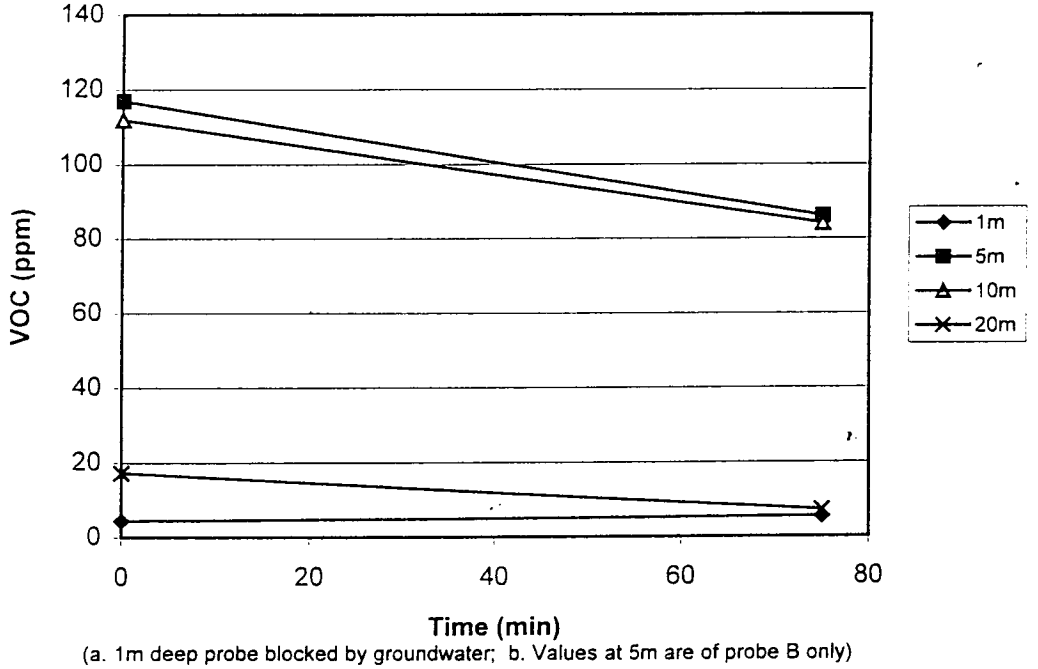
C418\xl\ASvt3-g1

VOC at Shallow Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 4 cfm)



(Values at 5m are of probe B only)

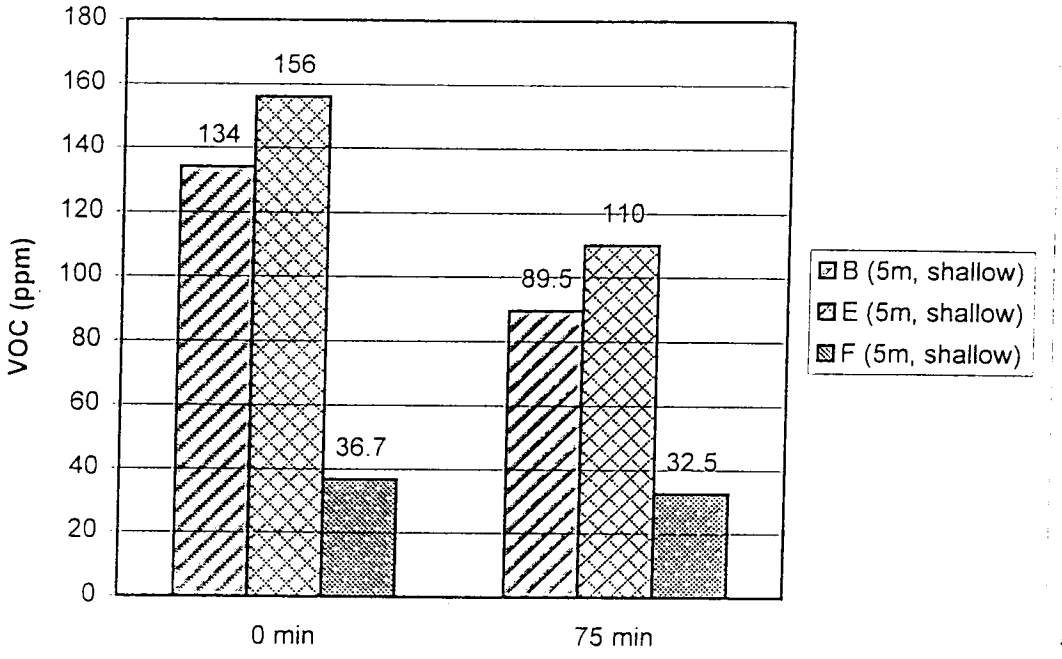
VOC at Deep Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 4 cfm)



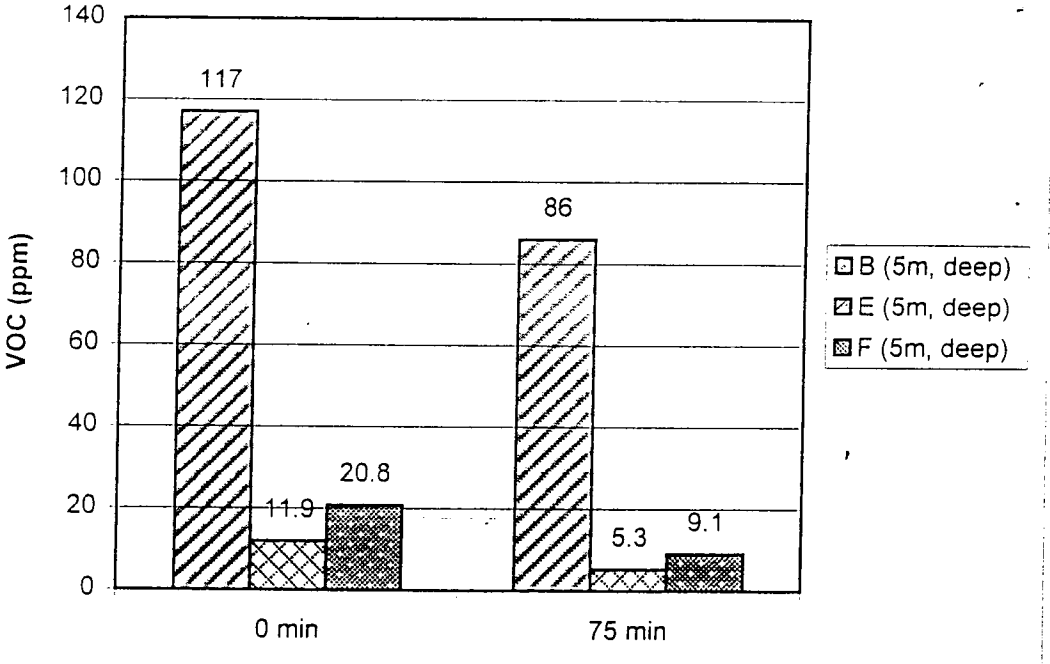
(a. 1m deep probe blocked by groundwater; b. Values at 5m are of probe B only)

C418\xl\ASvt3-g2

VOC at Shallow Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 4 cfm)

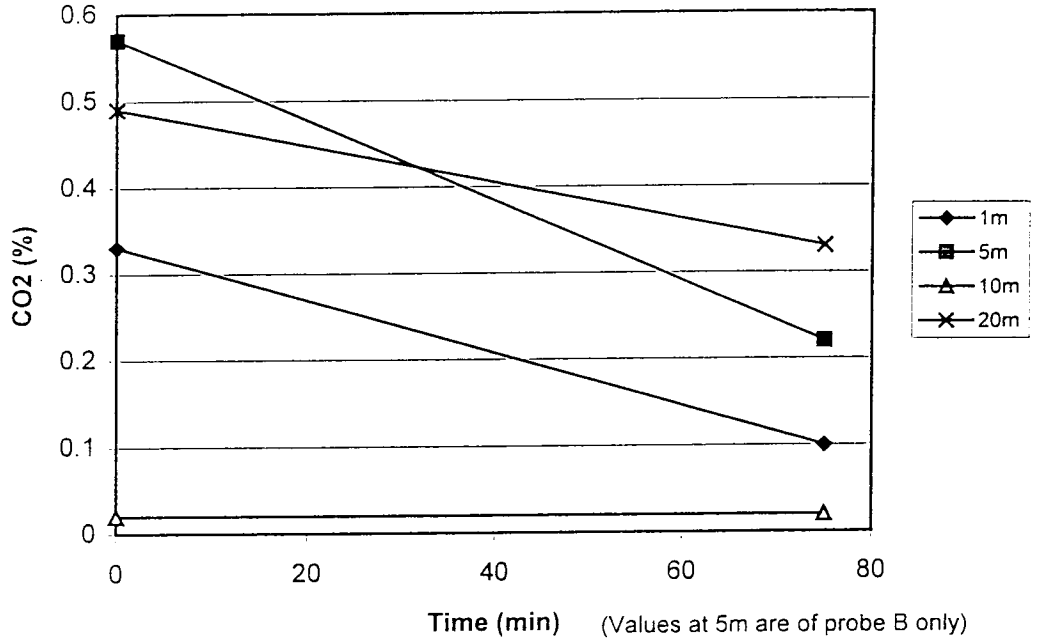


VOC at Deep Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 4 cfm)



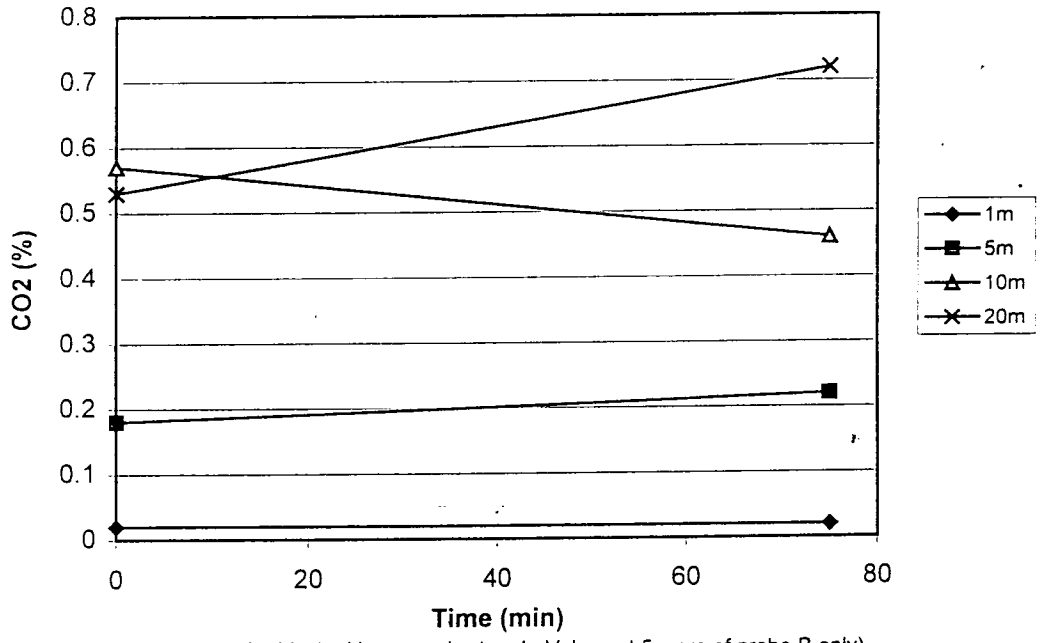
C418\xl\ASvt3-g2

CO2 at Shallow Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 4 cfm)



(Values at 5m are of probe B only)

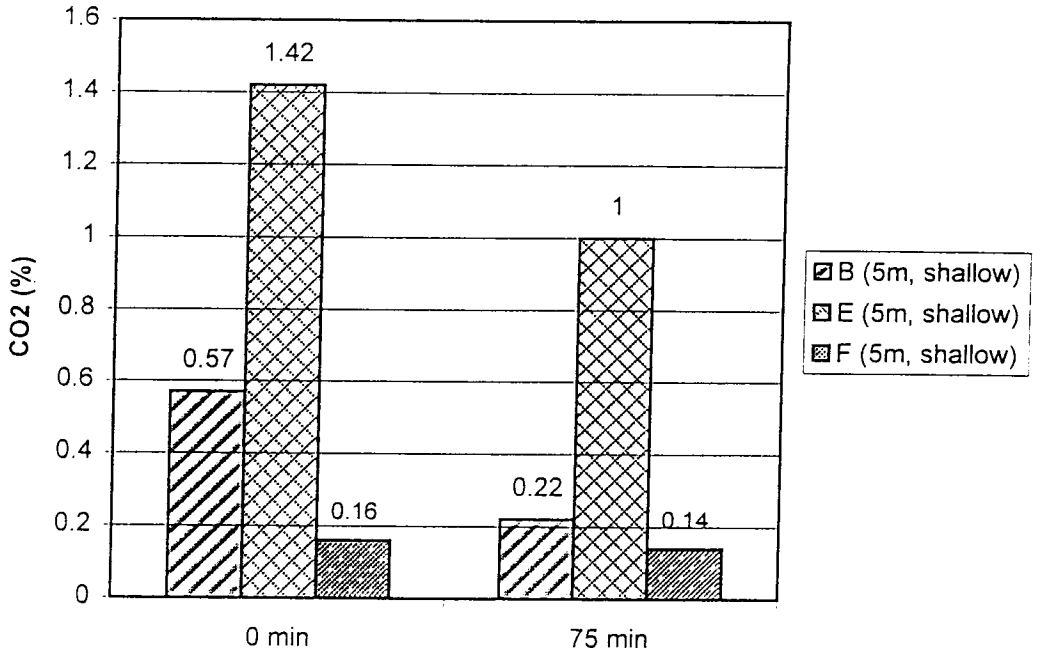
CO2 at Deep Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 4 cfm)



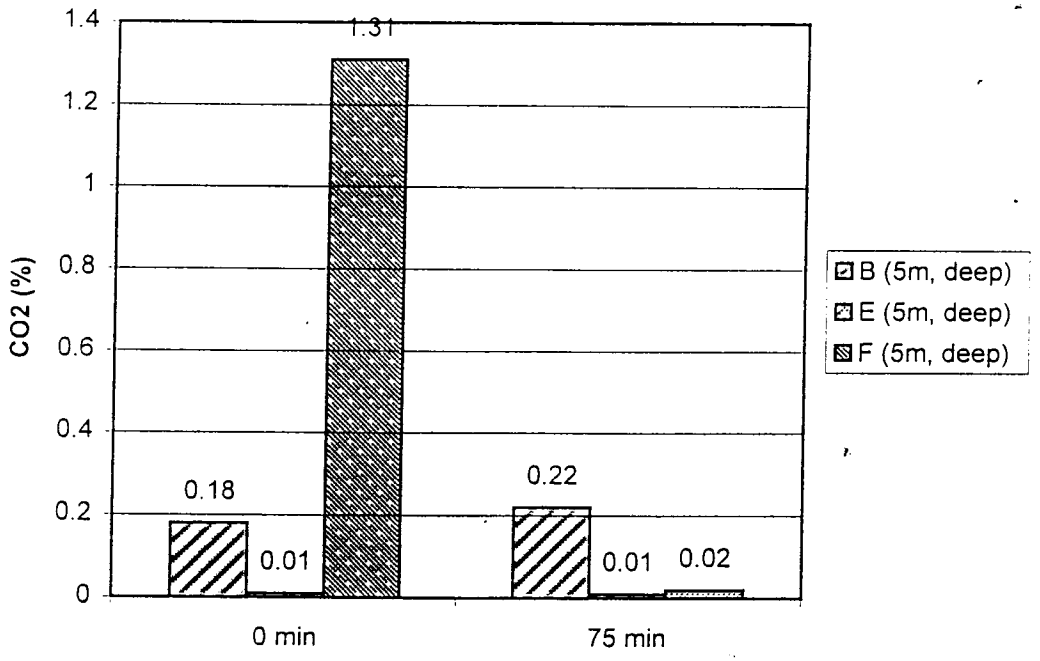
(a. 1m deep probe blocked by groundwater; b. Values at 5m are of probe B only)

C418\xl\ASvt3-g2

CO2 at Shallow Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 4 cfm)

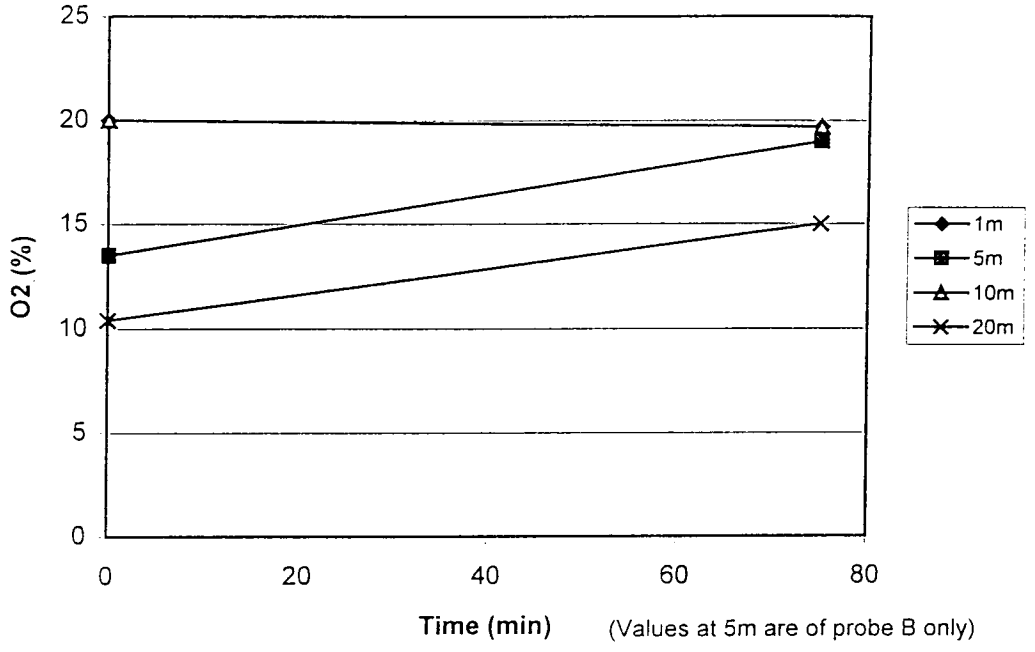


CO2 at Deep Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 4 cfm)



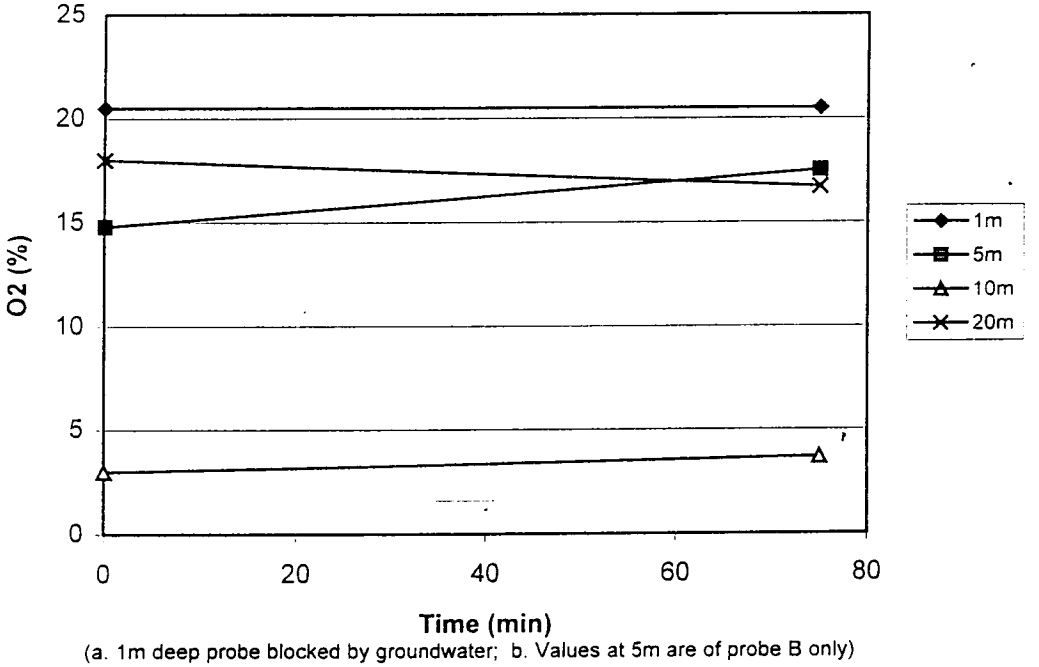
C418\xl\ASvt3-g2

O2 at Shallow Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flowrate = 4 cfm)



(Values at 5m are of probe B only)

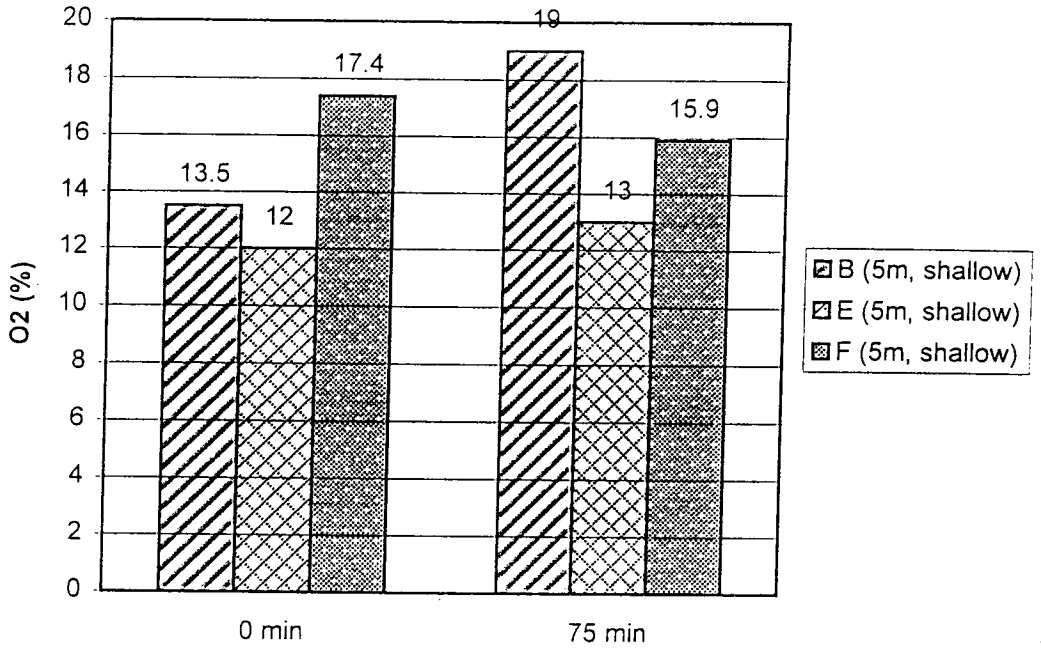
O2 at Deep Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 4 cfm)



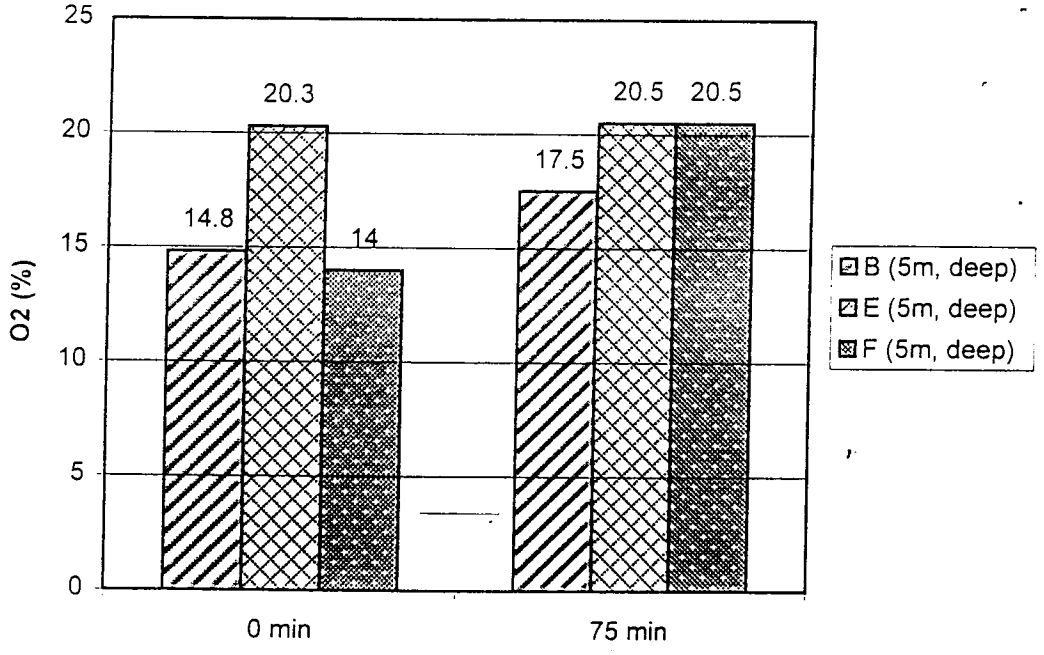
(a. 1m deep probe blocked by groundwater; b. Values at 5m are of probe B only)

C418\xl\ASvt3-g2

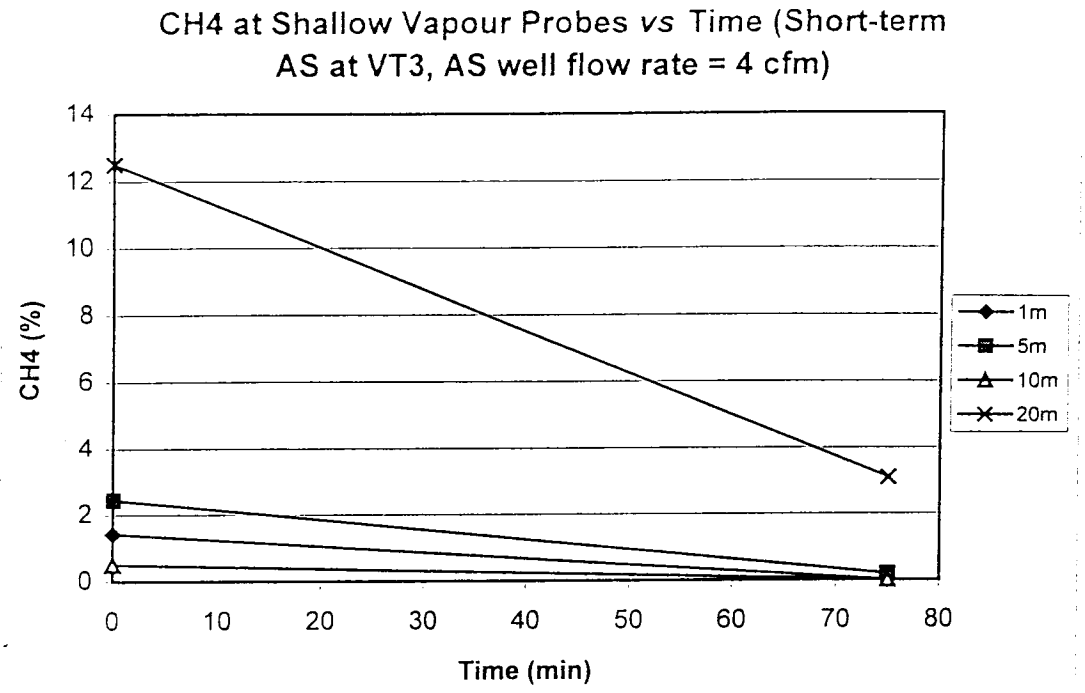
O2 at Shallow Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 4 cfm)



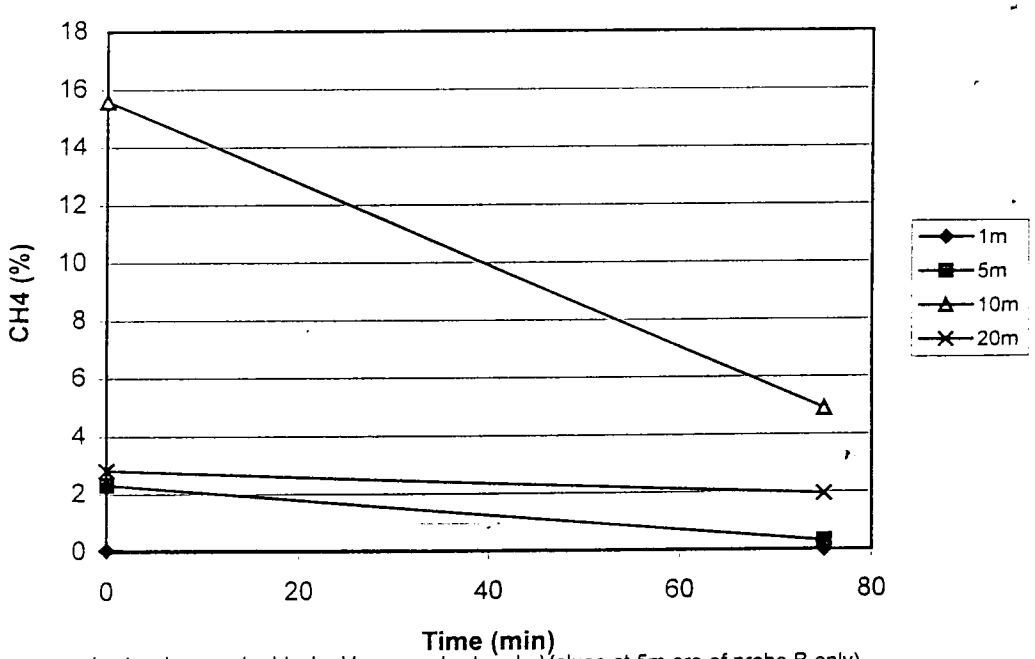
O2 at Deep Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 4 cfm)



C418\xl\ASvt3-g2



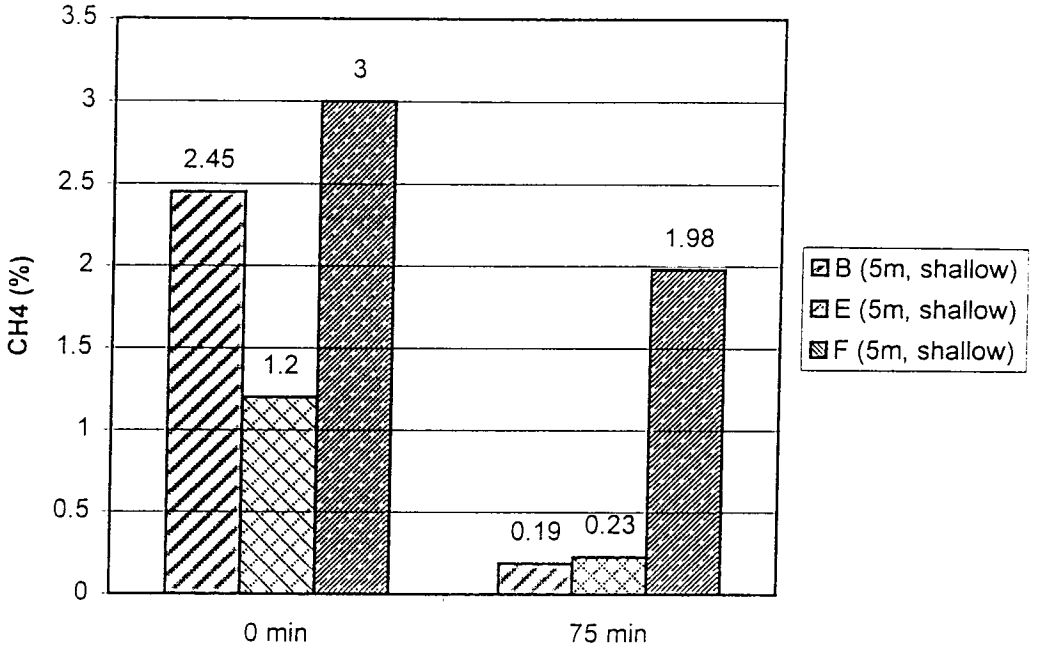
(Values at 5m are of probe B only)



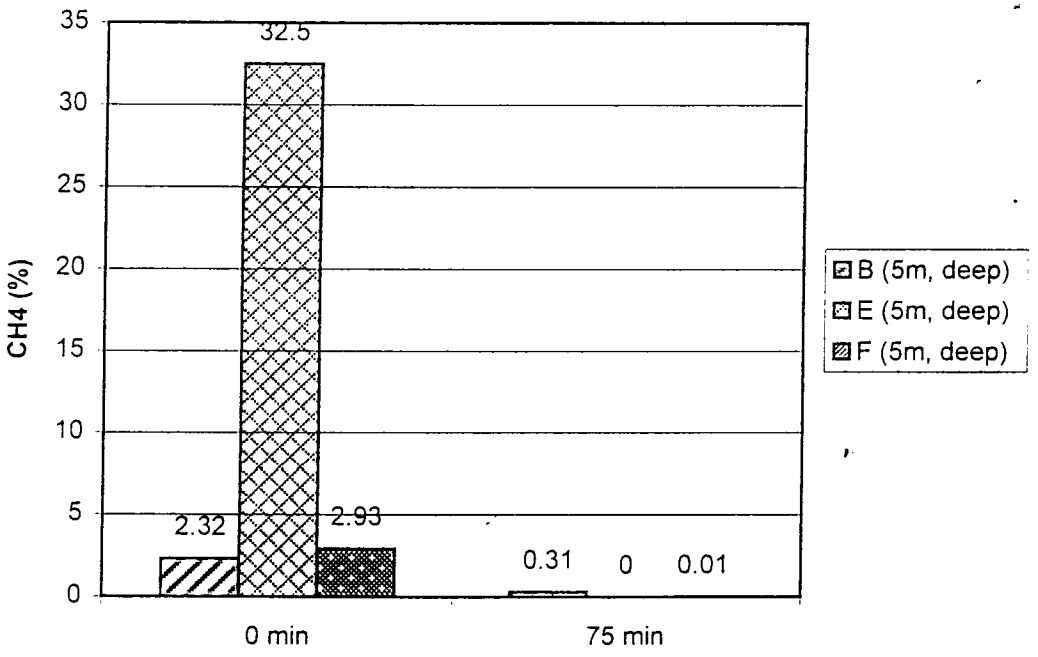
(a. 1m deep probe blocked by groundwater; b. Values at 5m are of probe B only)

C418\xl\ASvt3-g2

CH4 at Shallow Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 4 cfm)

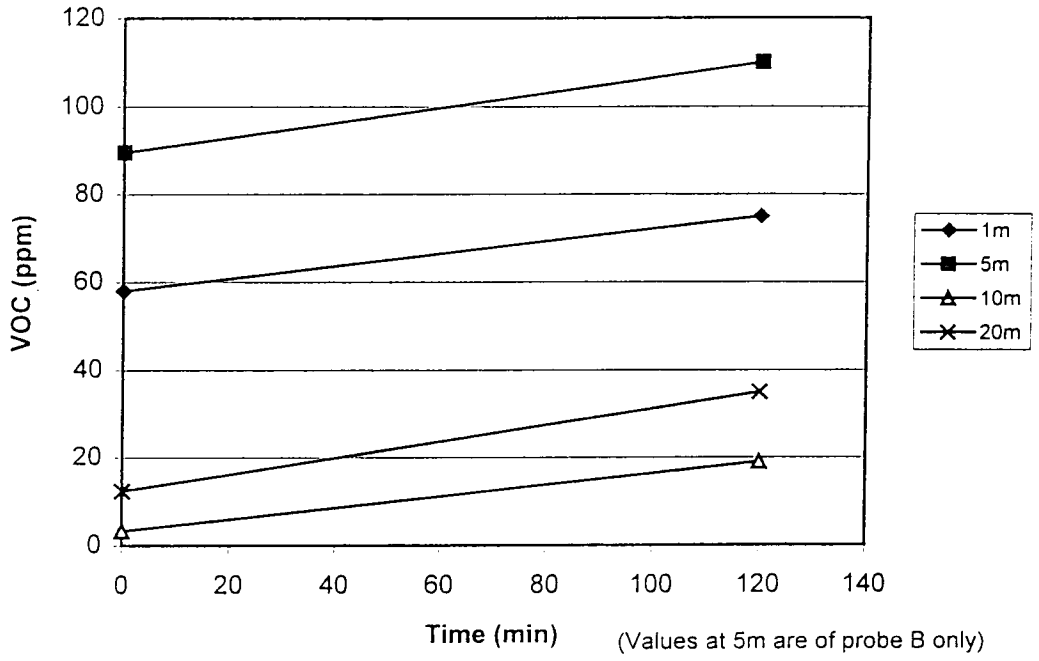


CH4 at Deep Radial Vapour Probes *vs* Time (Short-term at VT3, AS well flow rate = 4 cfm)



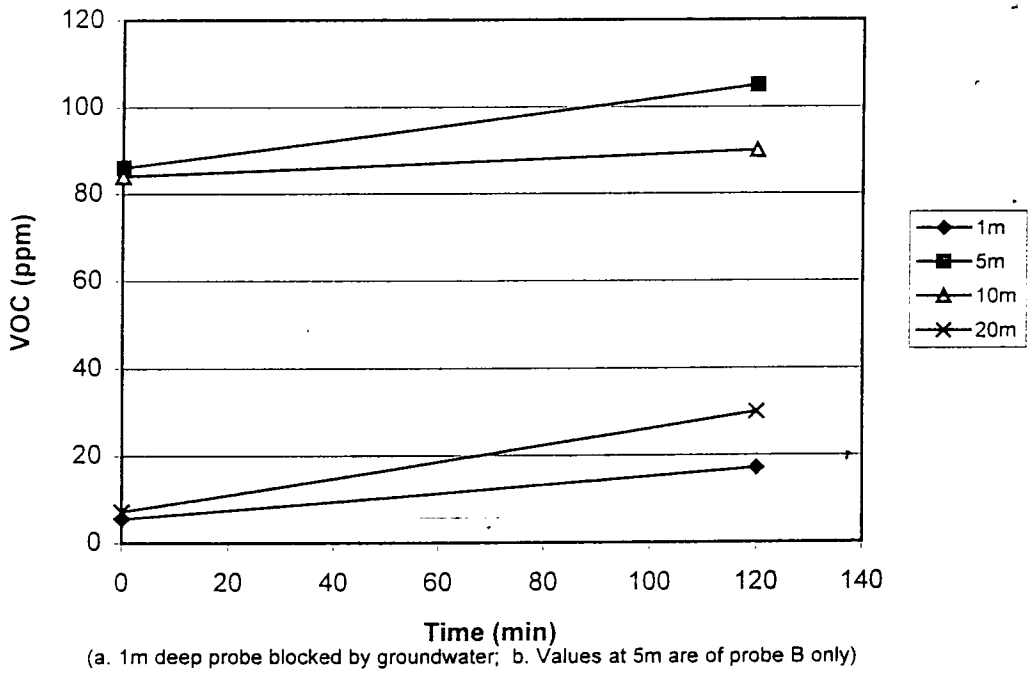
C418\xl\ASvt3-g2

VOC at Shallow Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 2 cfm)



(Values at 5m are of probe B only)

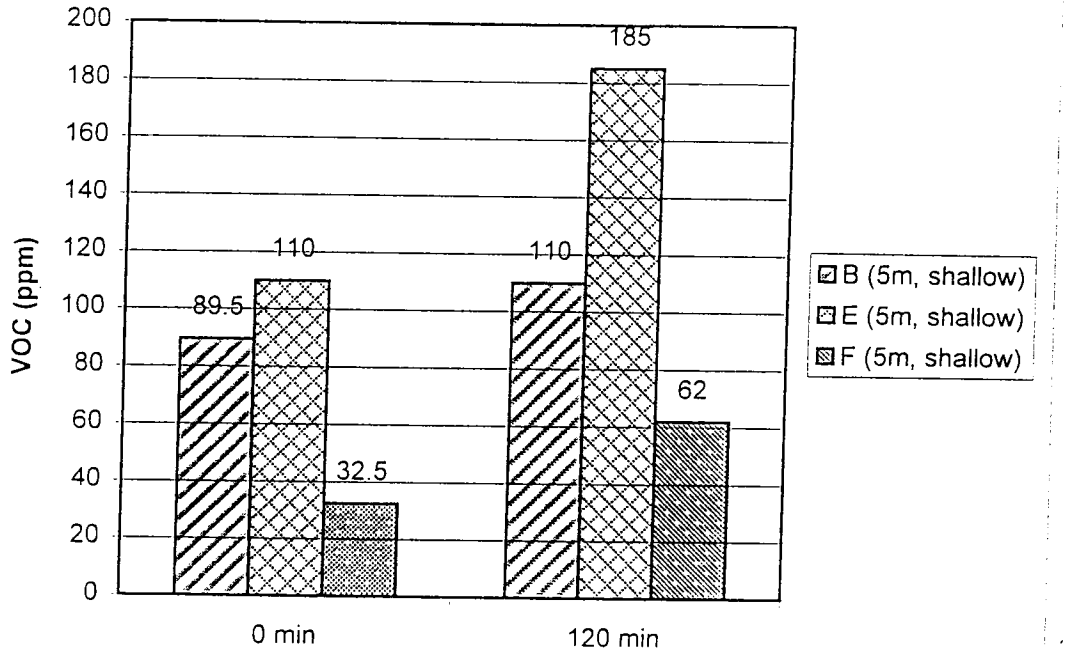
VOC at Deep Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 2 cfm)



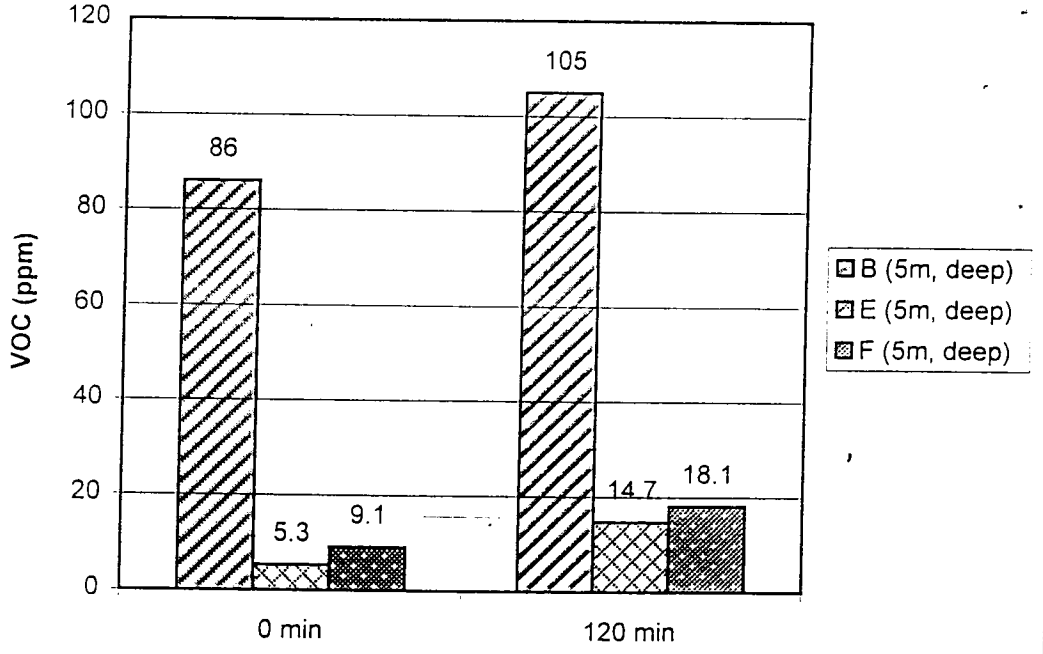
(a. 1m deep probe blocked by groundwater; b. Values at 5m are of probe B only)

C418\xl\ASvt3-g3

VOC at Shallow Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 2 cfm)

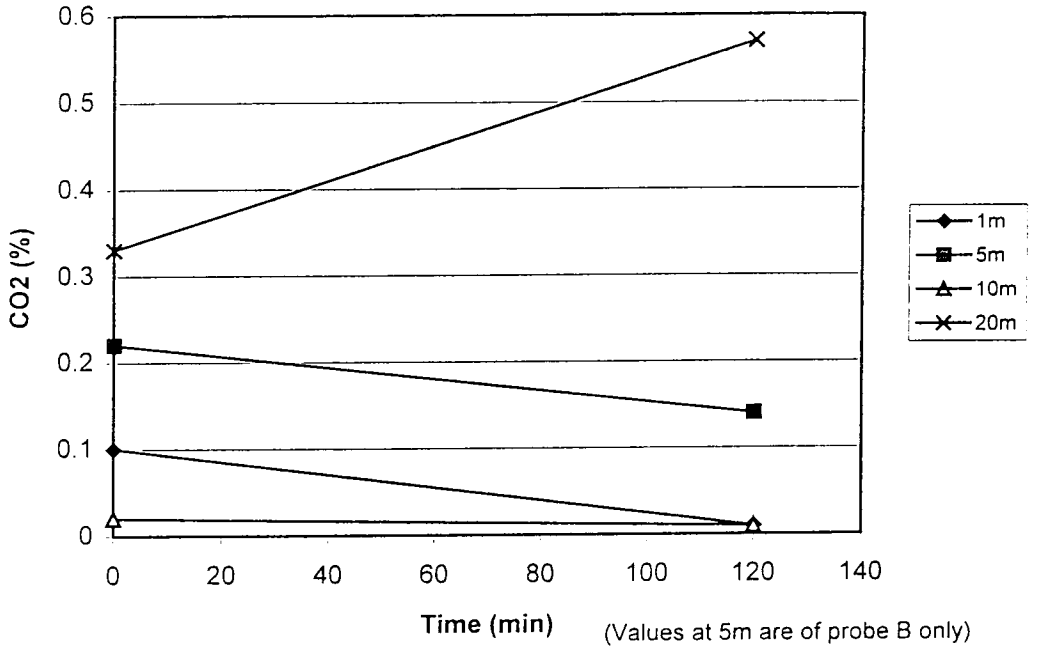


VOC at Deep Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 2 cfm)



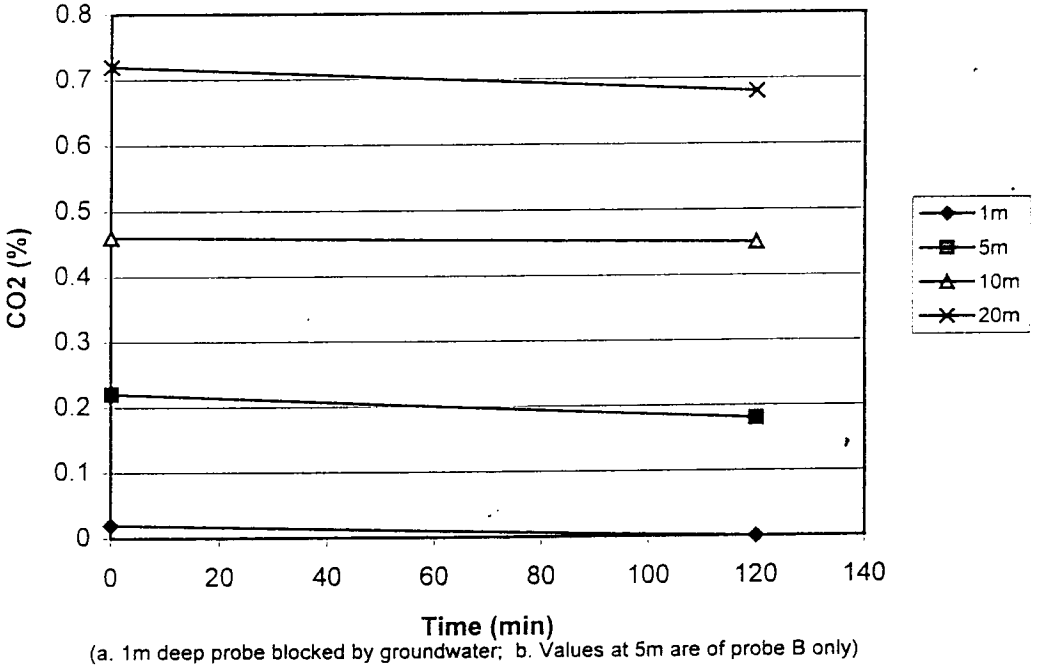
C418\xl\ASvt3-g3

CO2 at Shallow Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 2 cfm)



(Values at 5m are of probe B only)

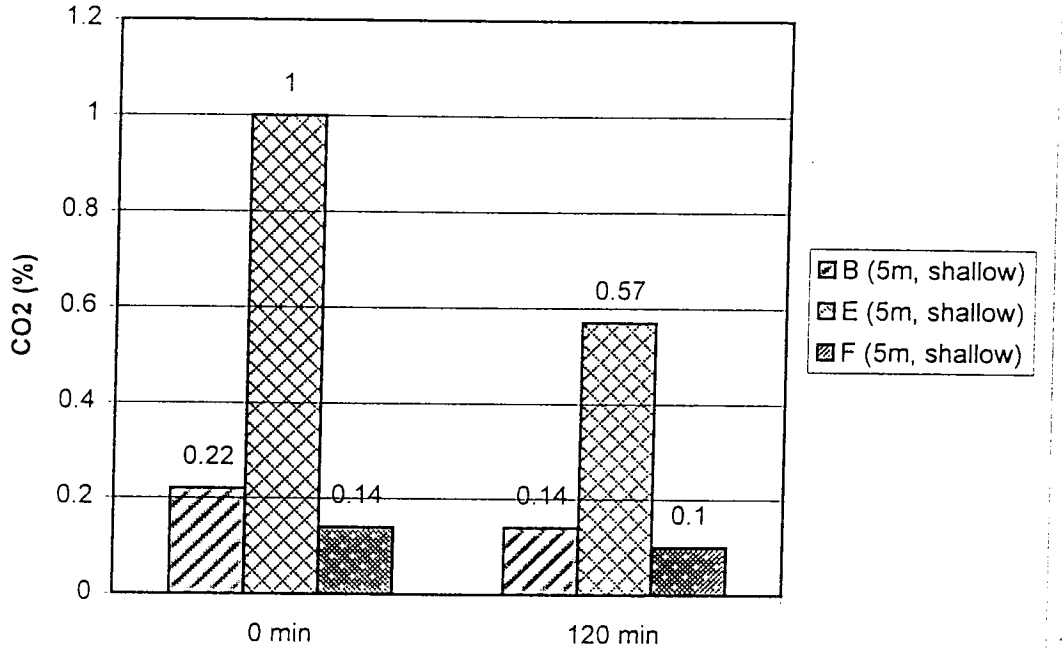
CO2 at Deep Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 2 cfm)



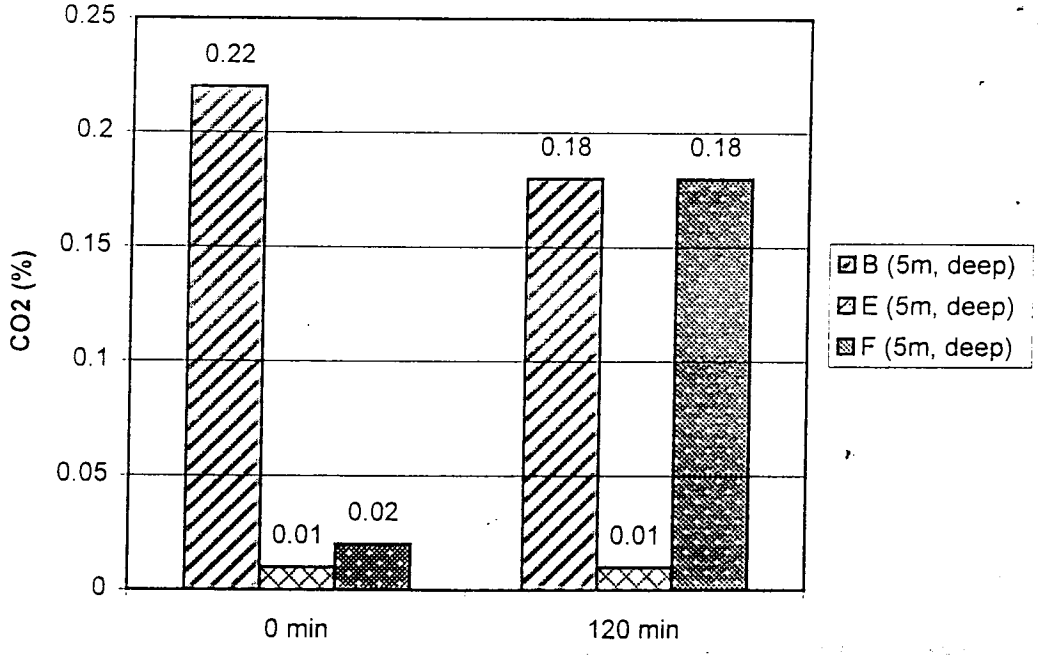
(a. 1m deep probe blocked by groundwater; b. Values at 5m are of probe B only)

C418\xl\ASvt3-g3

CO2 at Shallow Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 2 cfm)

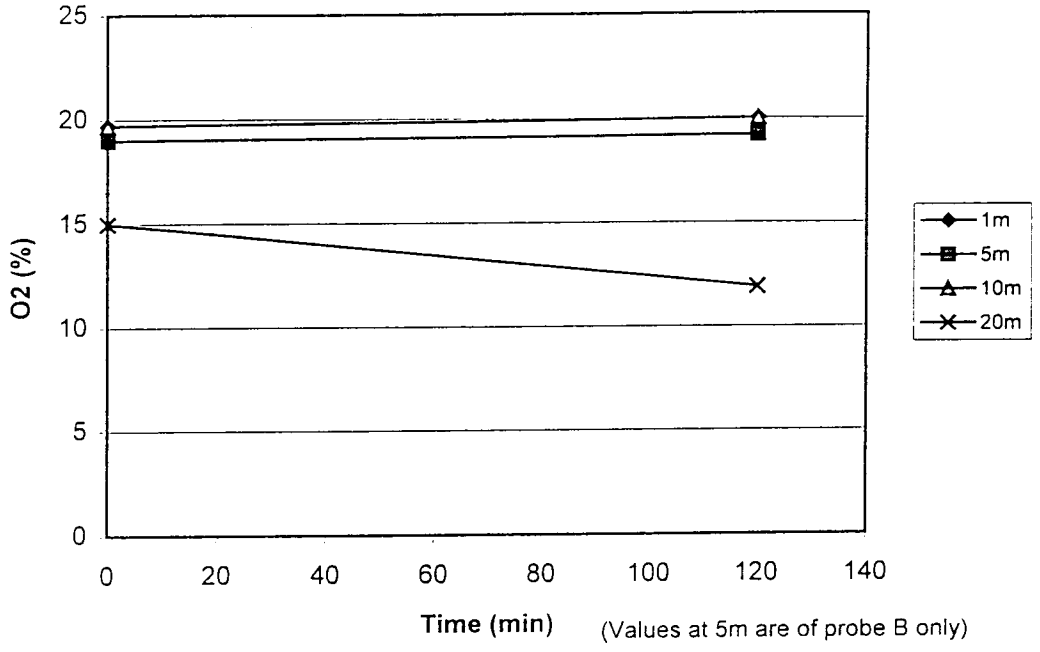


CO2 at Deep Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 2 cfm)



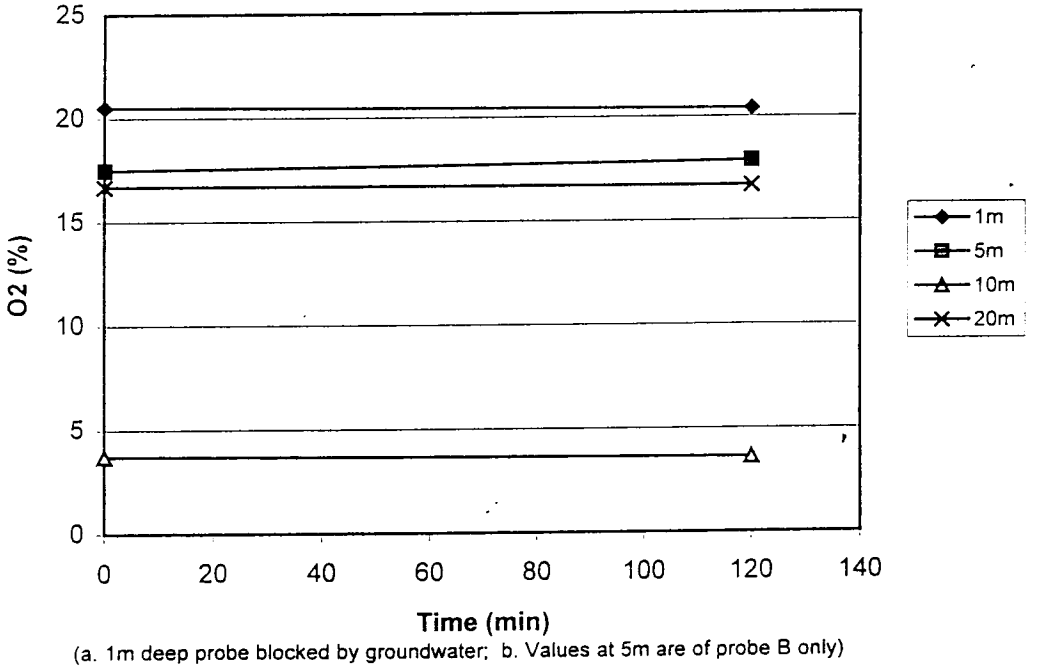
C418\xl\ASvt3-g3

O2 at Shallow Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 2 cfm)



(Values at 5m are of probe B only)

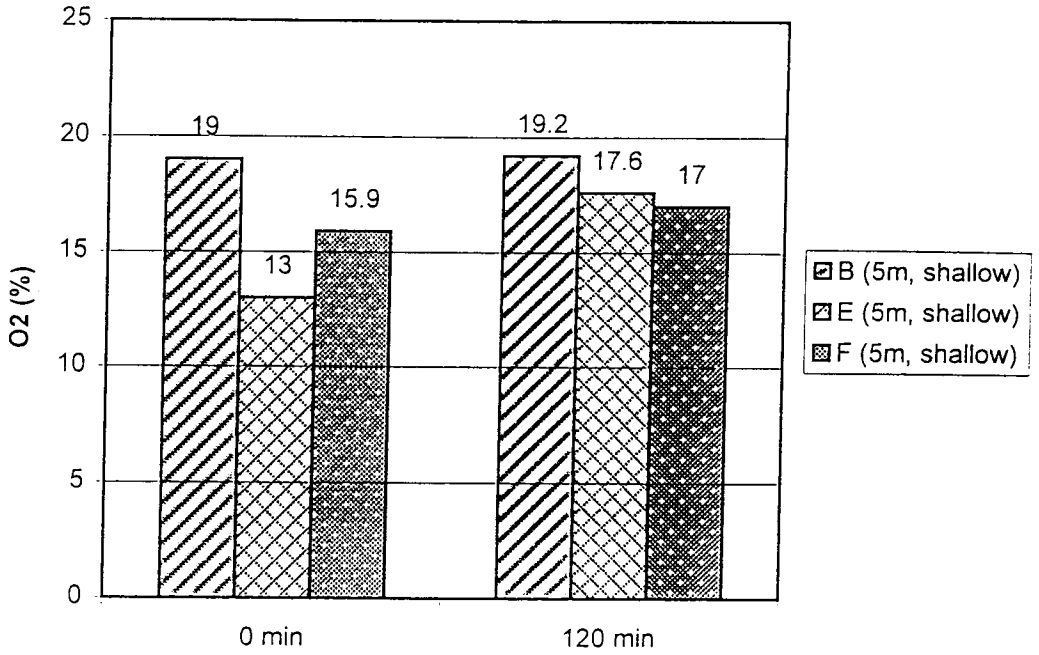
O2 at Deep Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 2 cfm)



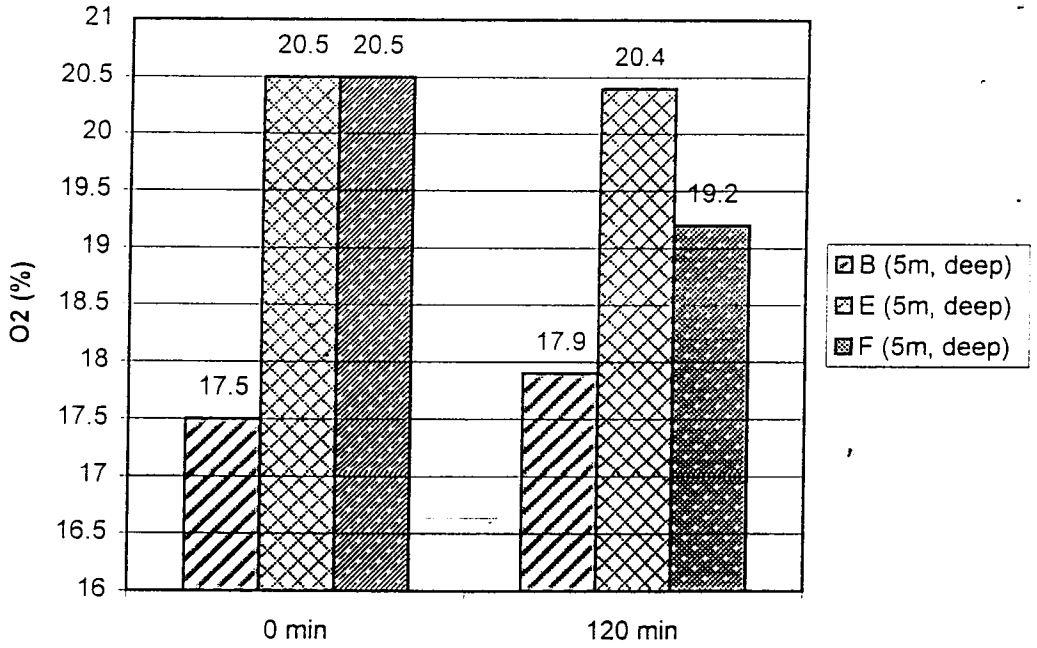
(a. 1m deep probe blocked by groundwater; b. Values at 5m are of probe B only)

C418\xl\ASvt3-g3

O2 at Shallow Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 2 cfm)

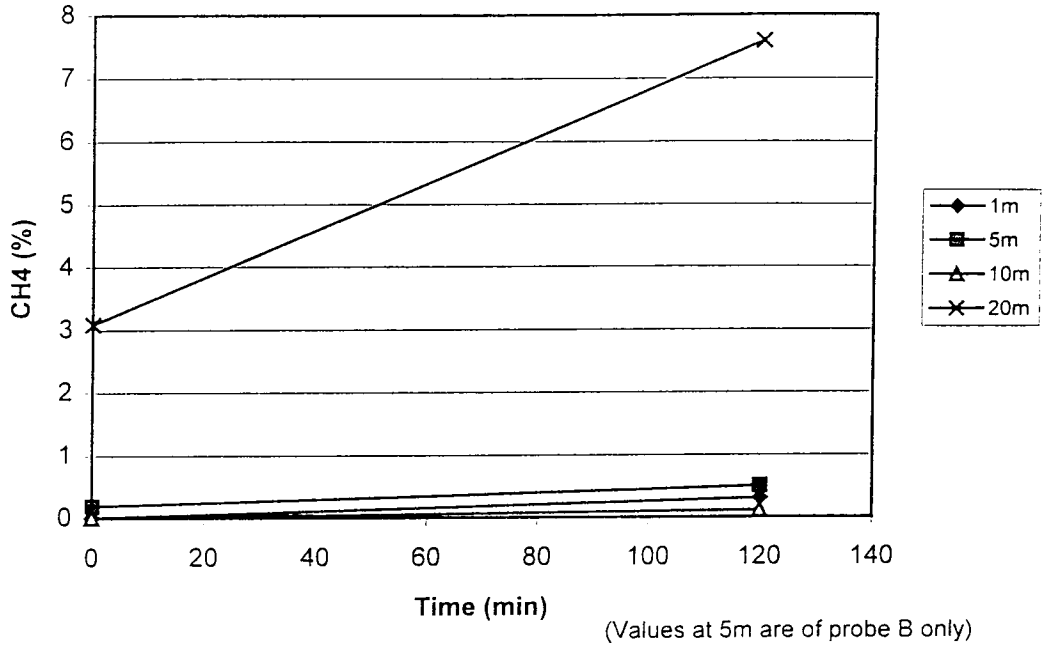


O2 at Deep Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 2 cfm)



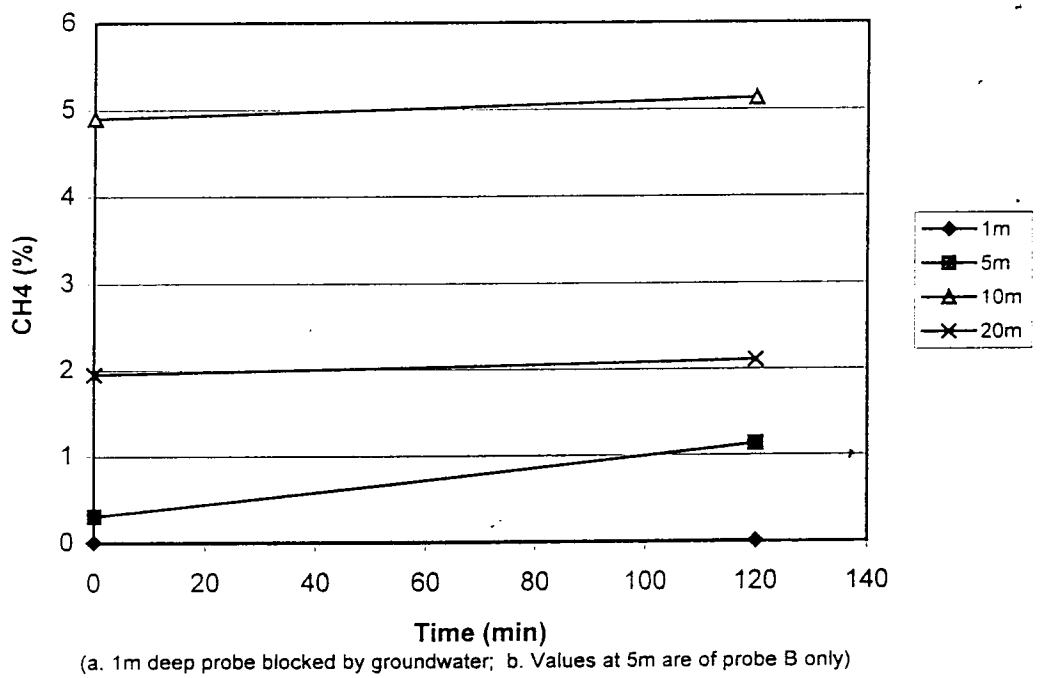
C418\xl\ASvt3-g3

CH4 at Shallow Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 2 cfm)



(Values at 5m are of probe B only)

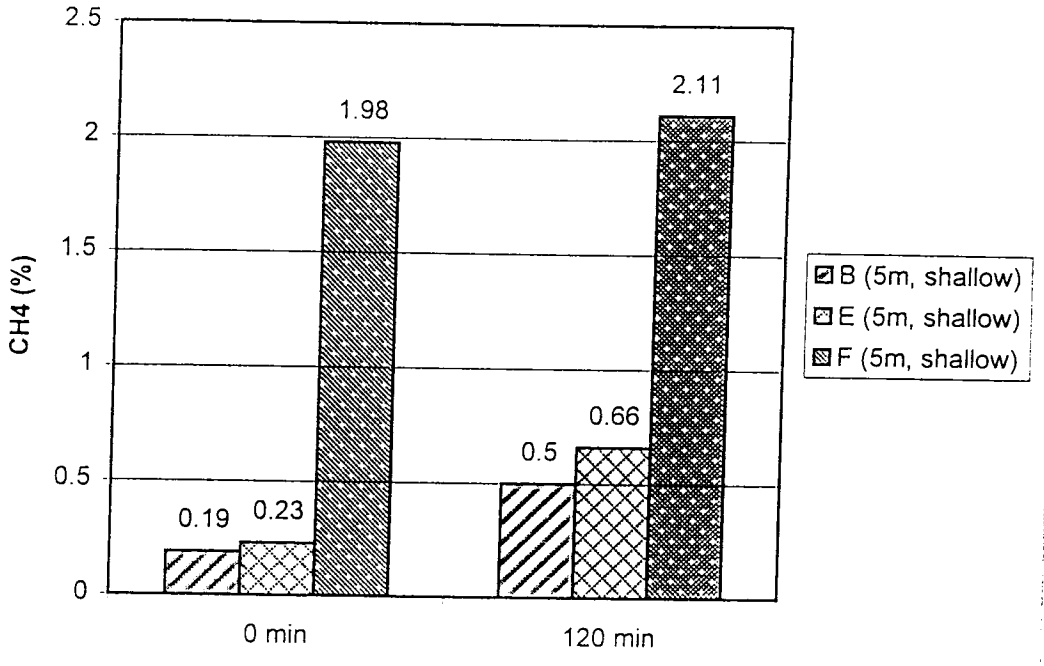
CH4 at Deep Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 2 cfm)



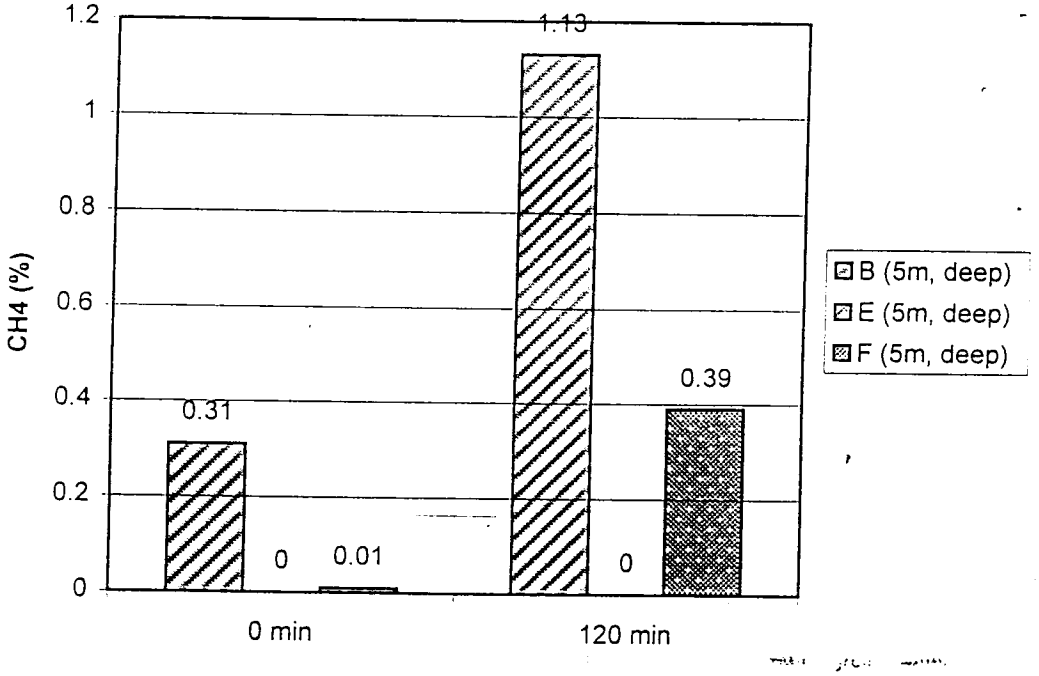
(a. 1m deep probe blocked by groundwater; b. Values at 5m are of probe B only)

C418\xl\ASvt3-g3

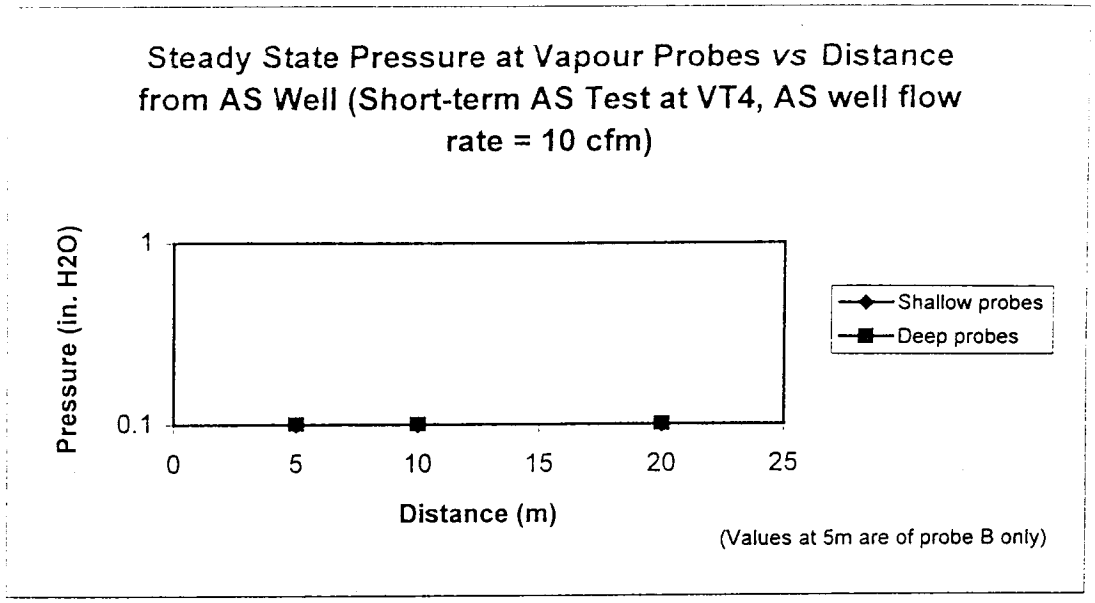
CH4 at Shallow Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 2 cfm)

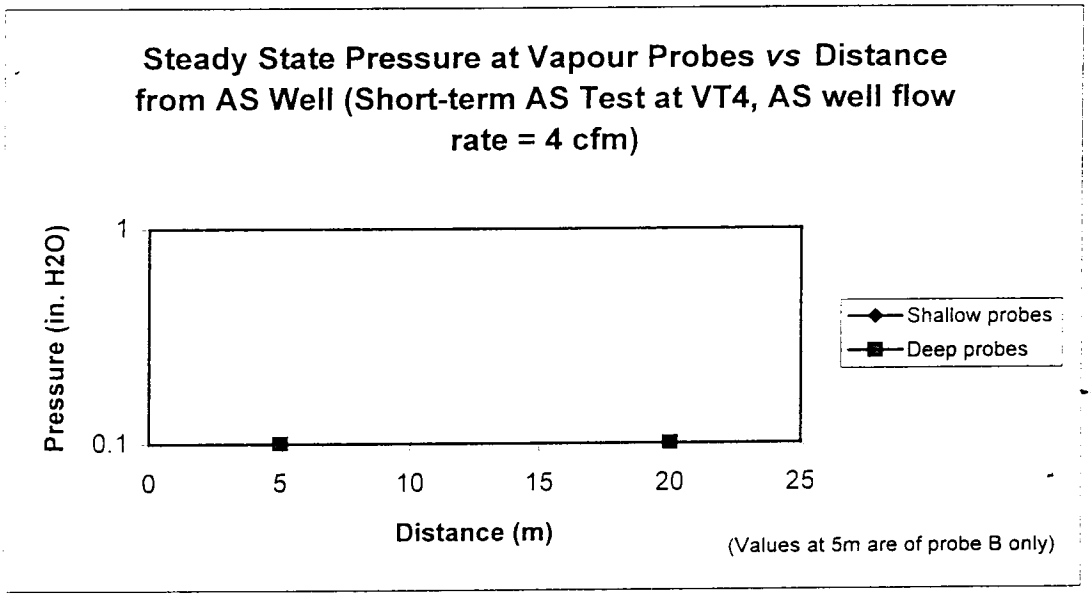


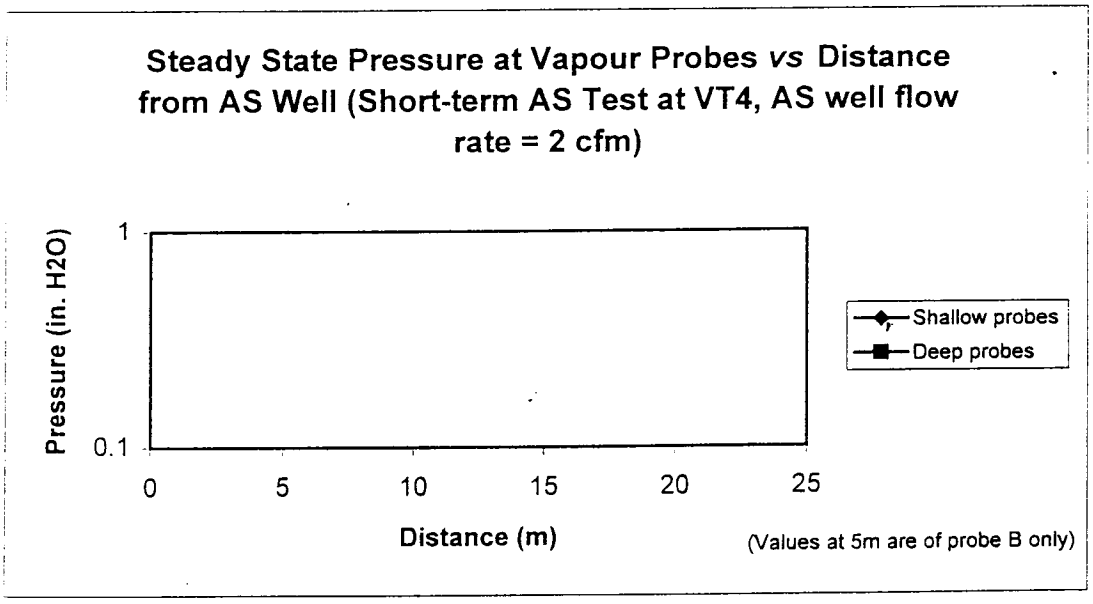
CH4 at Deep Radial Vapour Probes *vs* Time (Short-term AS Test at VT3, AS well flow rate = 2 cfm)



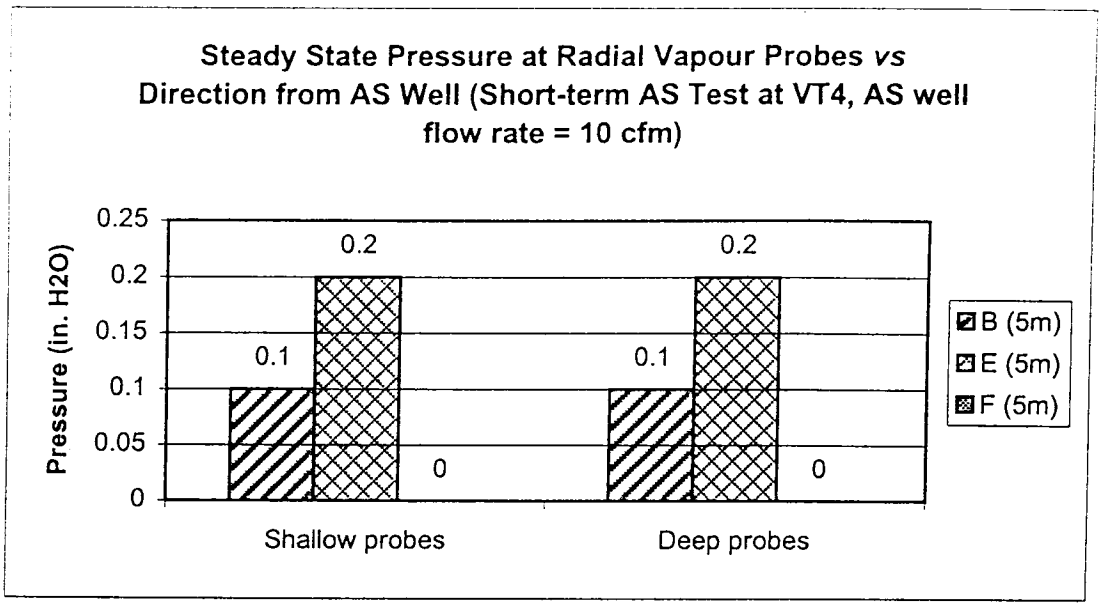
C418\xl\ASvt3-g3

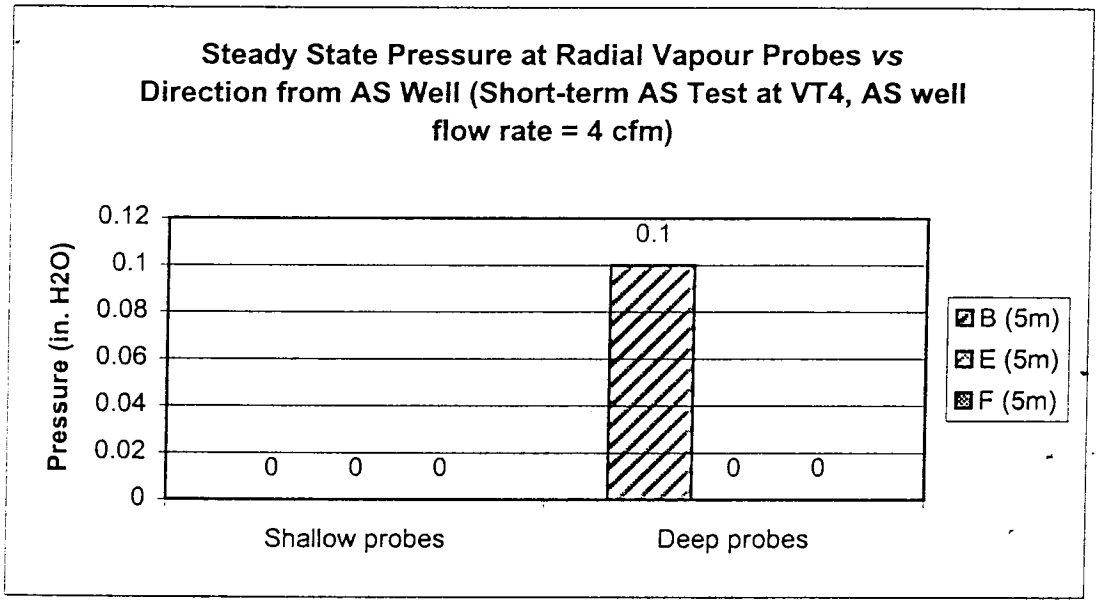


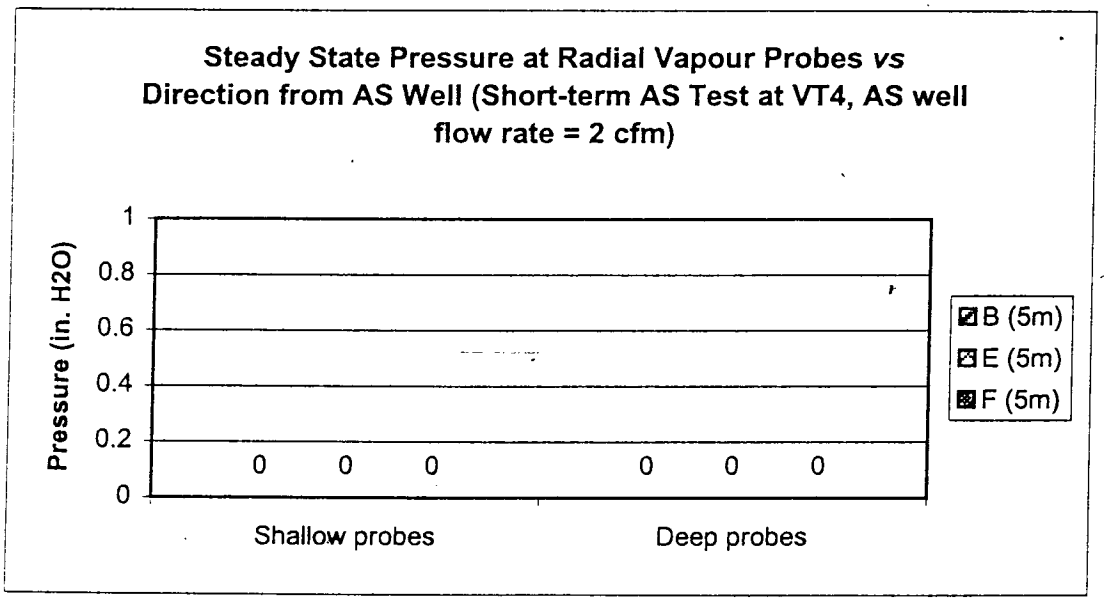




C418\xl\Asvt4-p







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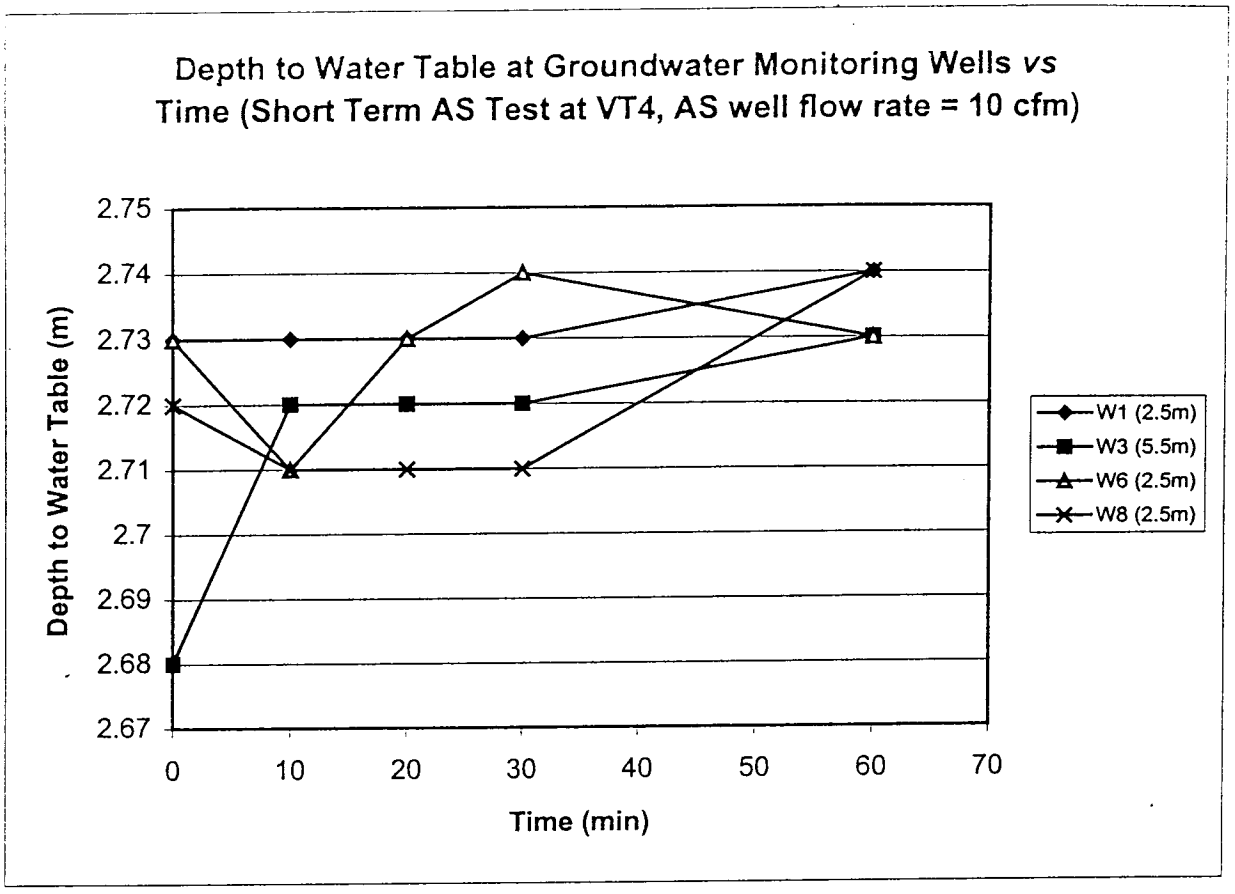
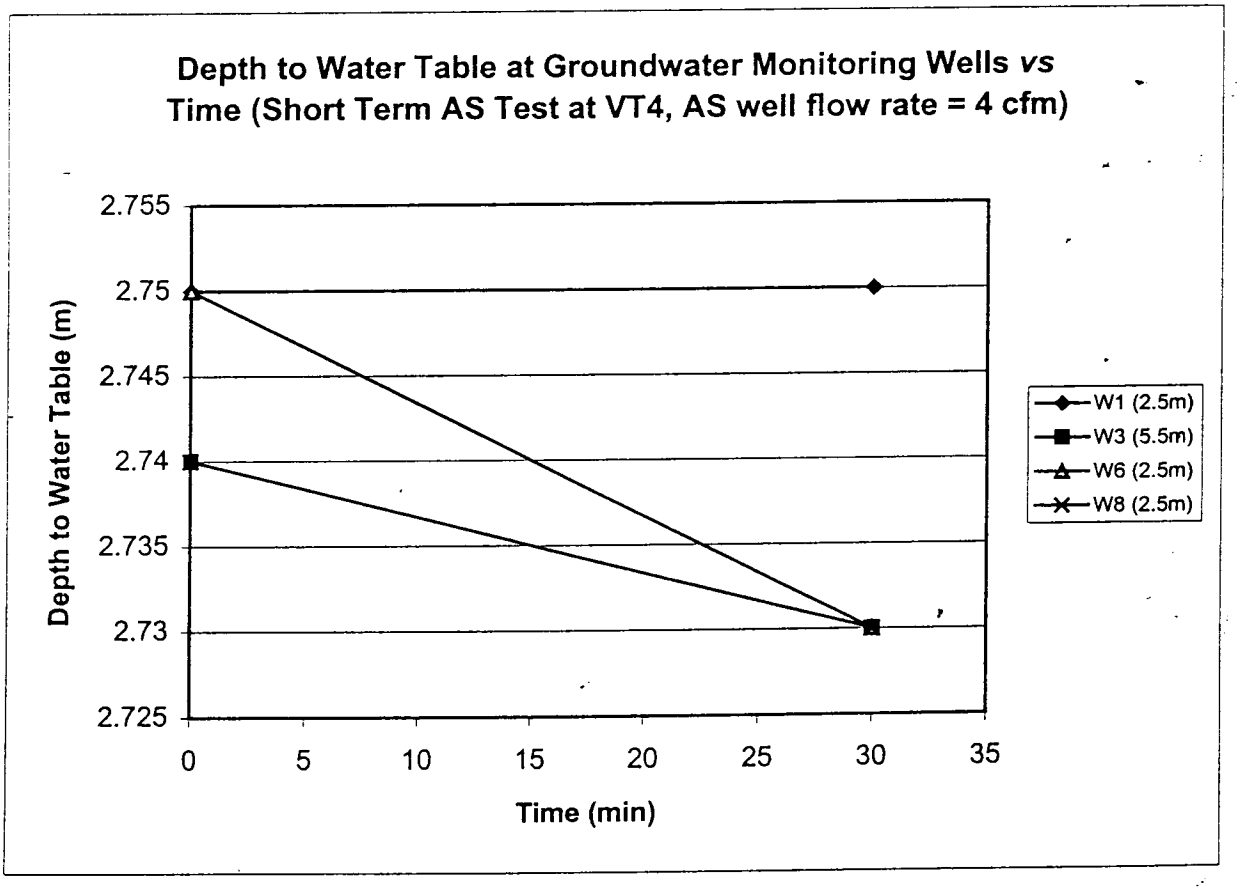
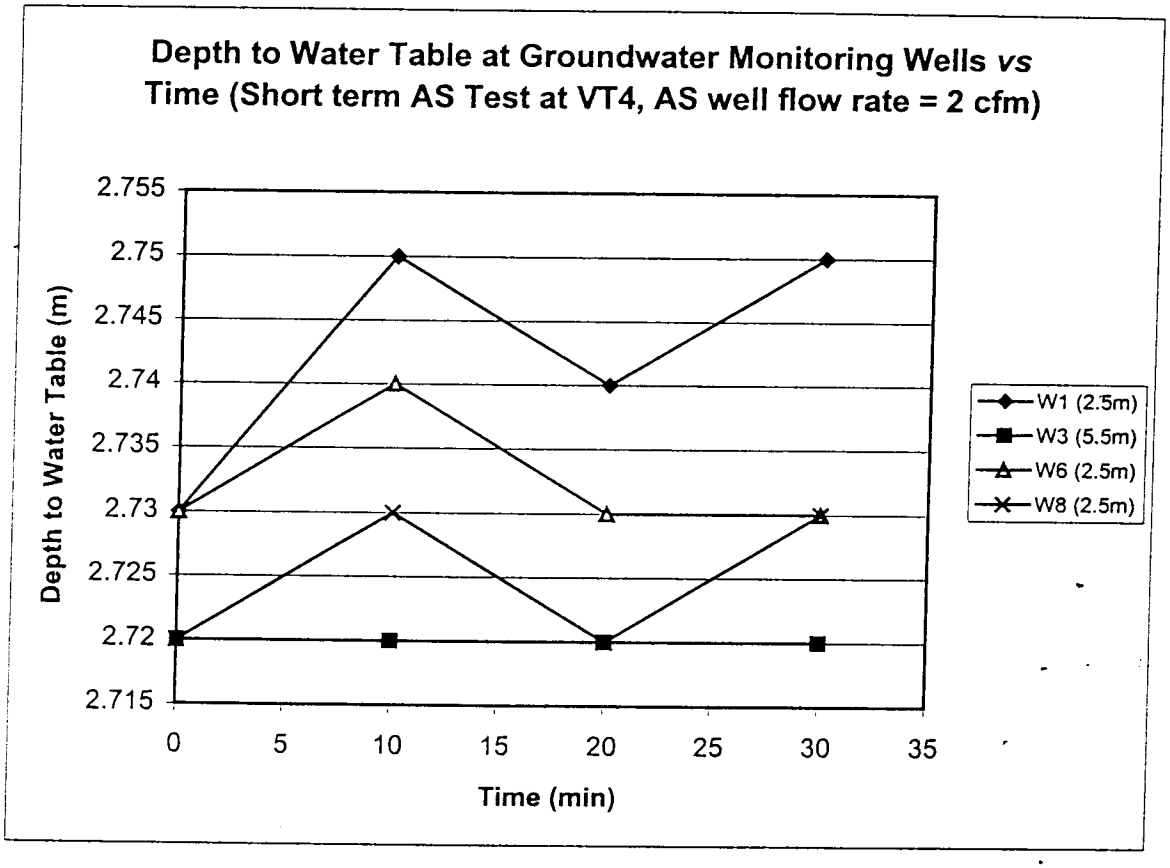
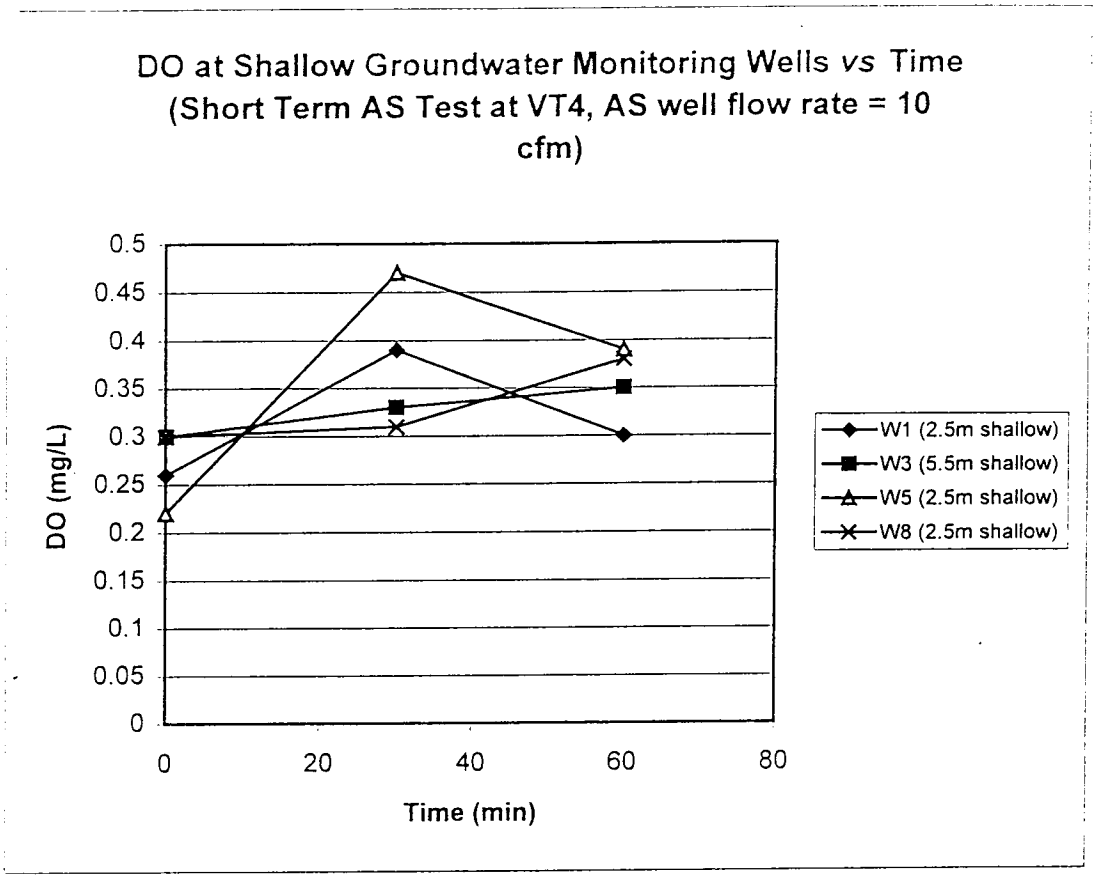
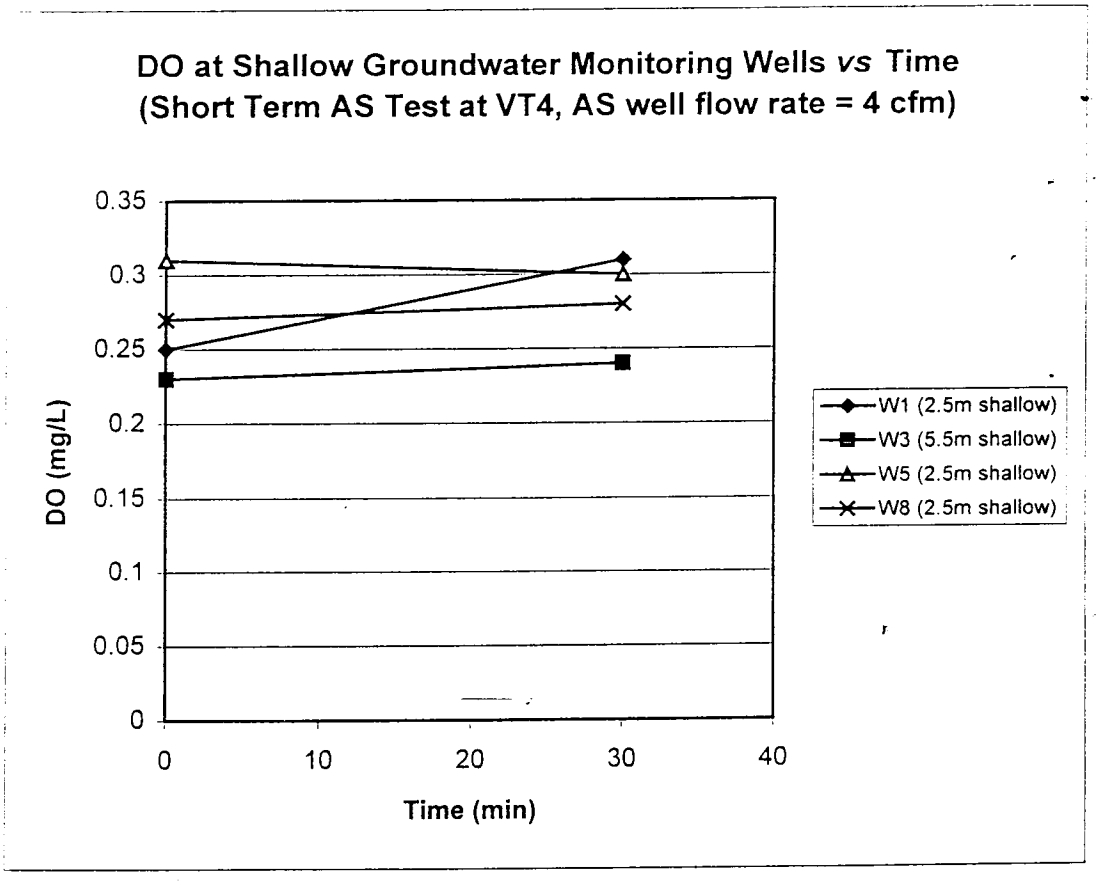

Depth to Water Table at Groundwater Monitoring Wells vs
Time (Short Term AS Test at VT4, AS well flow rate = 10 cfm)
Depth to Water Table (m)
2.75
2.74
2.73
2.72
2.71
2.7
2.69
2.68
2.67
0
10
20
30
40
50
60
70
Time (min)
W1 (2.5m)
W3 (5.5m)
W6 (2.5m)
W8 (2.5m)


Depth to Water Table at Groundwater Monitoring Wells vs
Time (Short Term AS Test at VT4, AS well flow rate = 4 cfm)
Depth to Water Table (m)
2.755
2.75
2.745
2.74
2.735
2.73
2.725
0
5
10
15
20
25
30
35
Time (min)
W1 (2.5m)
W3 (5.5m)
W6 (2.5m)
W8 (2.5m)

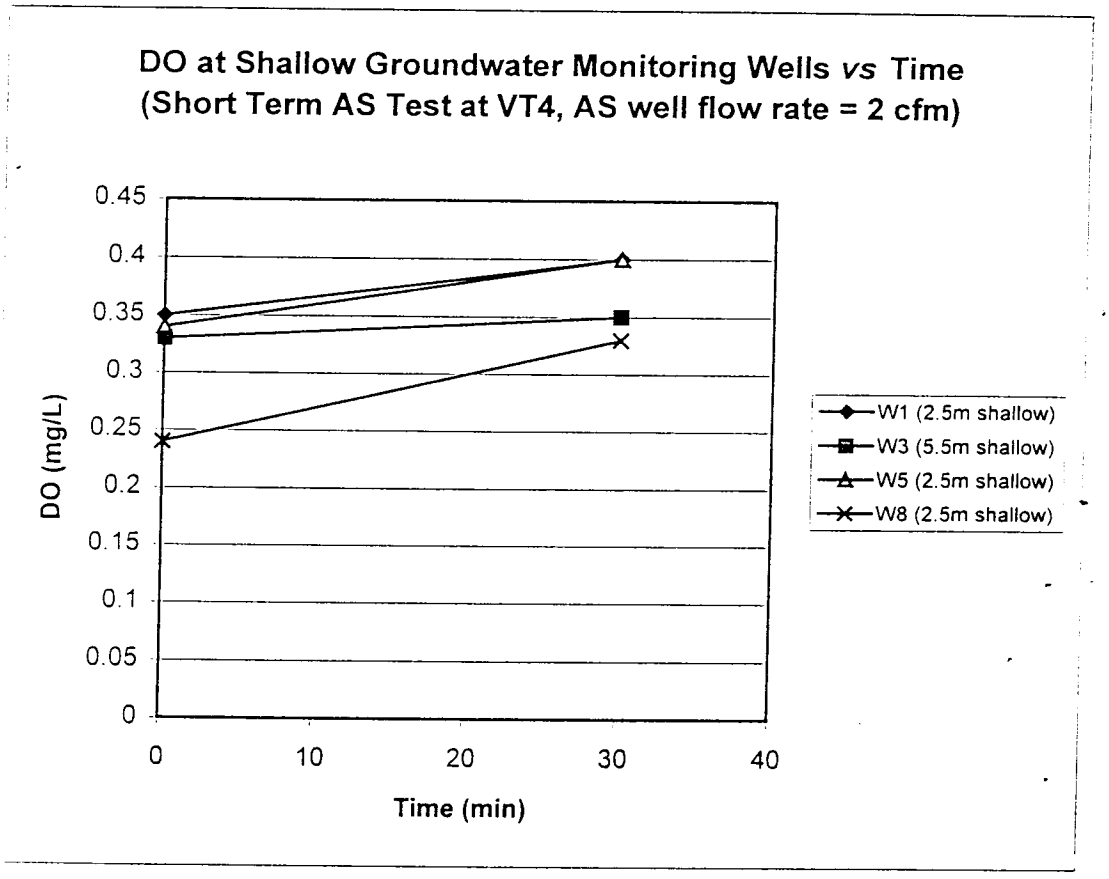
C418\ASvt4-p


Depth to Water Table at Groundwater Monitoring Wells vs Time (Short term AS Test at VT4, AS well flow rate = 2 cfm)
Depth to Water Table (m)
2.755
2.75
2.745
2.74
2.735
2.73
2.725
2.72
2.715
0
5
10
15
20
25
30
35
Time (min)
W1 (2.5m)
W3 (5.5m)
W6 (2.5m)
W8 (2.5m)

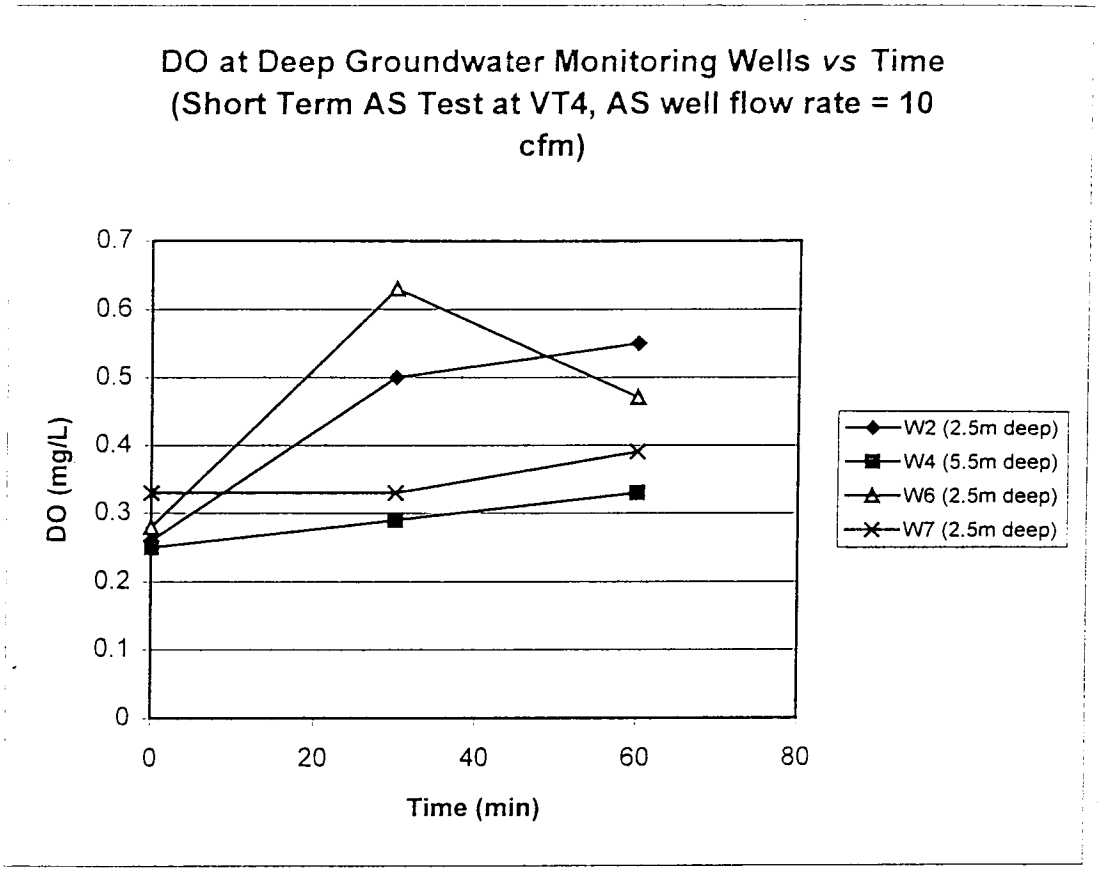


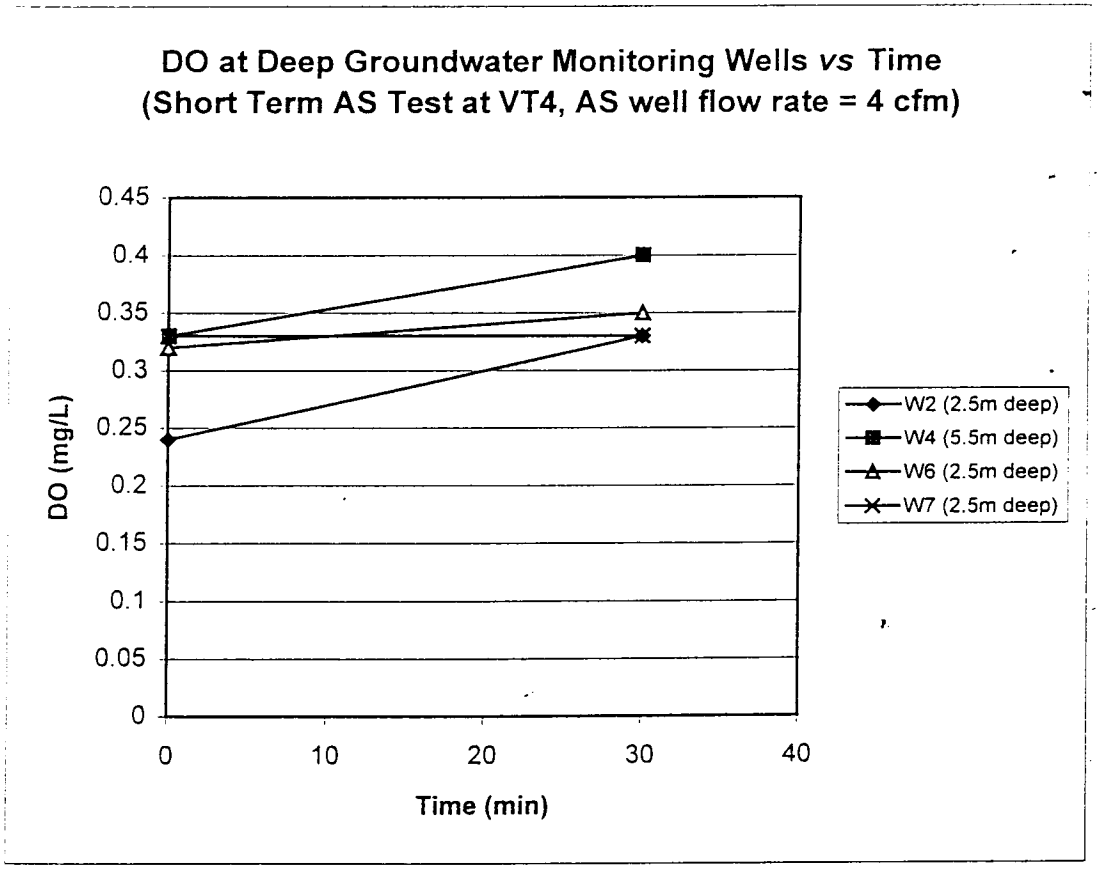


C418\xl\Asvt4-g4

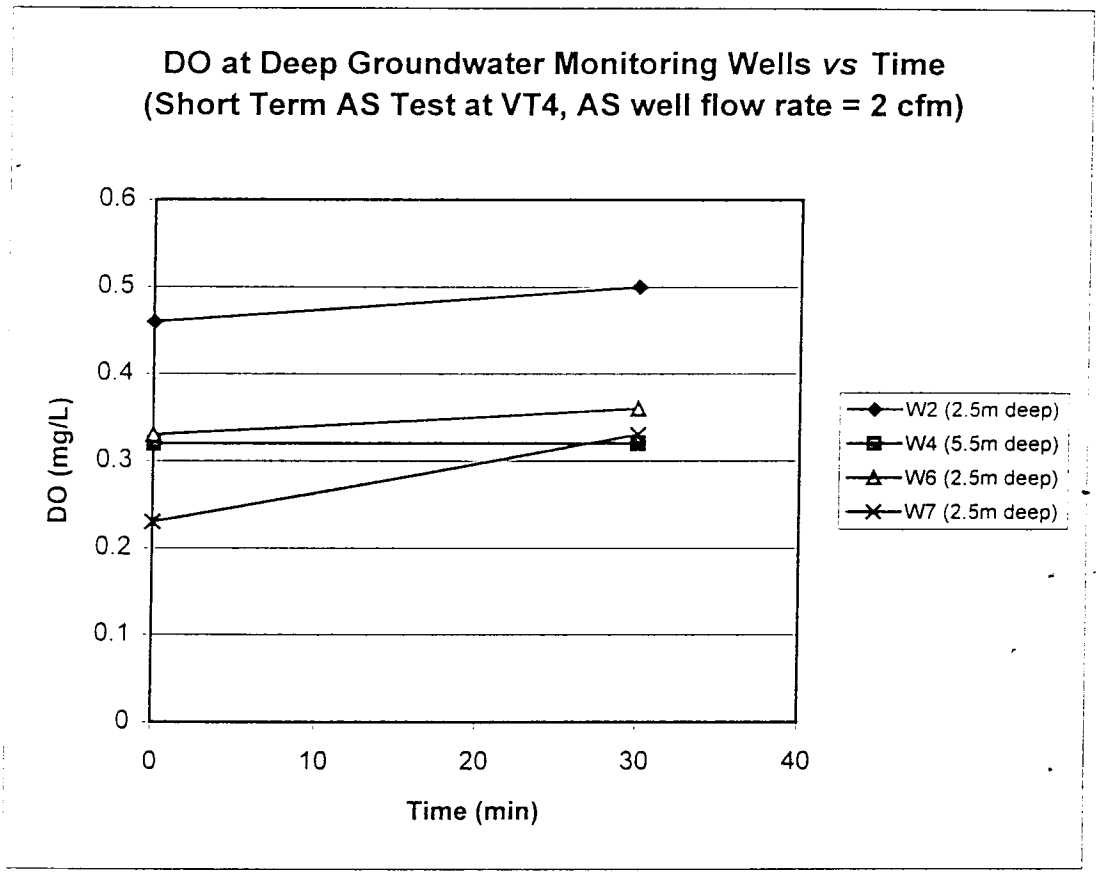


C418\xl\Asvt4-g4



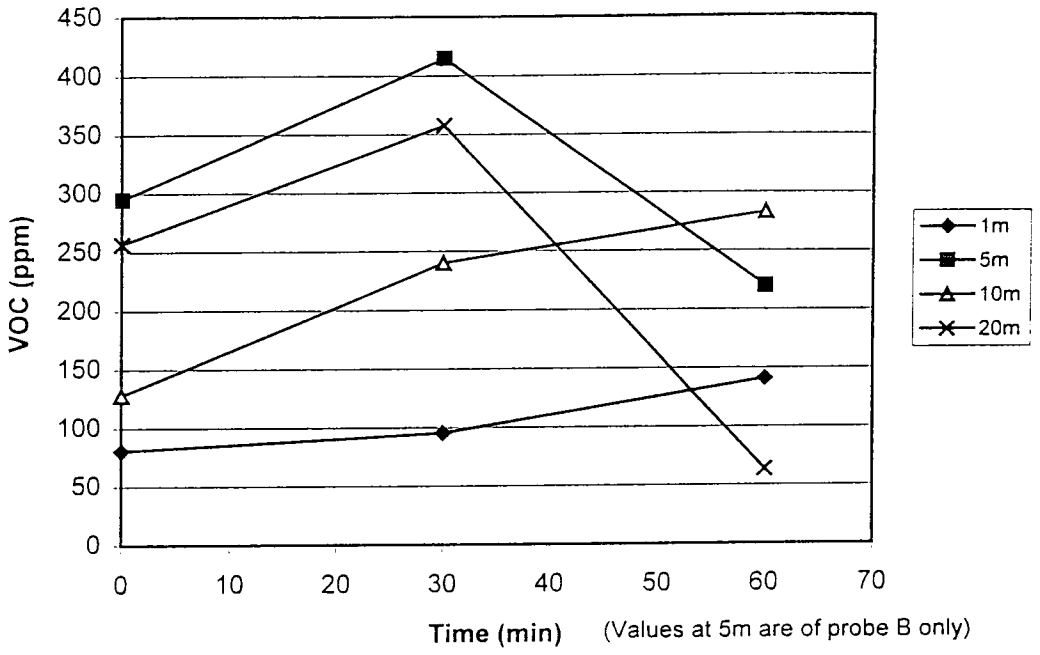


C418\xl\Asvt4-g4



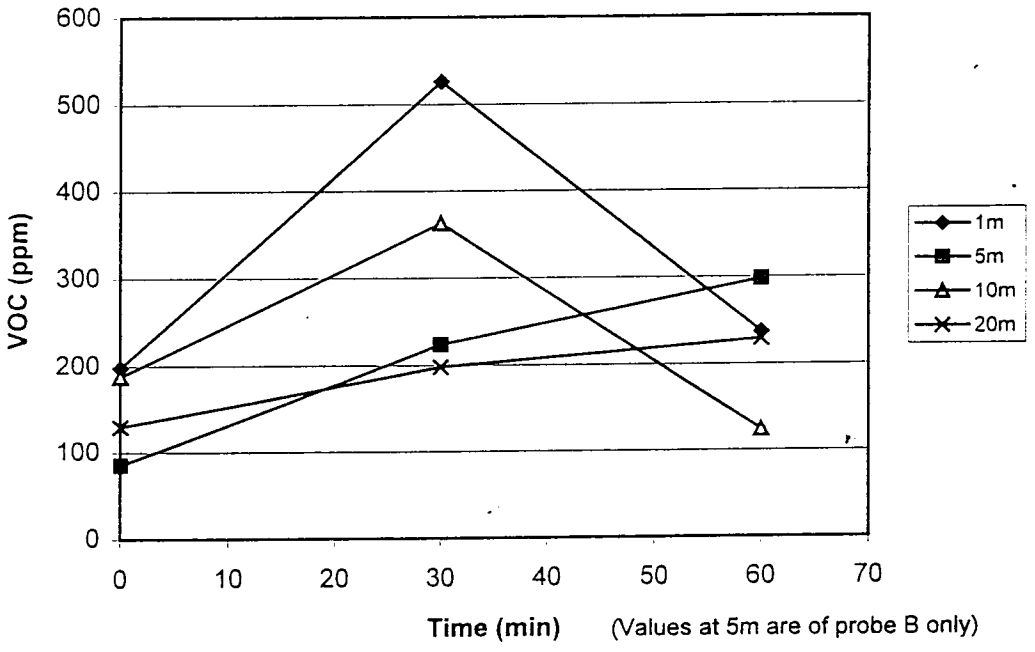
C418\xl\Asvt4-g4

VOC at Shallow Vapour Probes *vs* Time (Short-term AS Test at VT4, AS well flow rate = 10 cfm)



(Values at 5m are of probe B only)

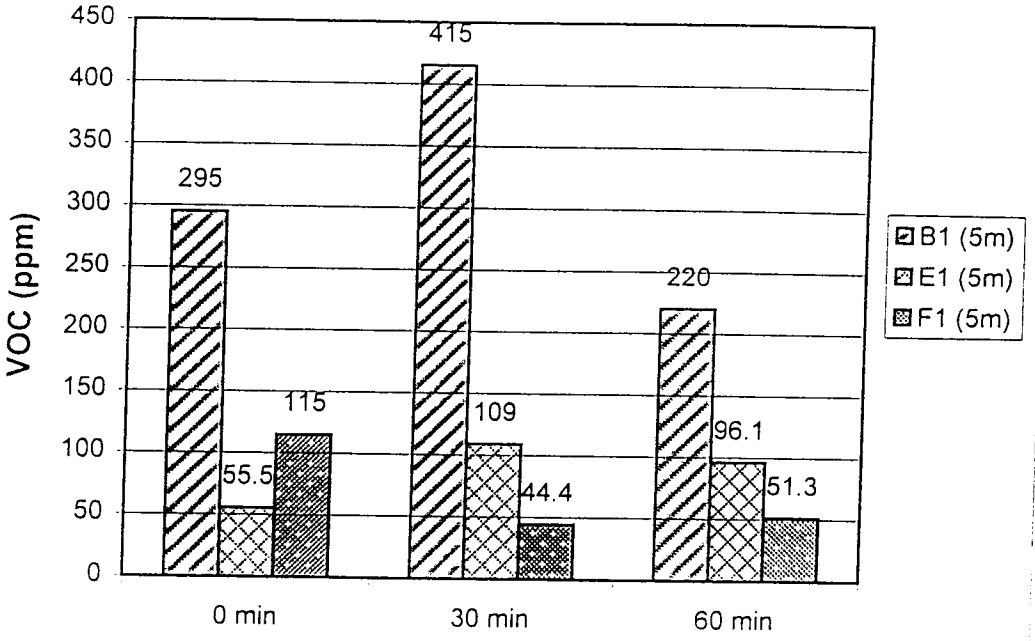
VOC at Deep Vapour Probes *vs* Time (Short-term AS Test at VT4, AS well flow rate = 10 cfm)



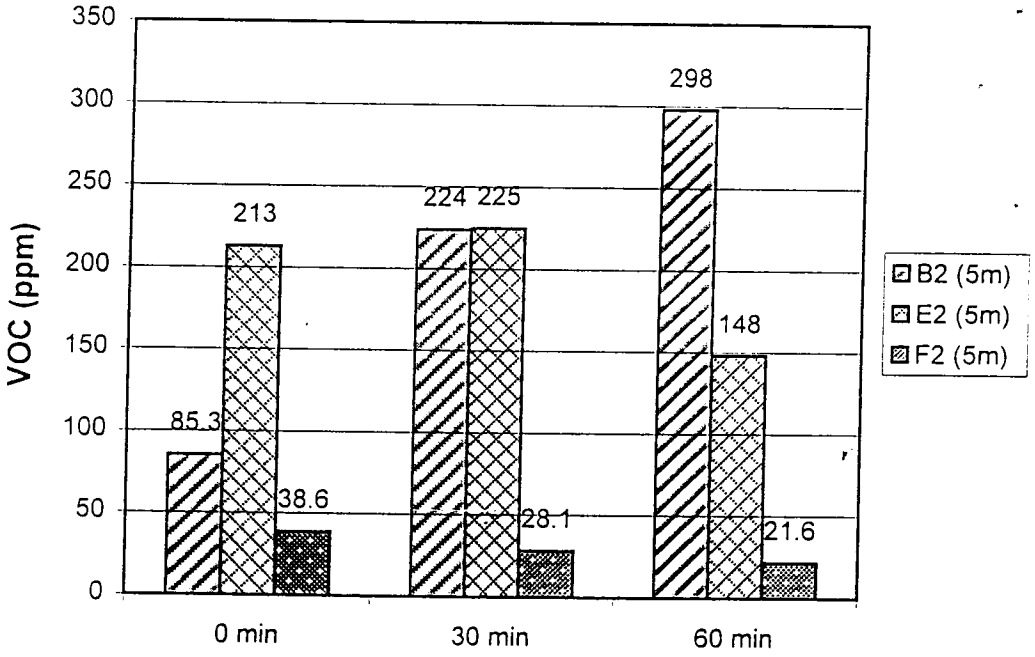
(Values at 5m are of probe B only)

C418\xl\Asvt4-g1

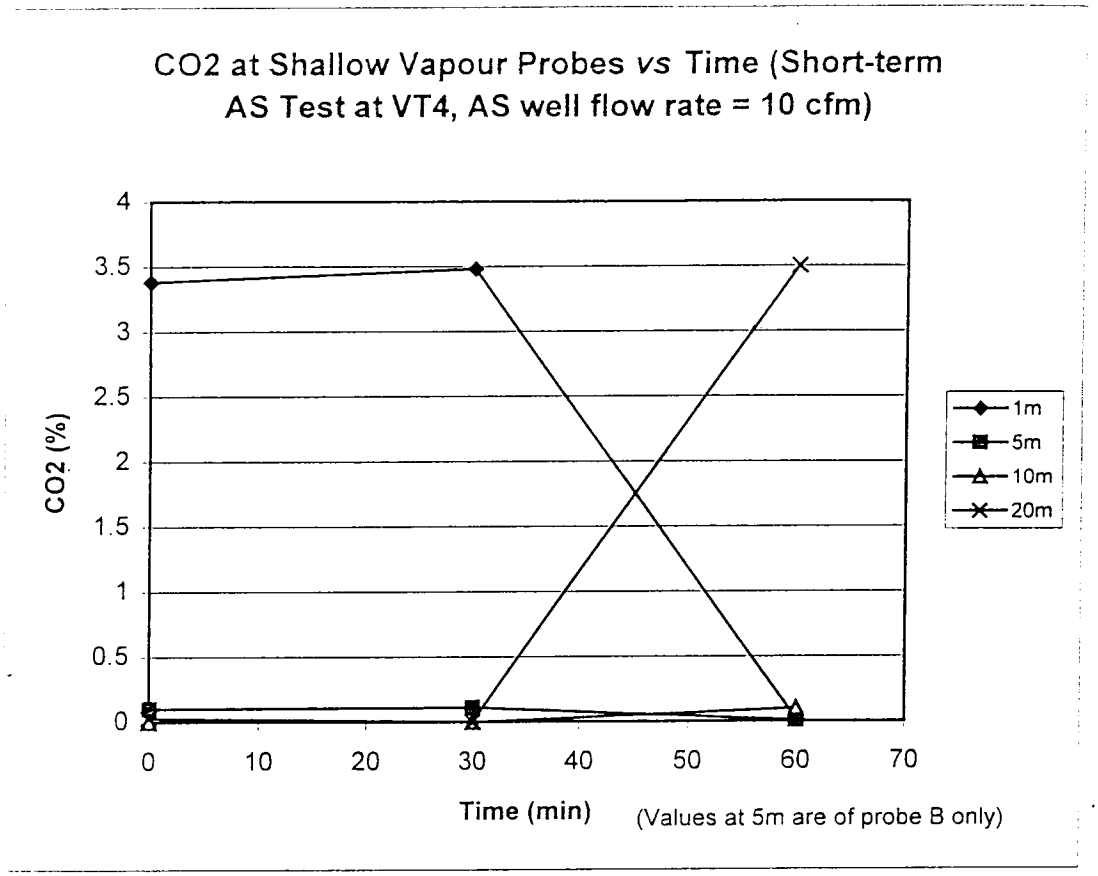
VOC at Shallow Radial Vapour Probes *vs* Time (Short-term AS Test at VT4, AS well flow rate = 10 cfm)

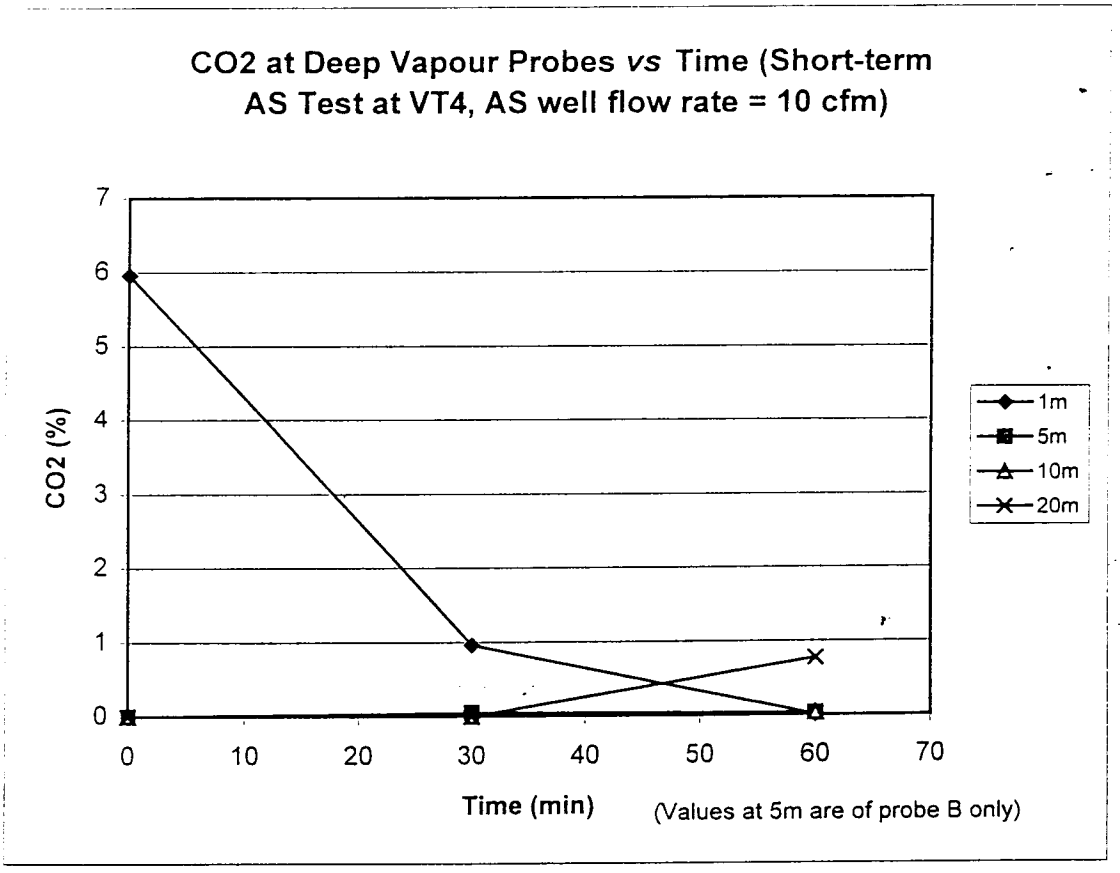


VOC at Deep Radial Vapour Probes *vs* Time (Short-term AS Test at VT4, AS well flow rate = 10 cfm)



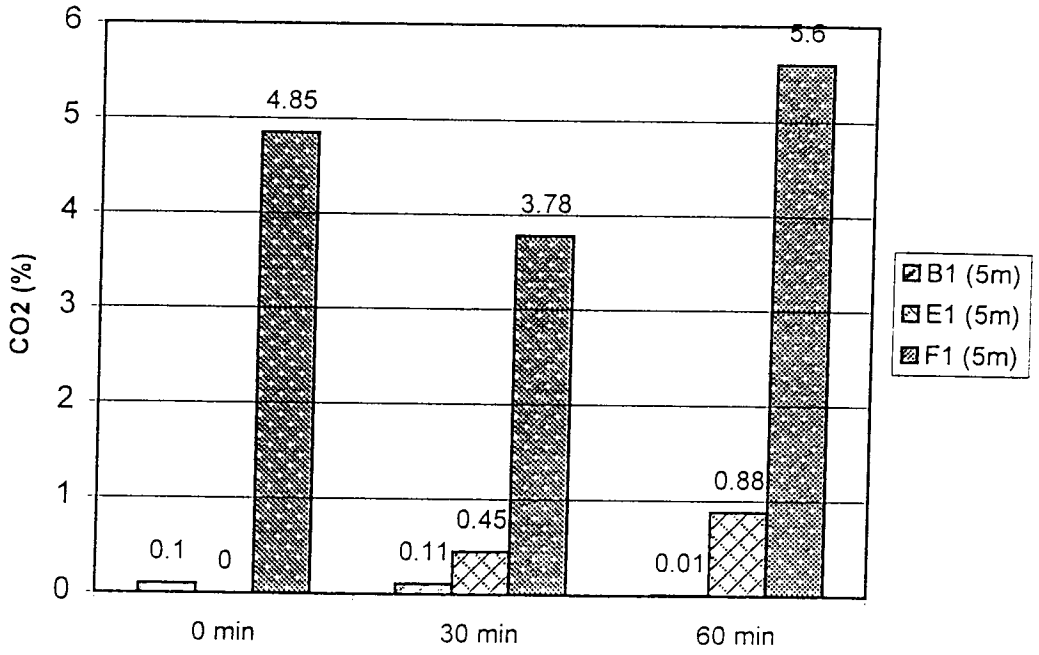
C418\xl\Asvt4-g1



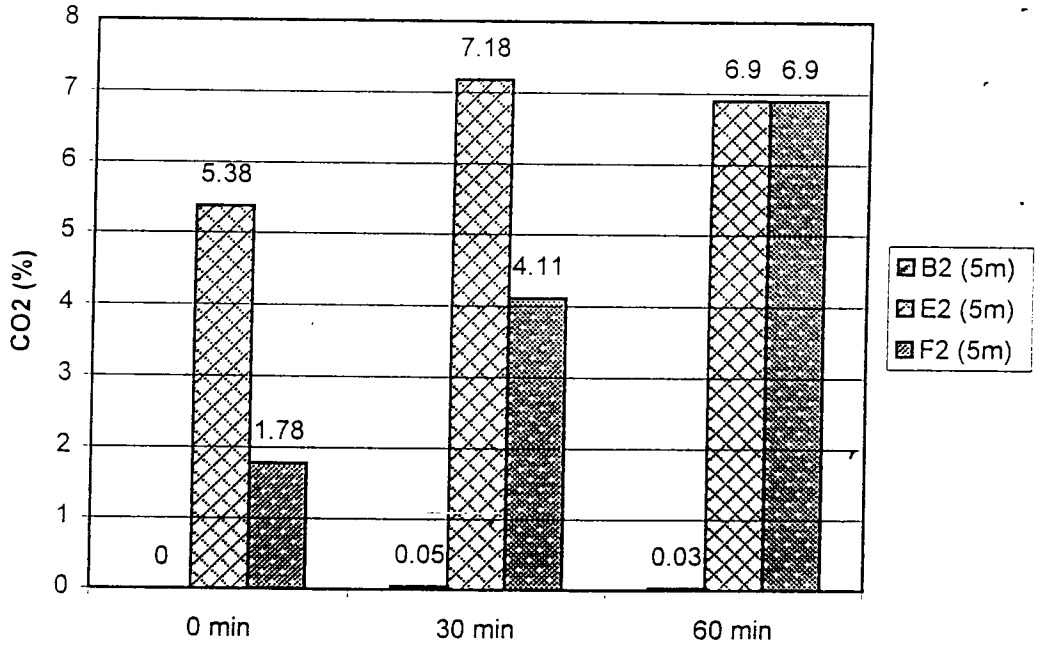


C418\xl\Asvt4-g1

CO2 at Shallow Radial Vapour Probes *vs* Time (Short-term AS Test at VT4, AS well flow rate = 10 cfm)

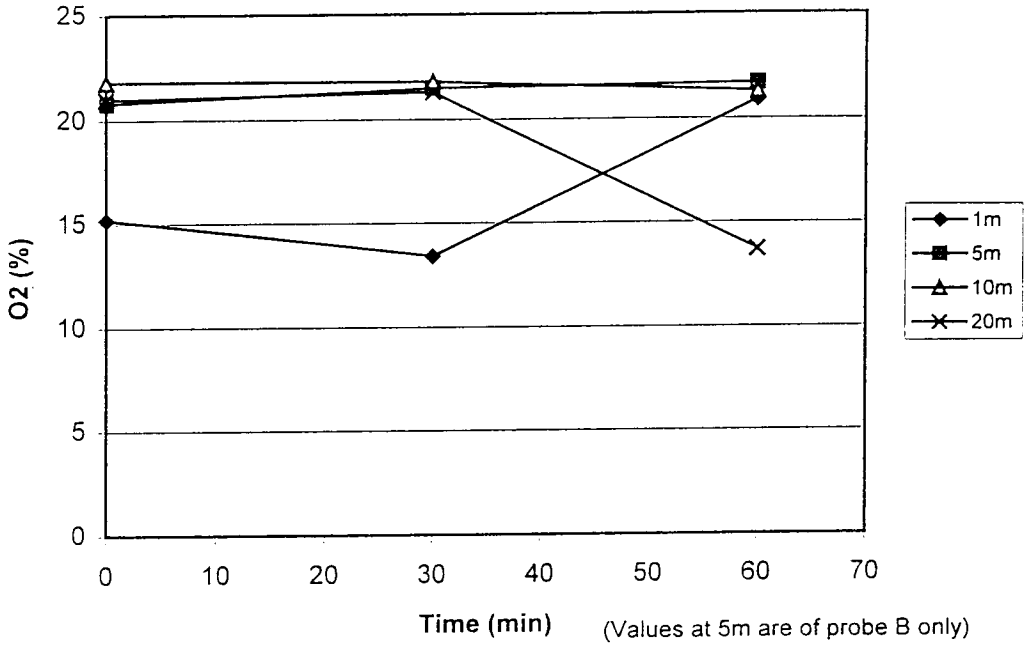


CO2 at Deep Radial Vapour Probes *vs* Time (Short-term AS Test at VT4, AS well flow rate = 10 cfm)



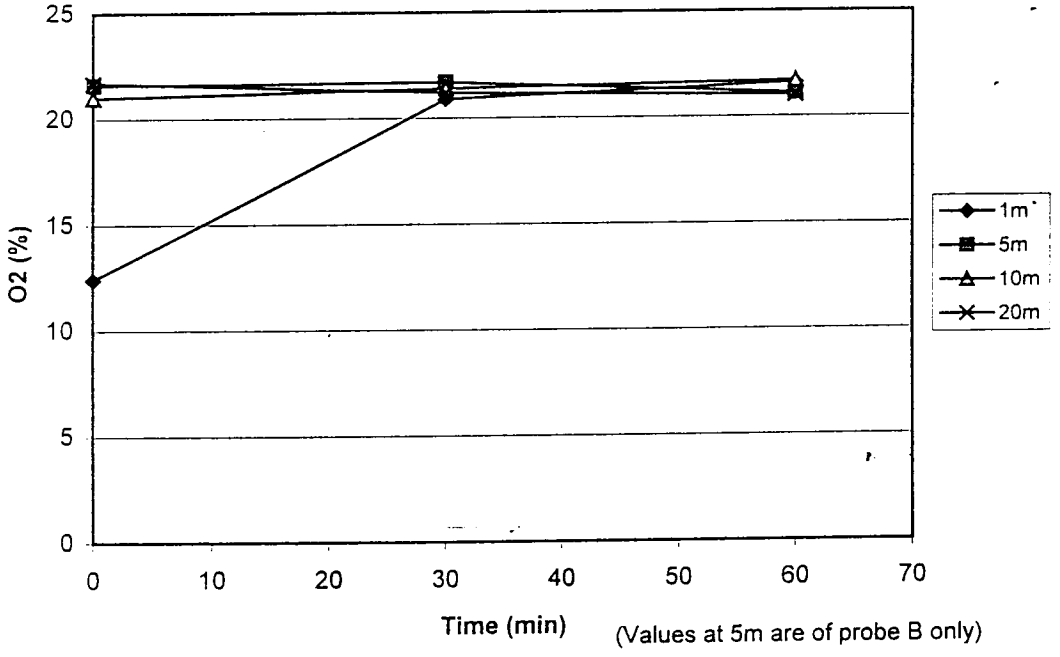
C418\xl\Asvt4-g1

O2 at Shallow Vapour Probes *vs* Time (Short-term AS Test at VT4, AS well flow rate = 10 cfm)



(Values at 5m are of probe B only)

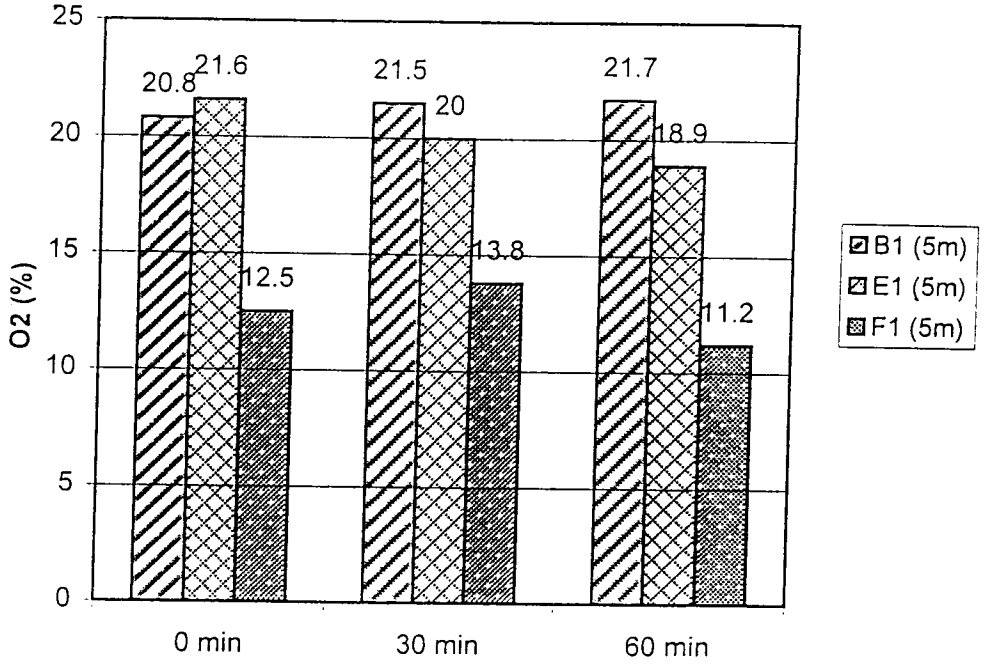
O2 at Deep Vapour Probes *vs* Time (Short-term AS Test at VT4, AS well flow rate = 10 cfm)



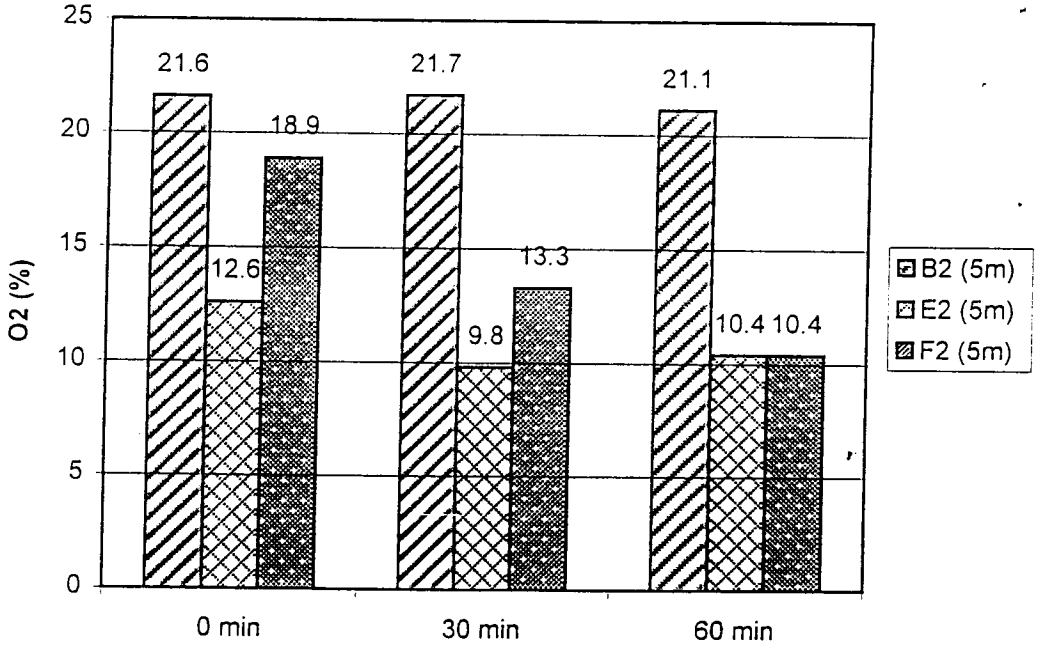
(Values at 5m are of probe B only)

C418\xl\Asvt4-g1

O2 at Shallow Radial Vapour Probes *vs* Time (Short-term AS Test at VT4, AS well flow rate = 10 cfm)



O2 at Deep Radial Vapour Probes *vs* Time (Short-term AS Test at VT4, AS well flow rate = 10 cfm)



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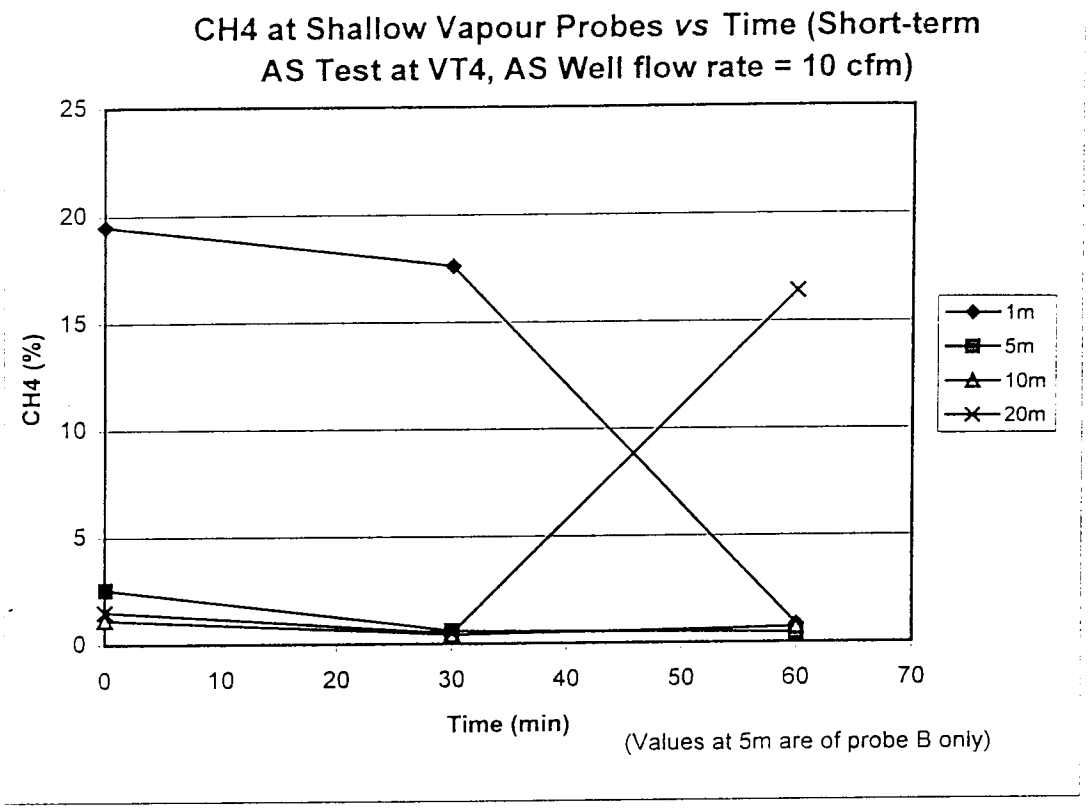

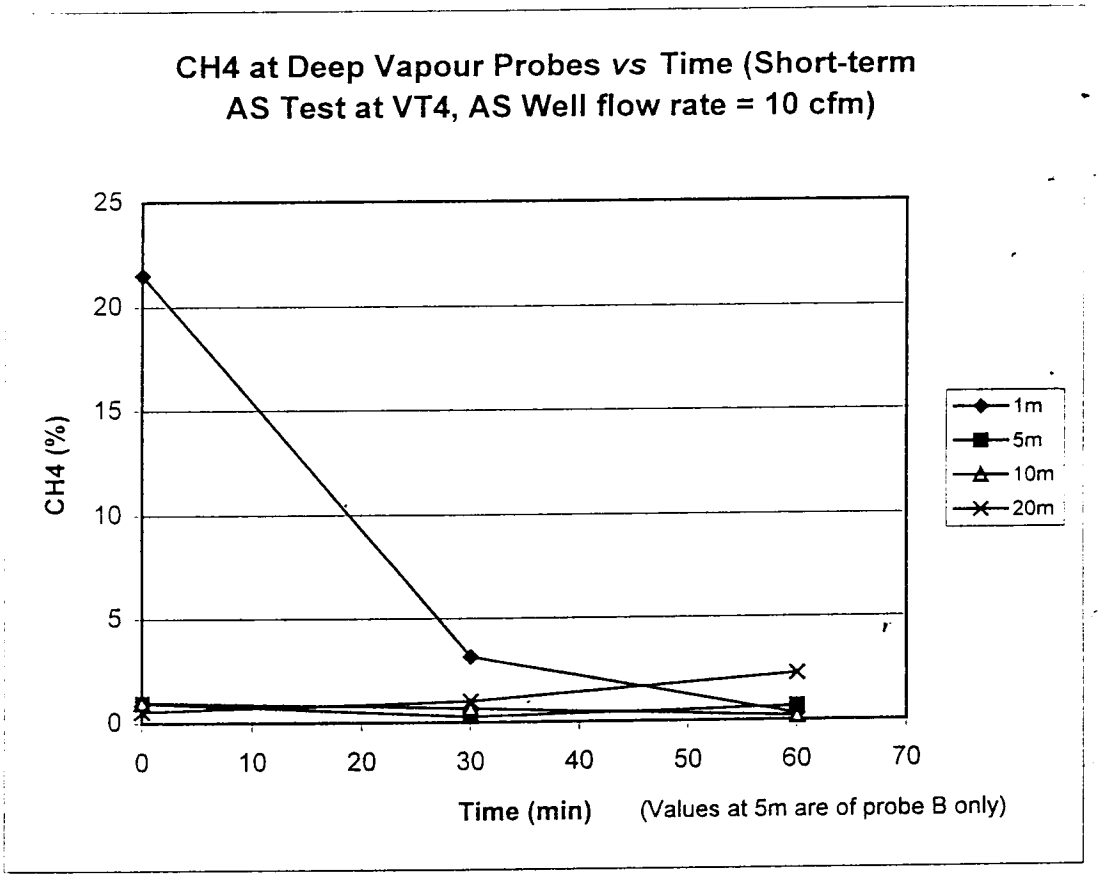

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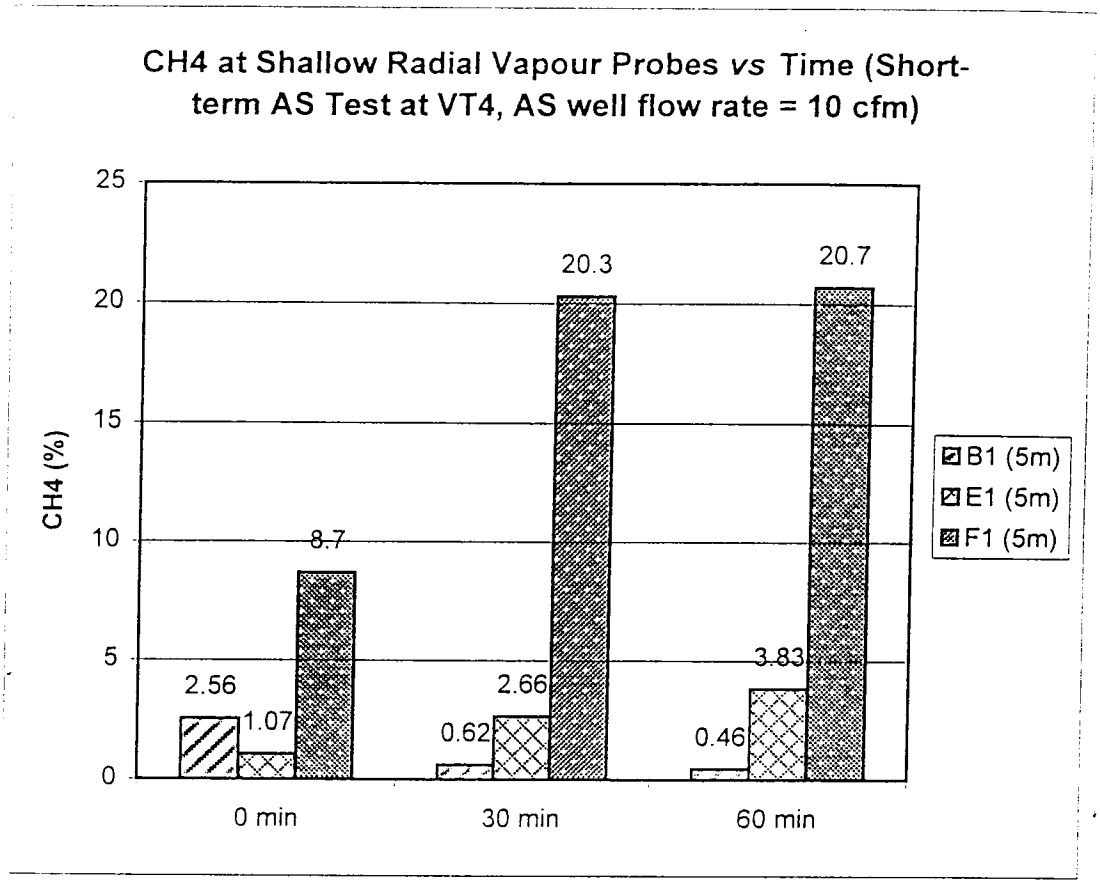

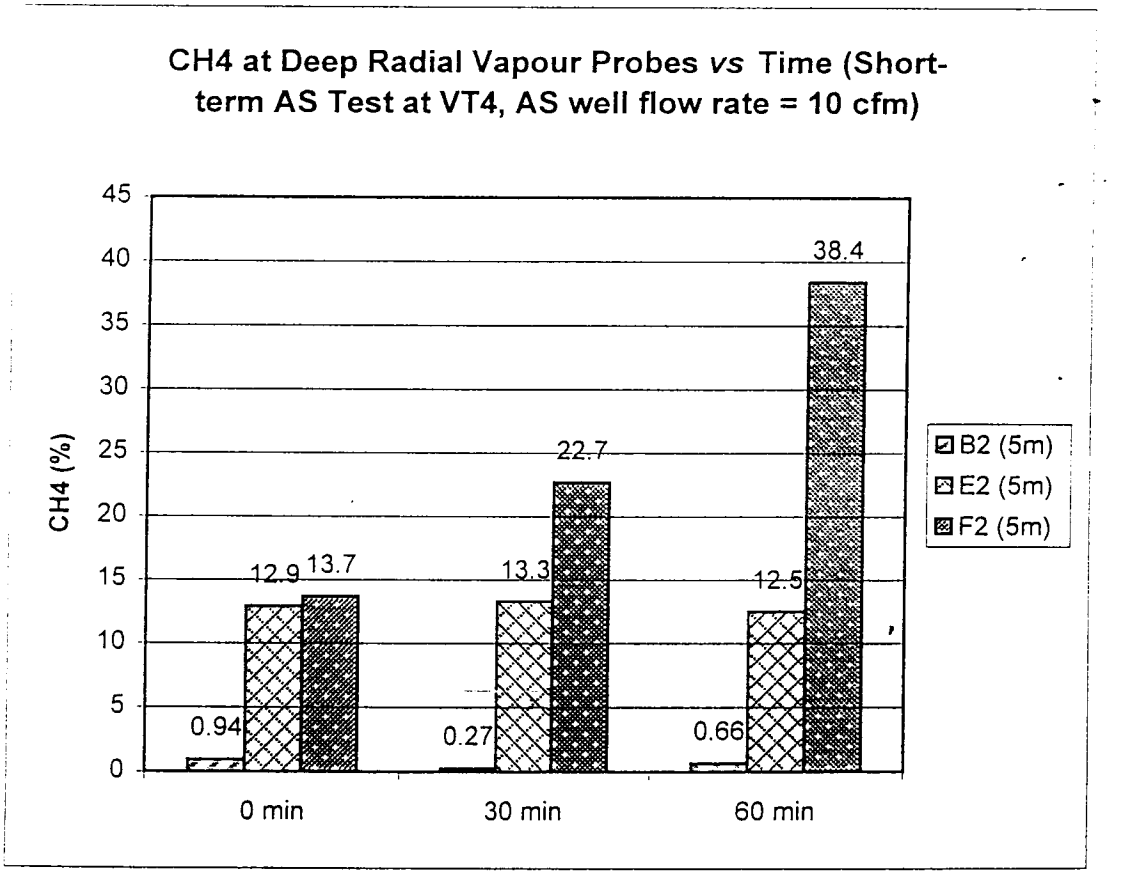

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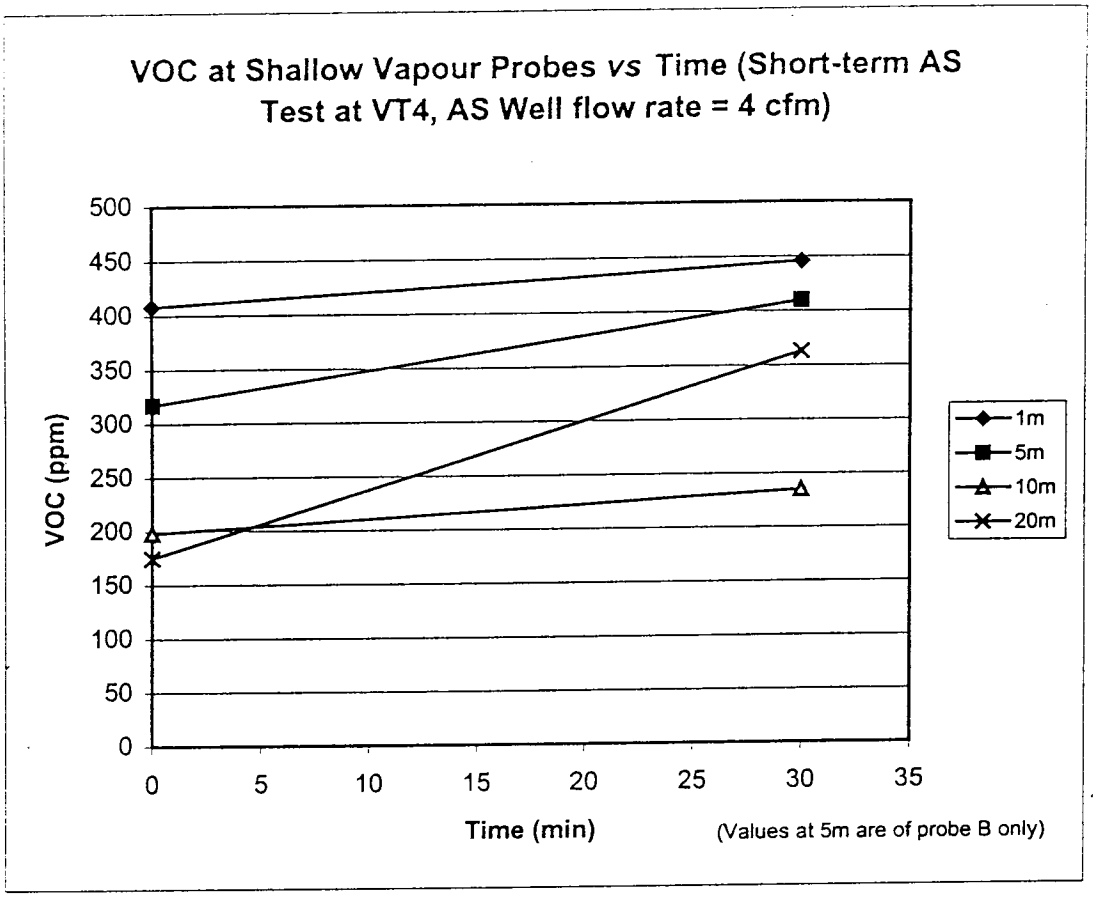

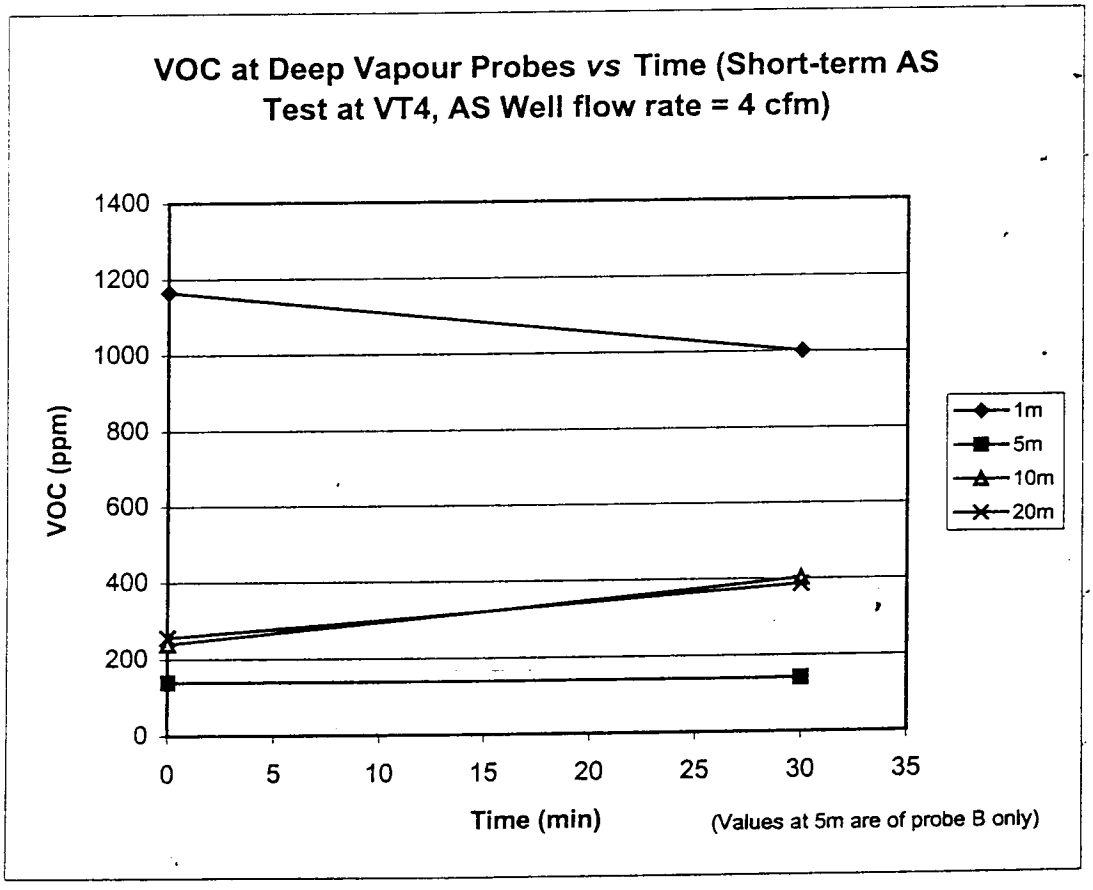

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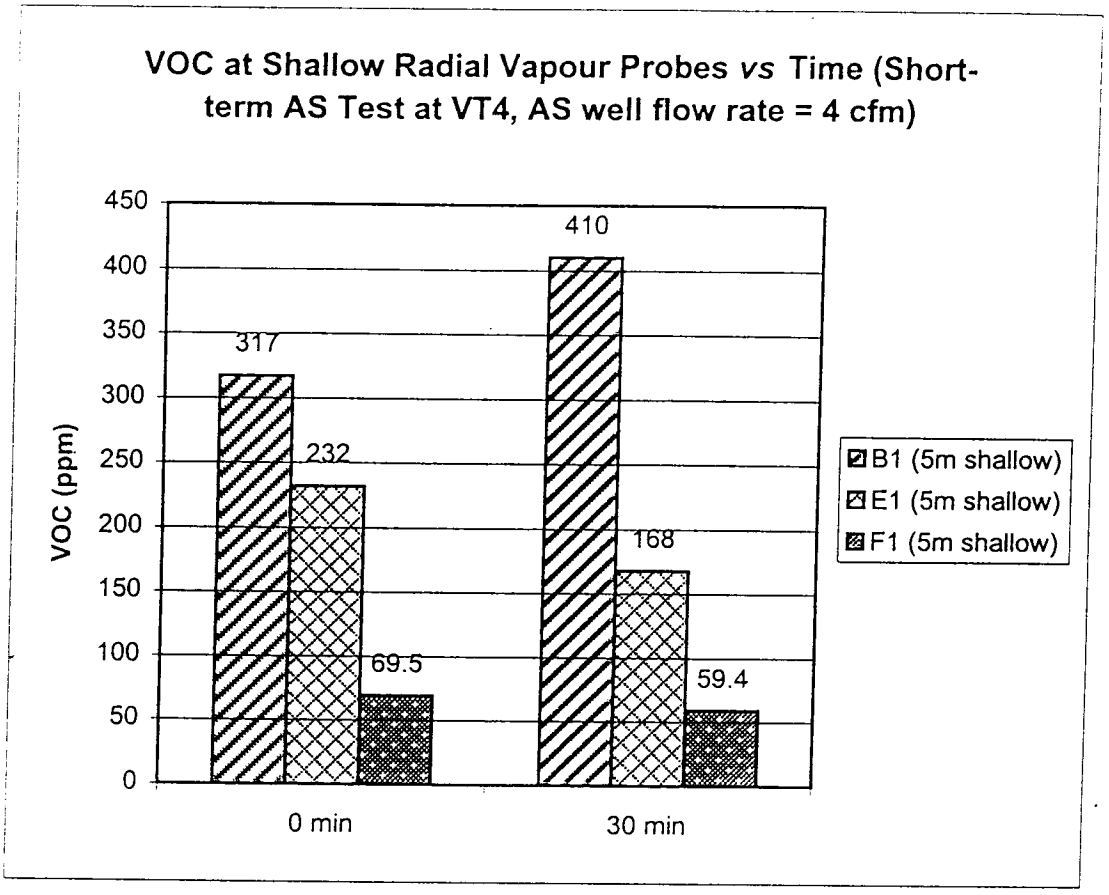

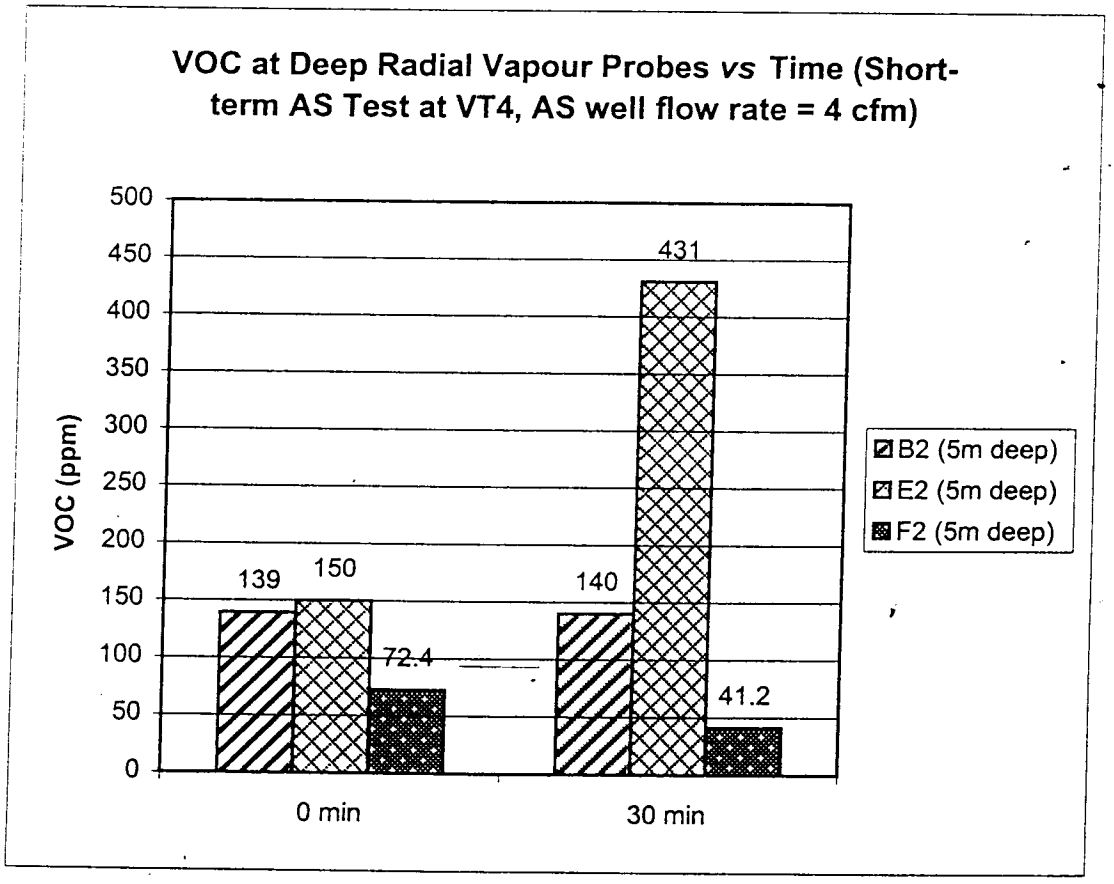

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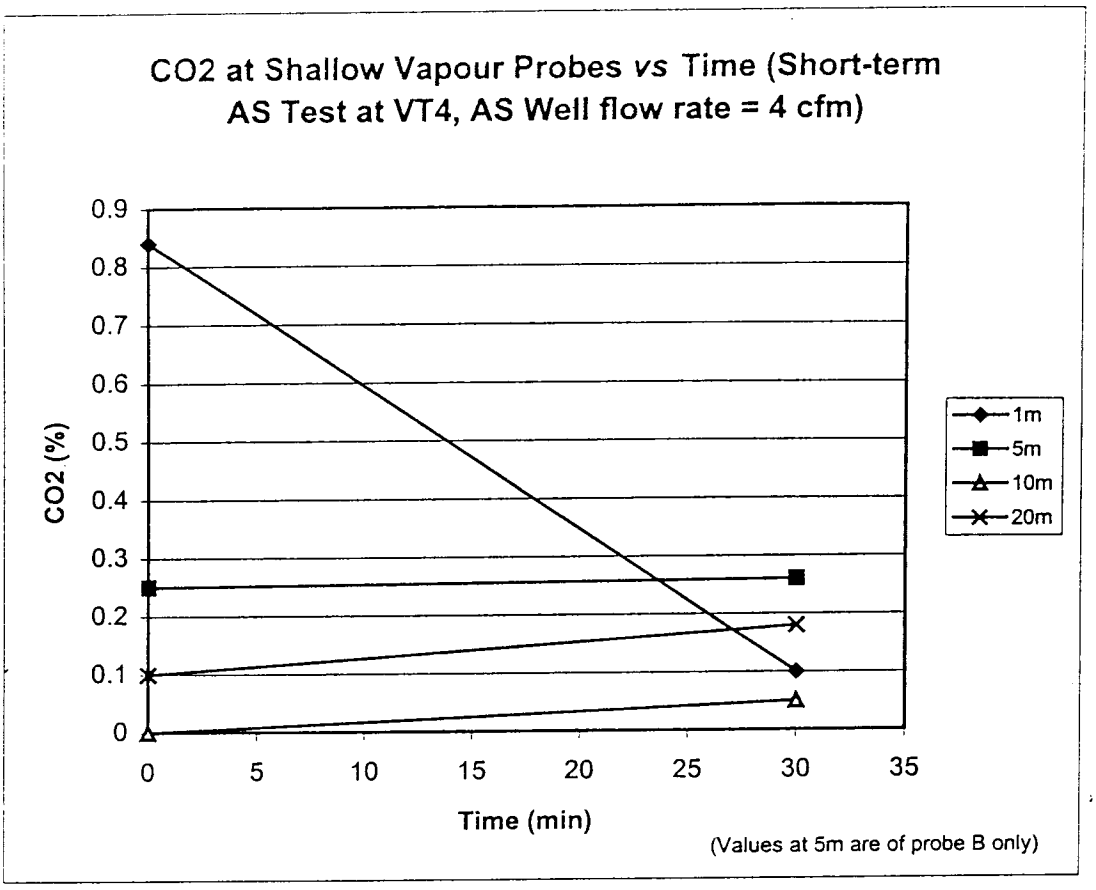

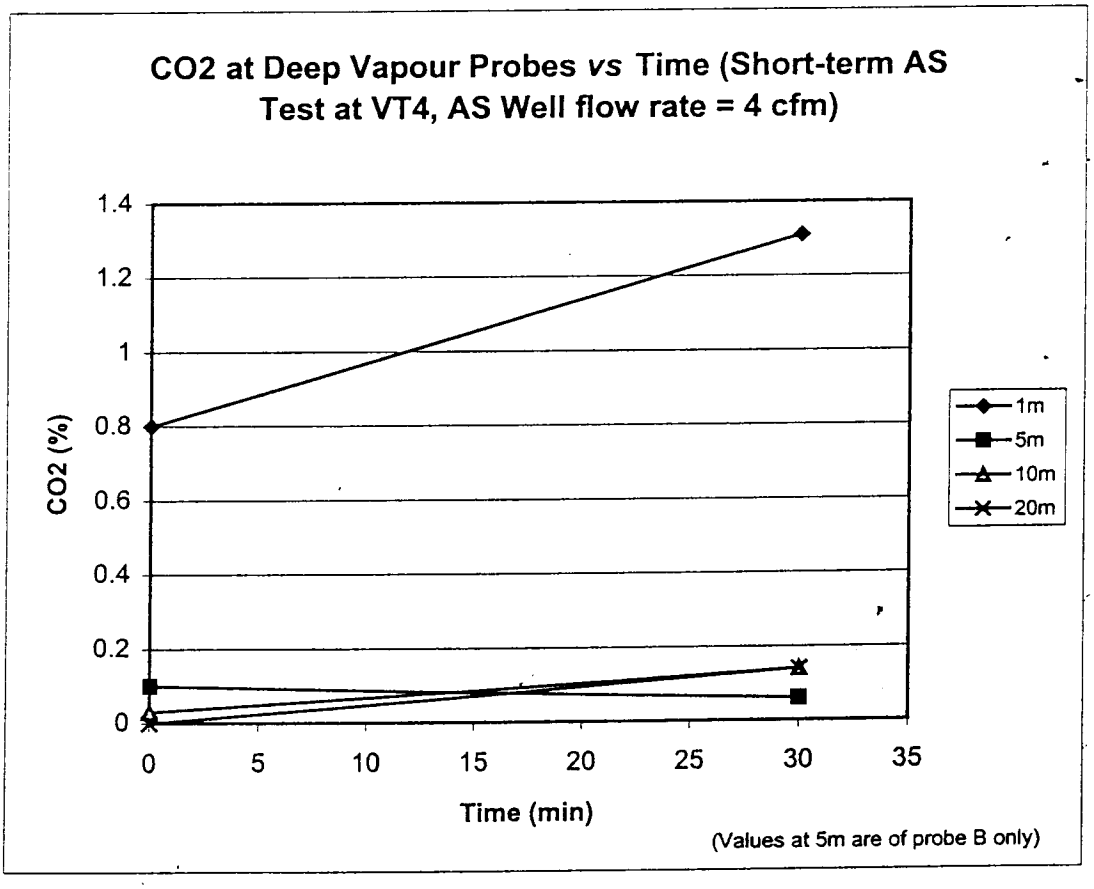

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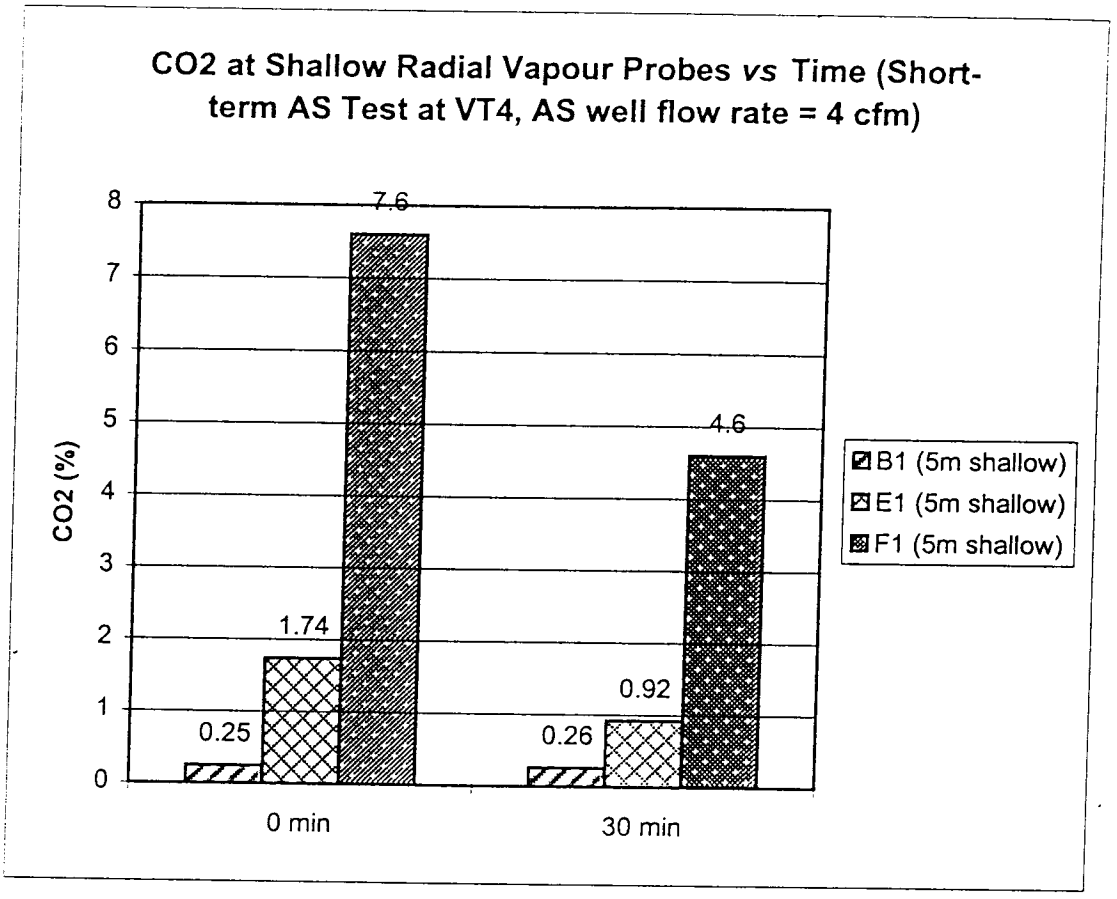

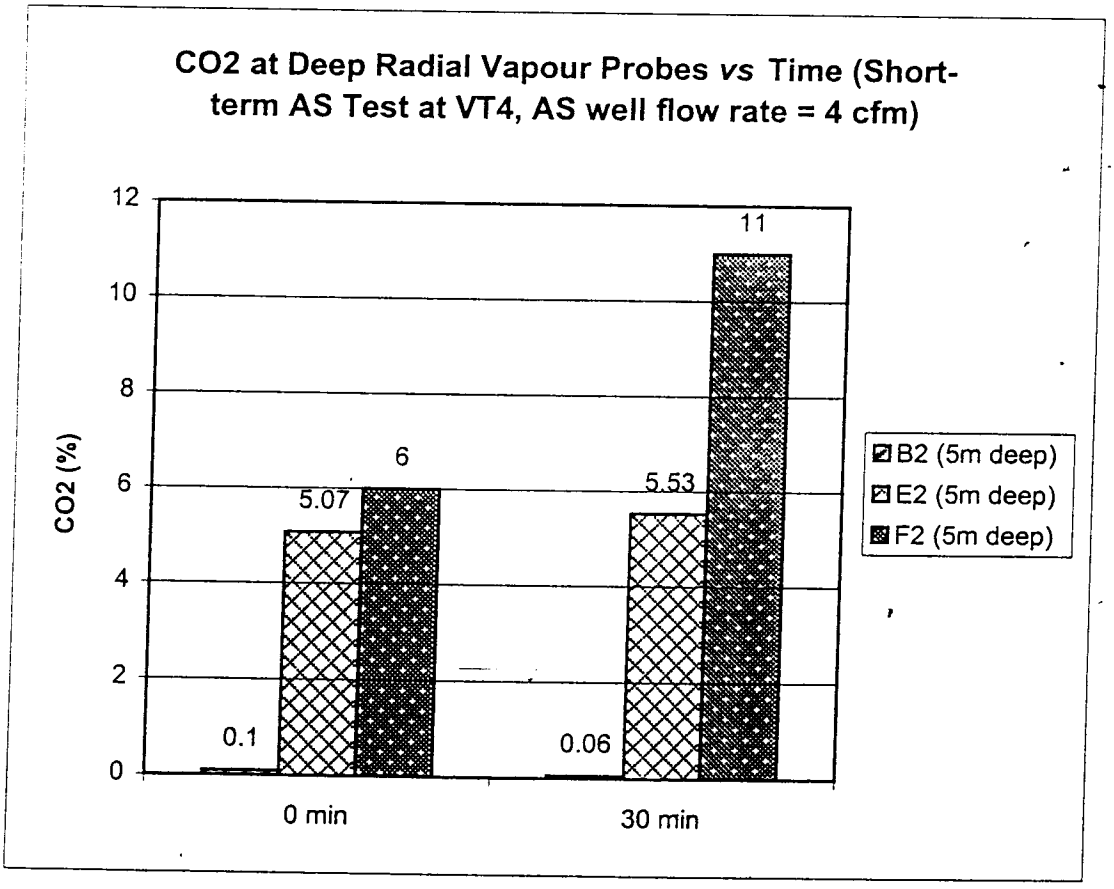

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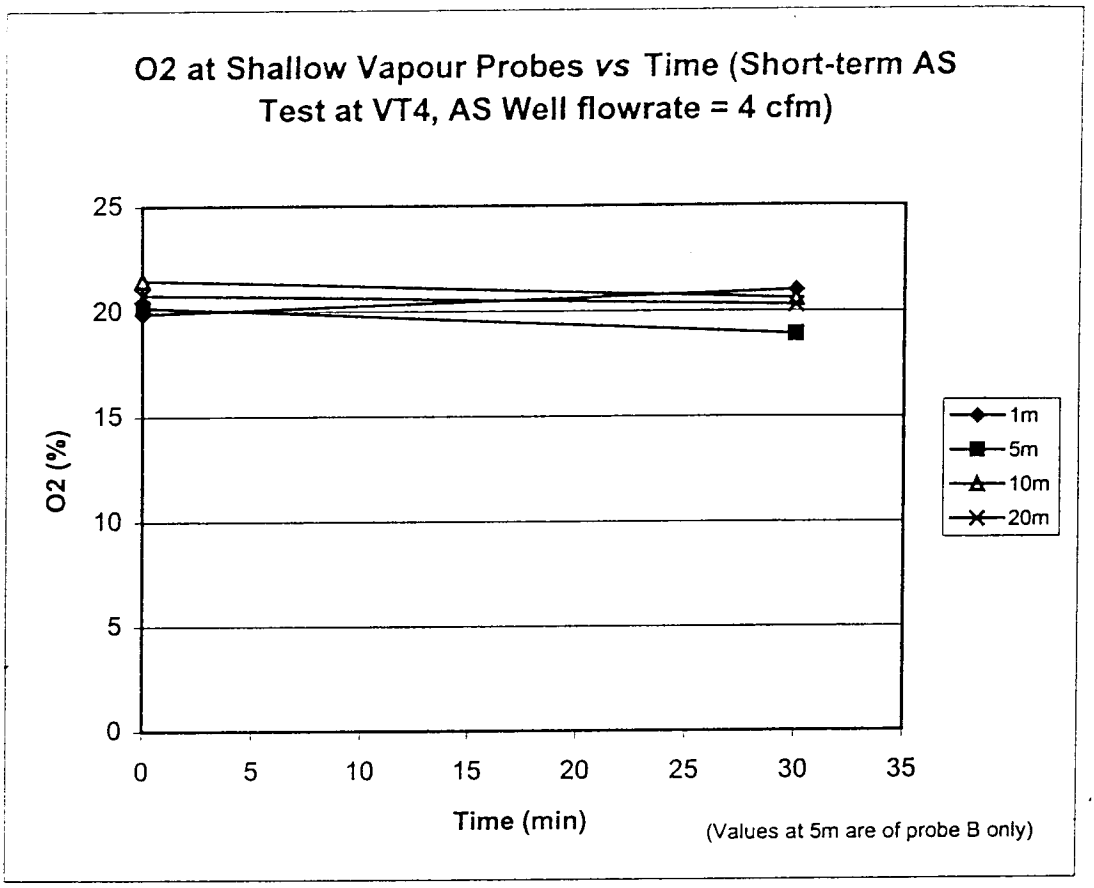

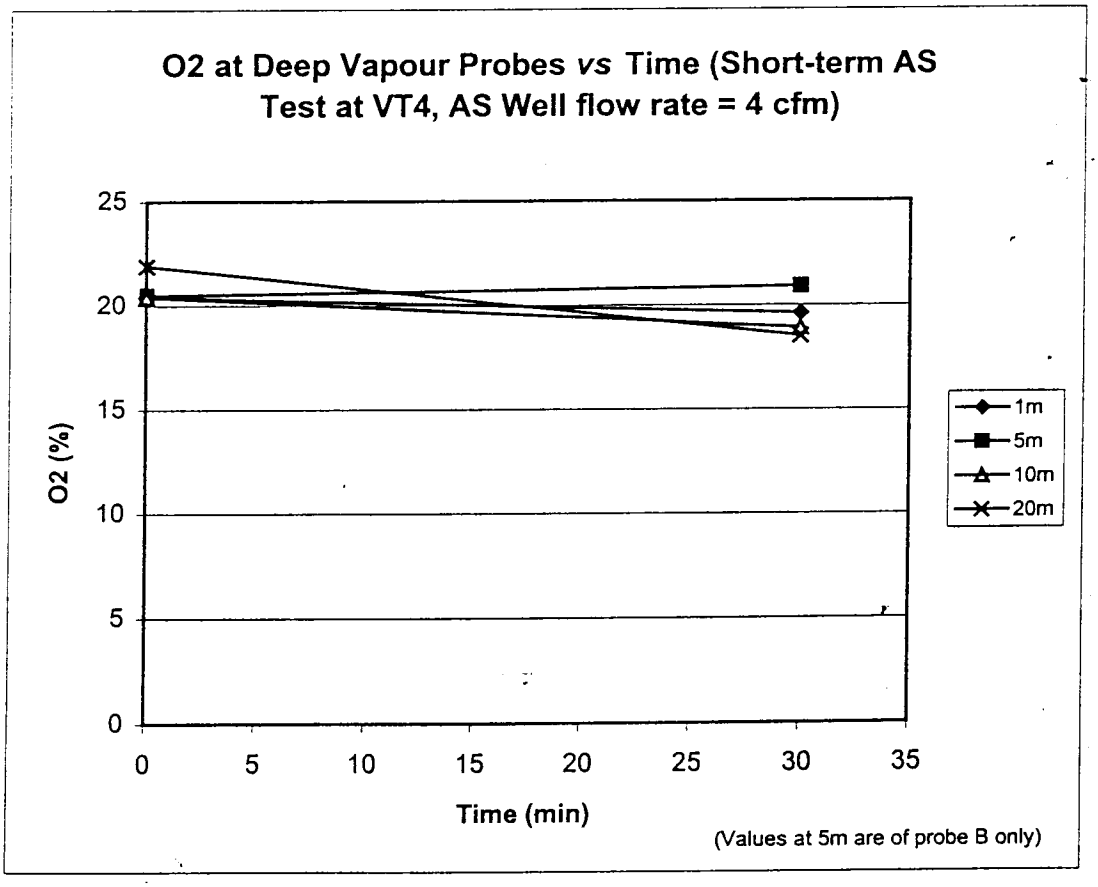

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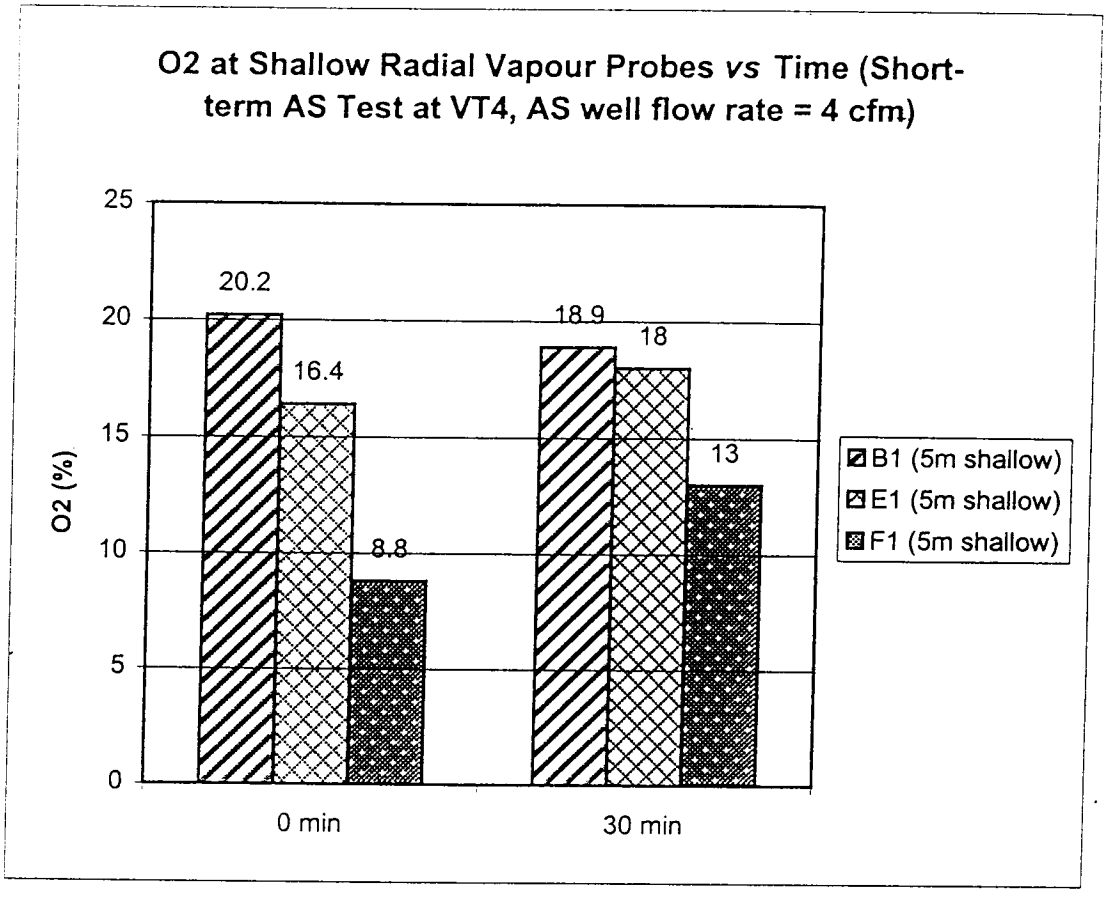

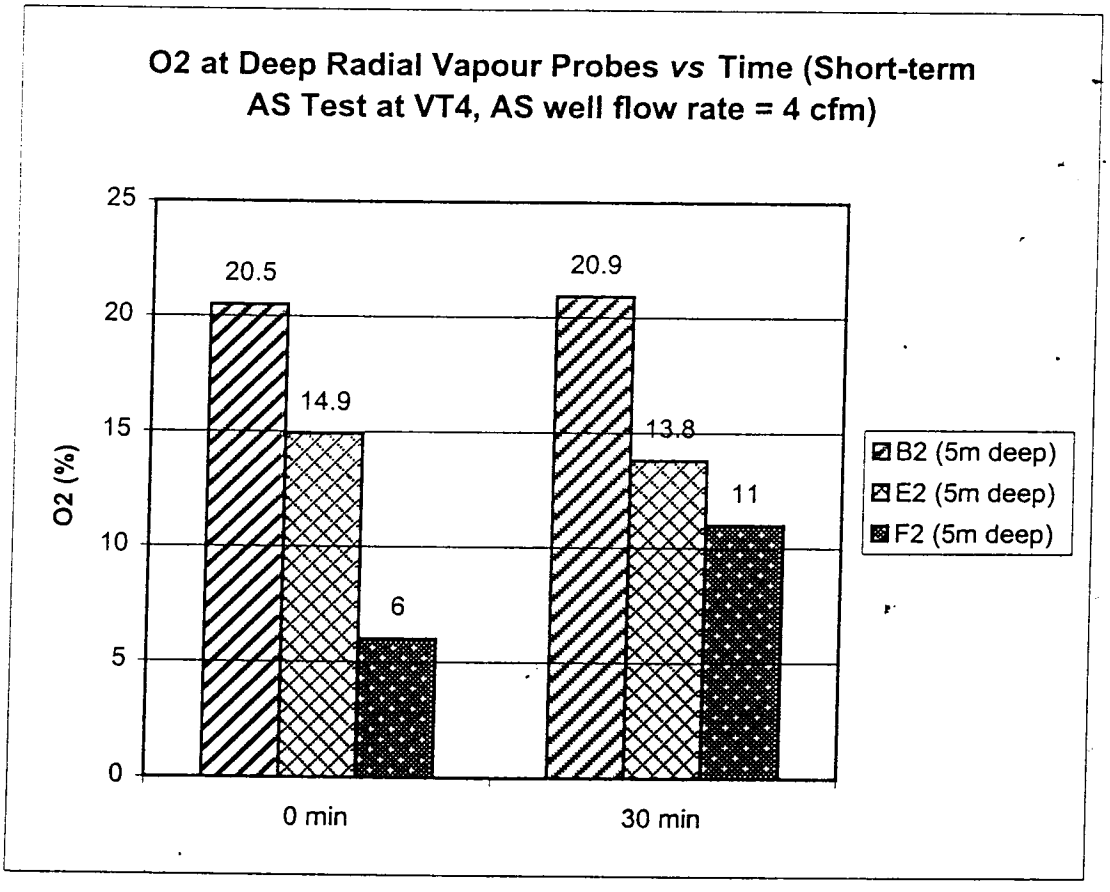

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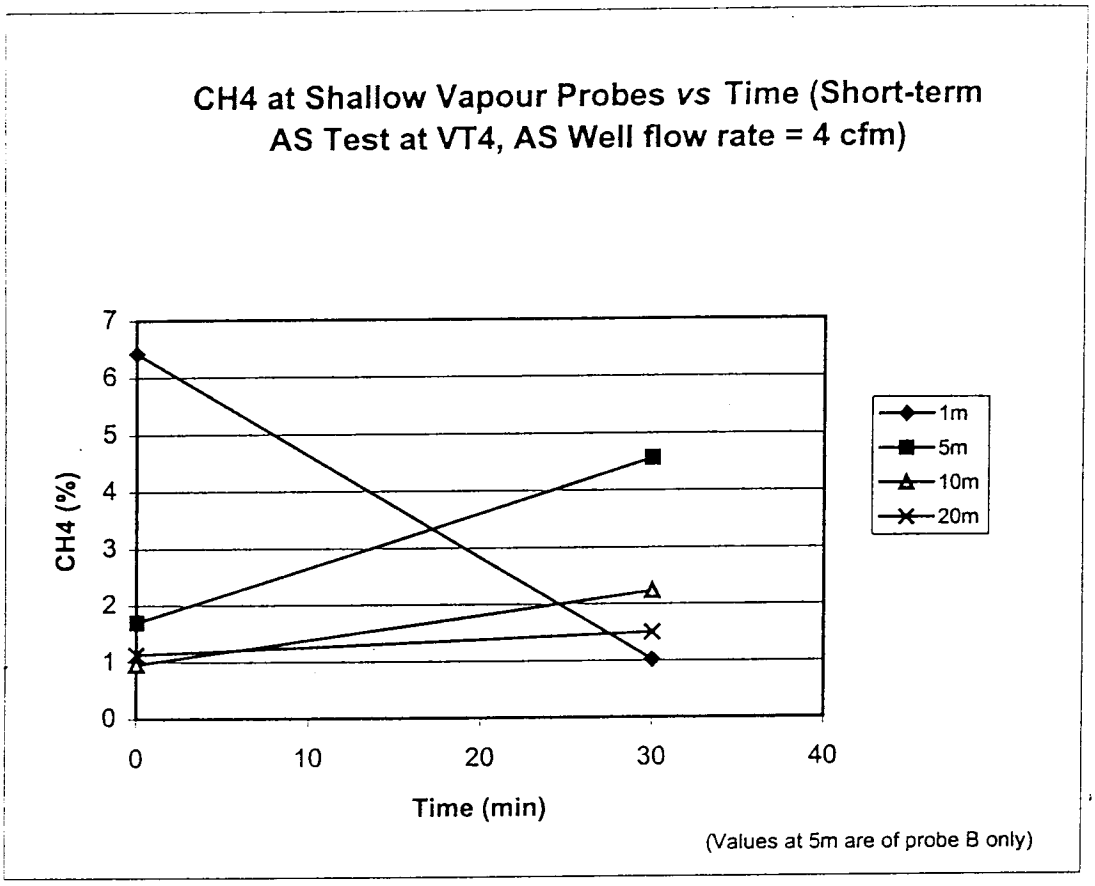

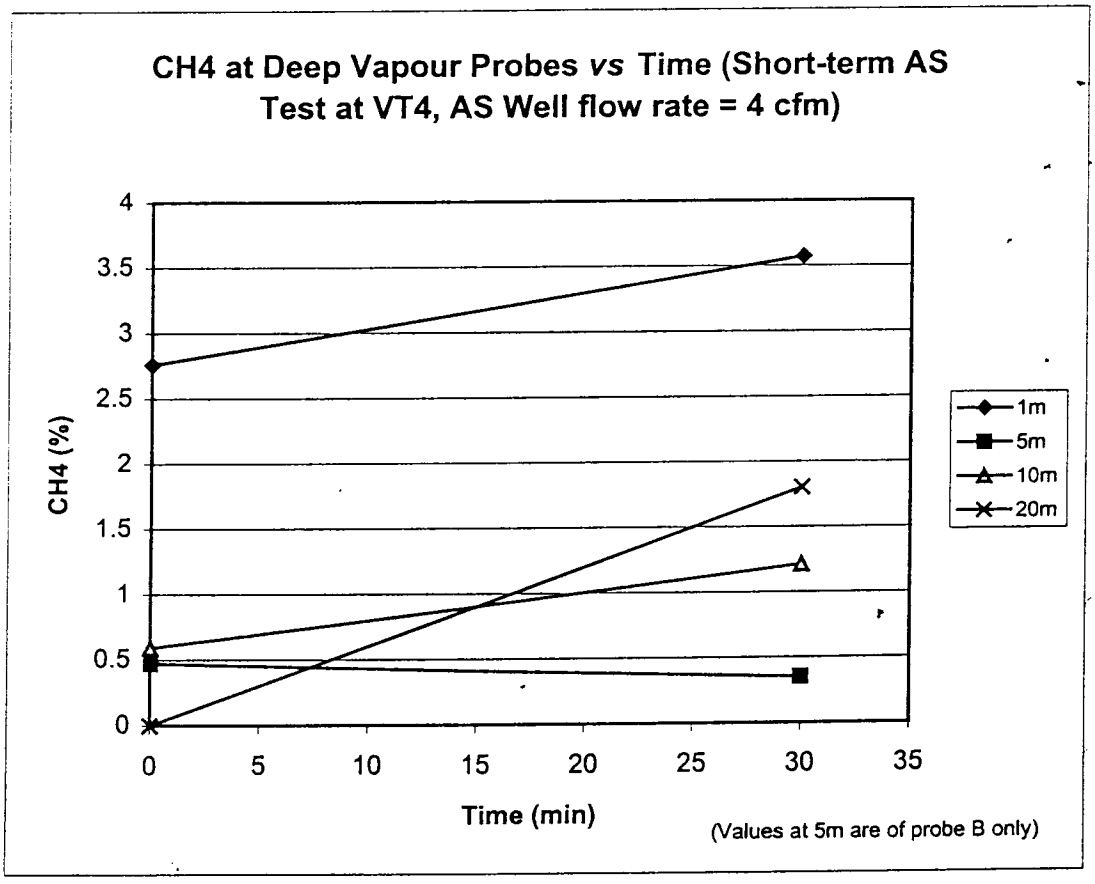

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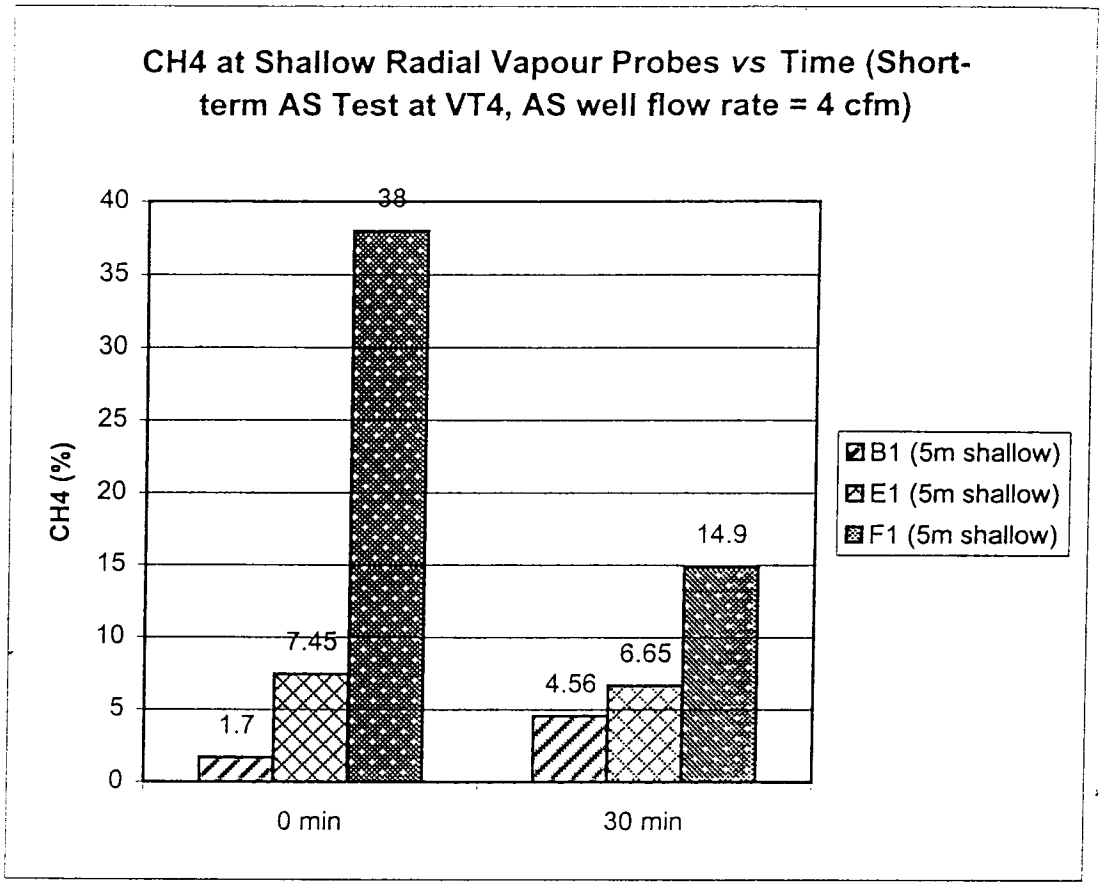

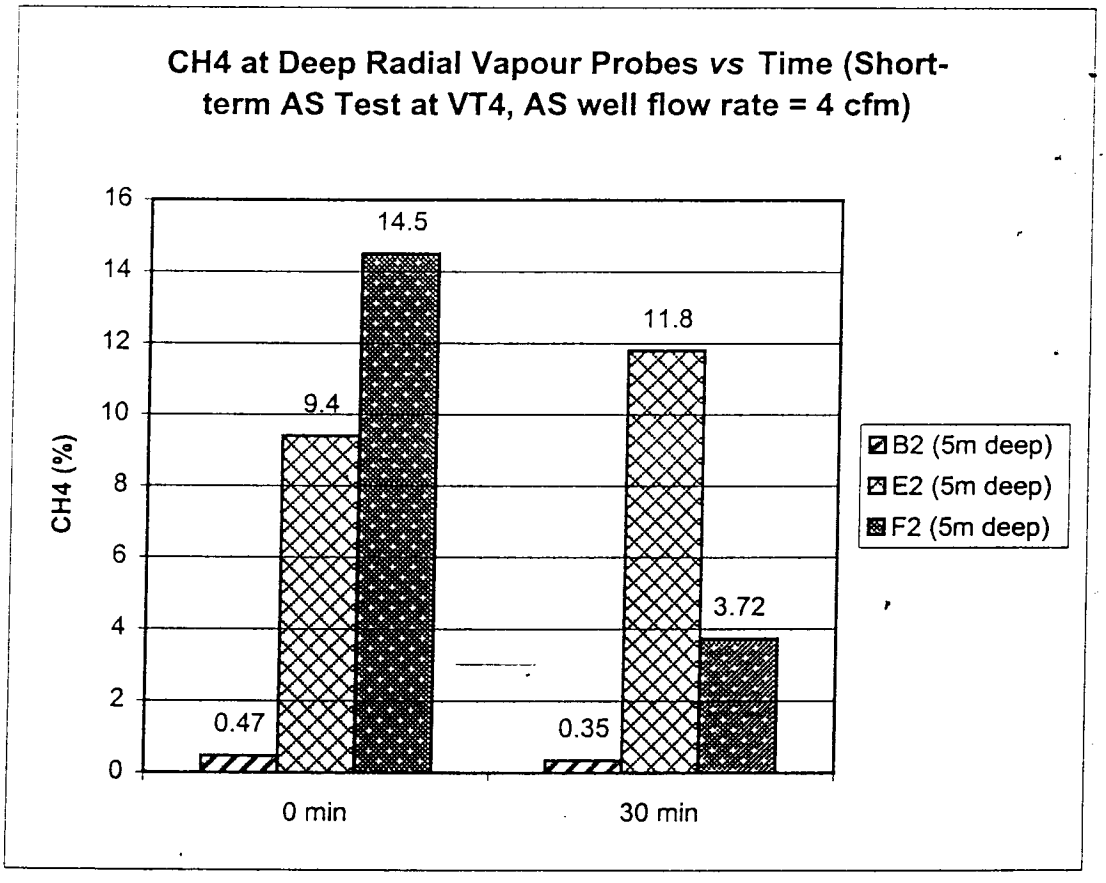

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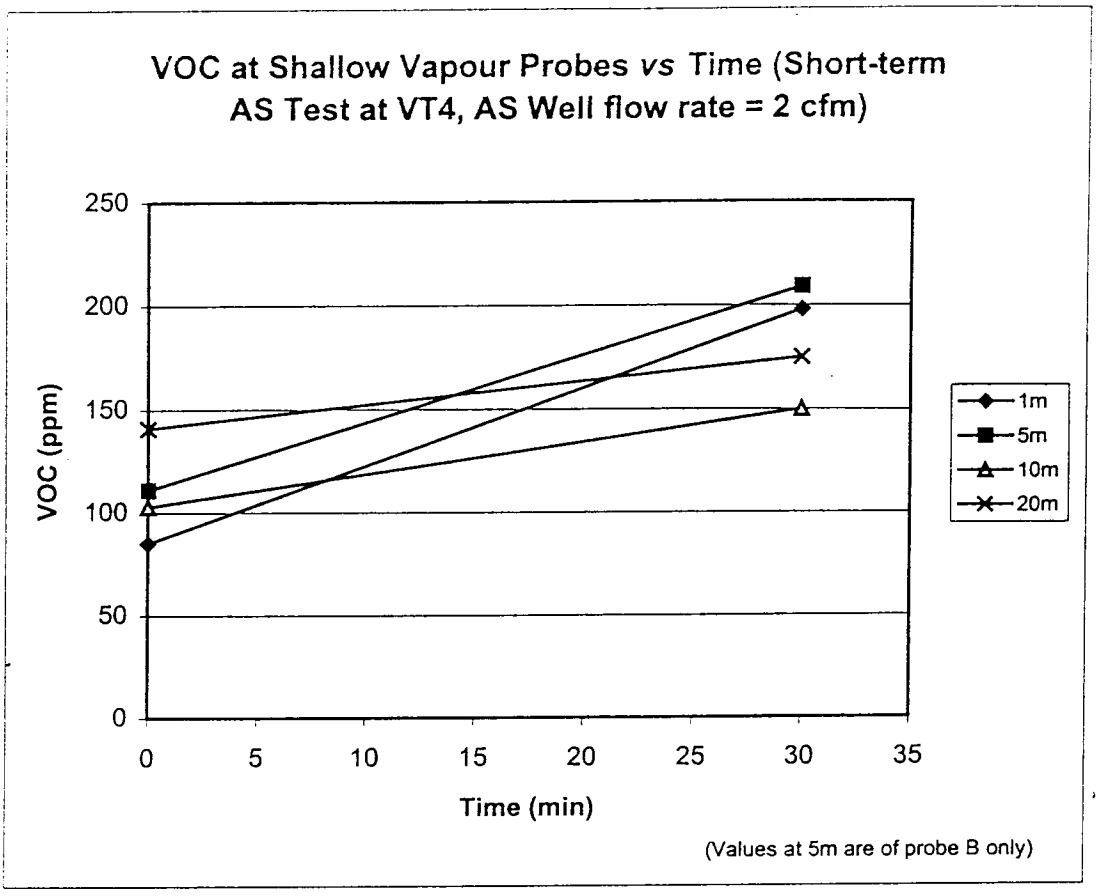

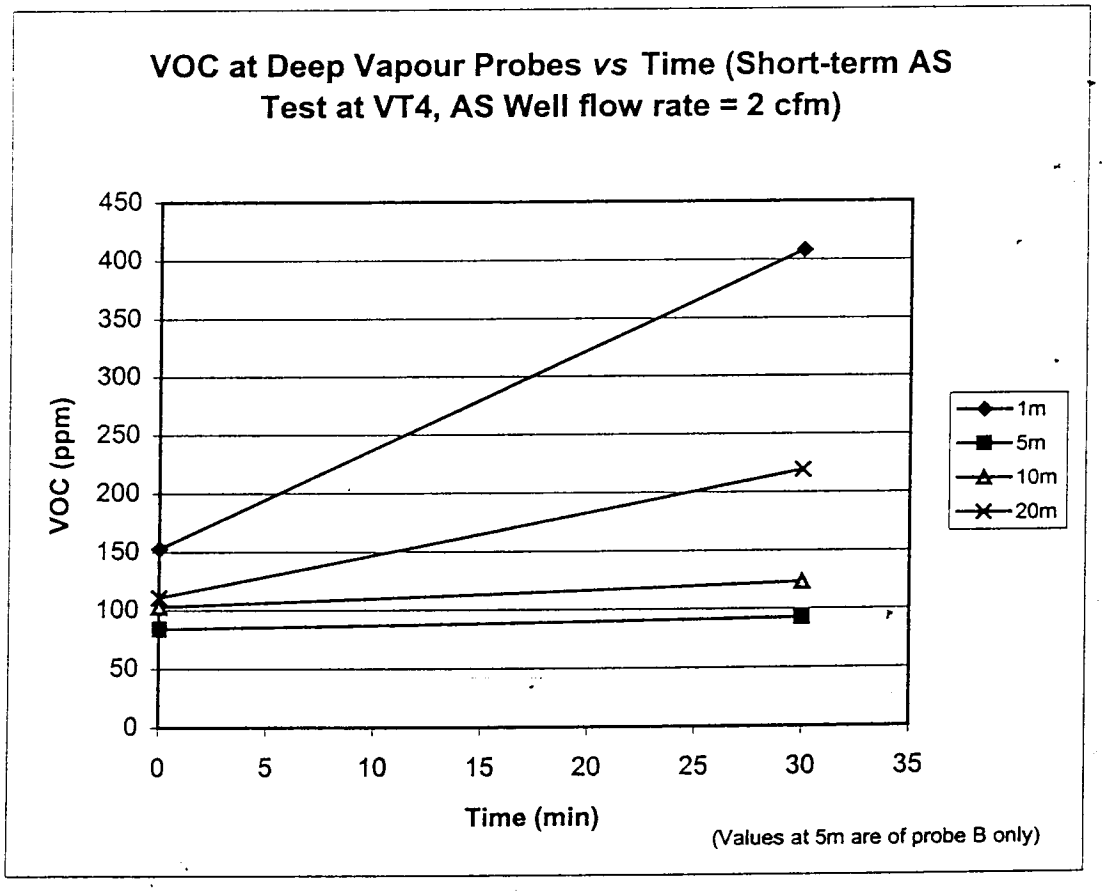

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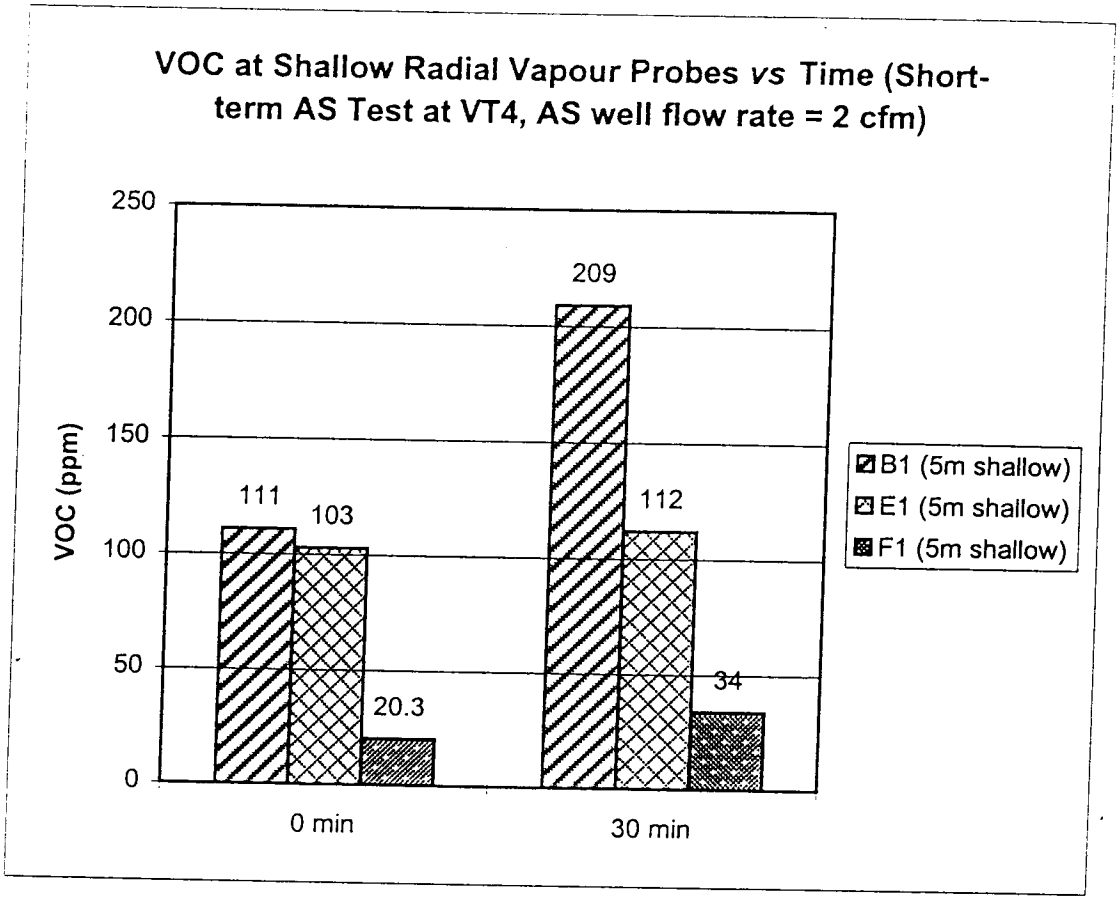

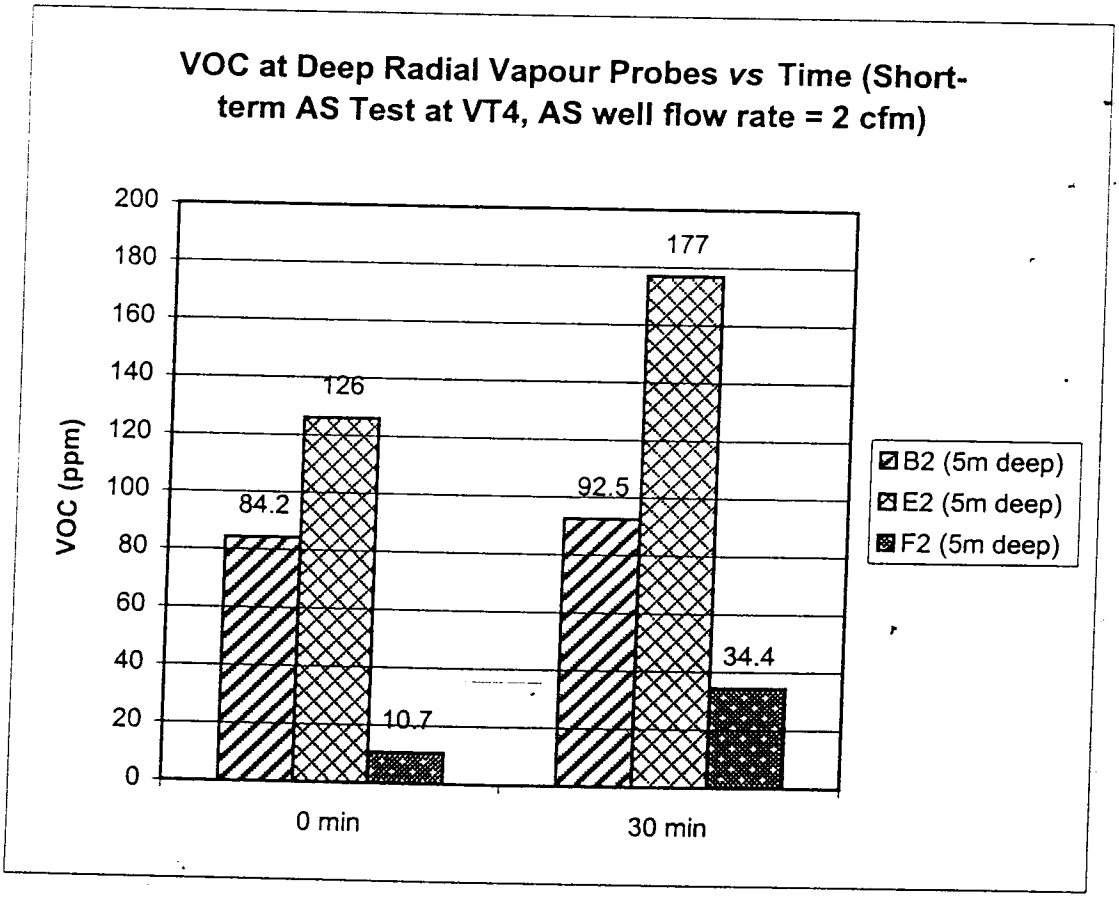

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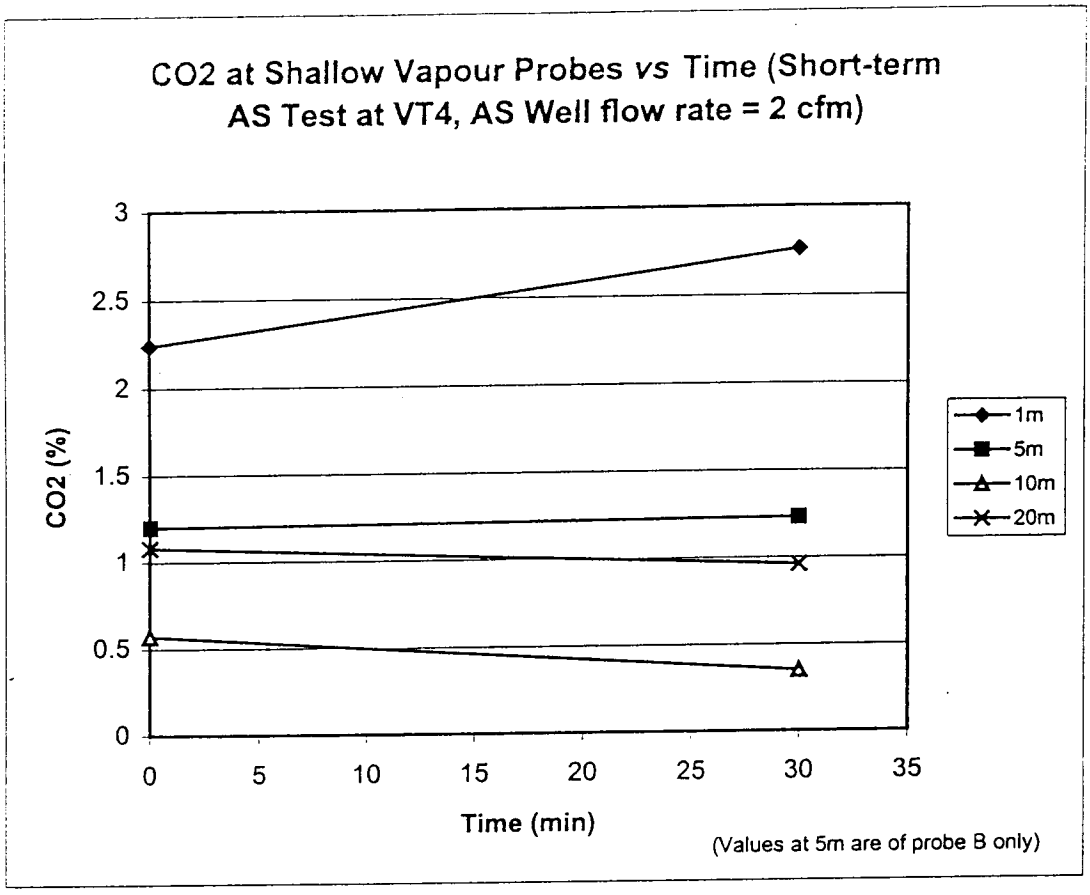

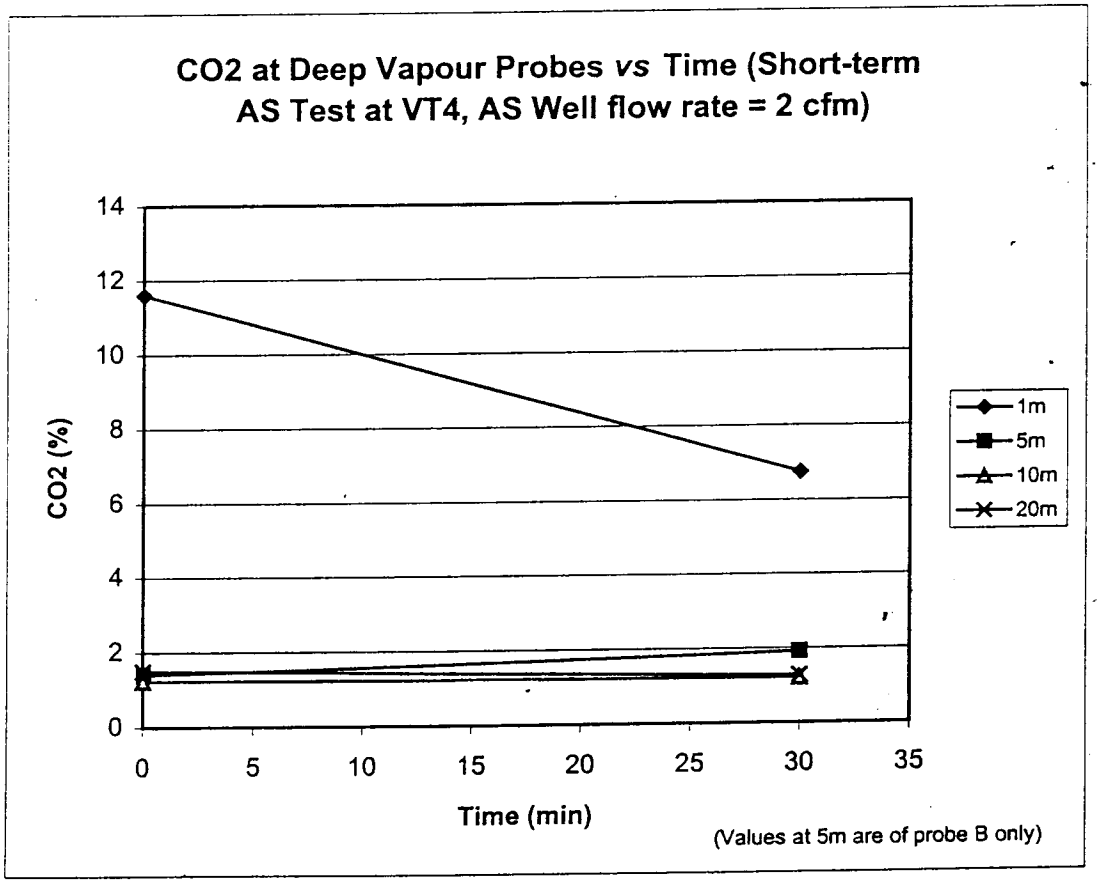

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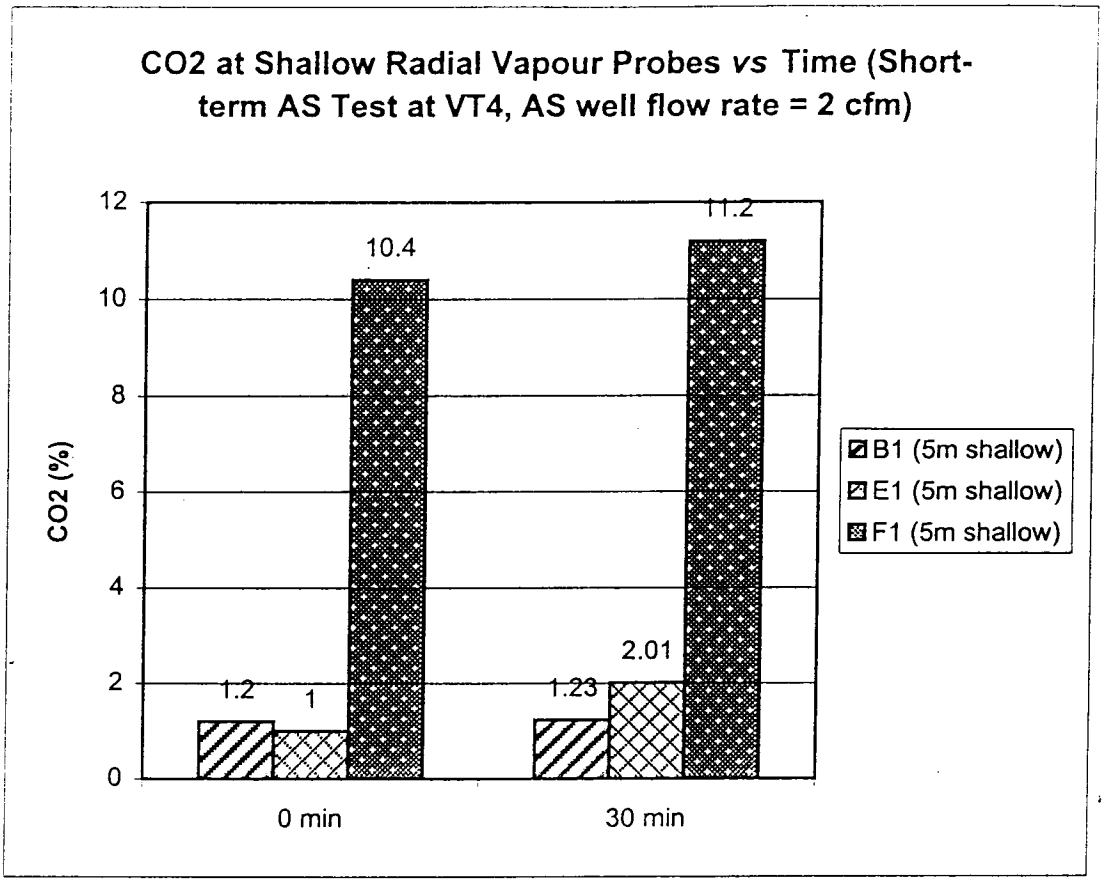

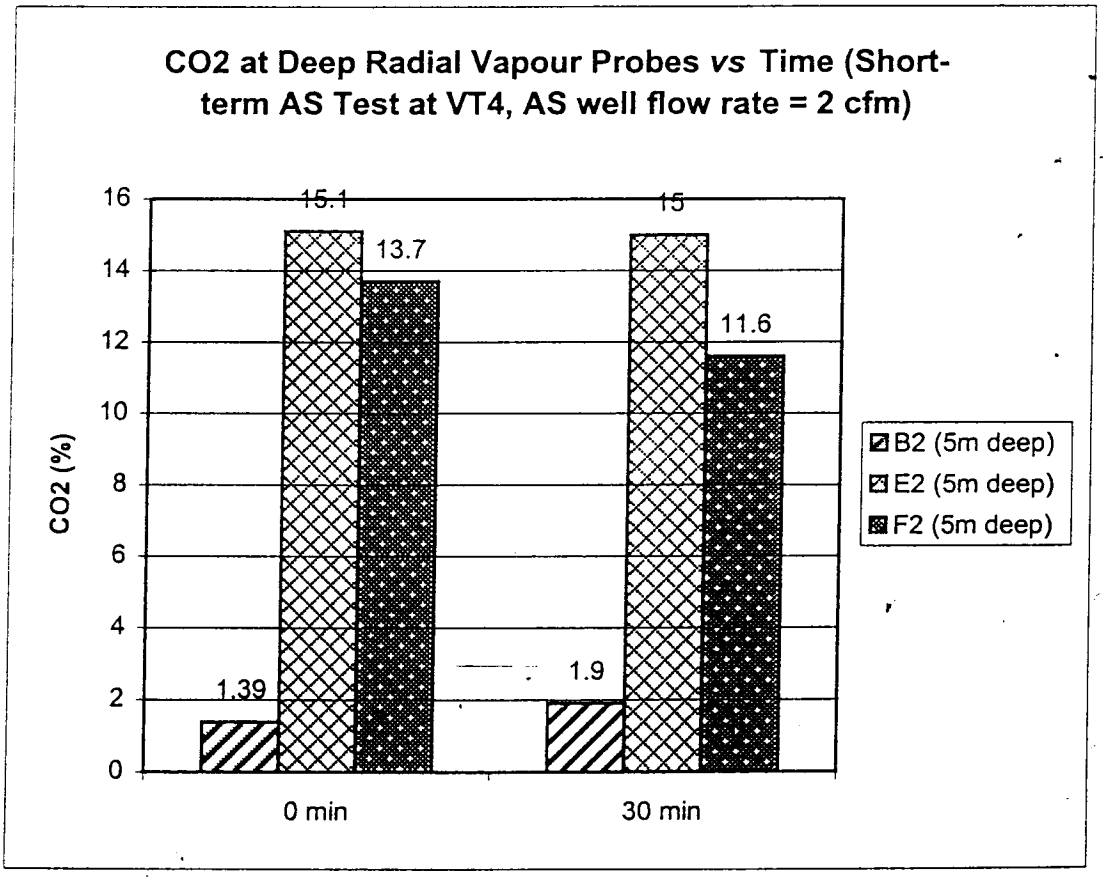

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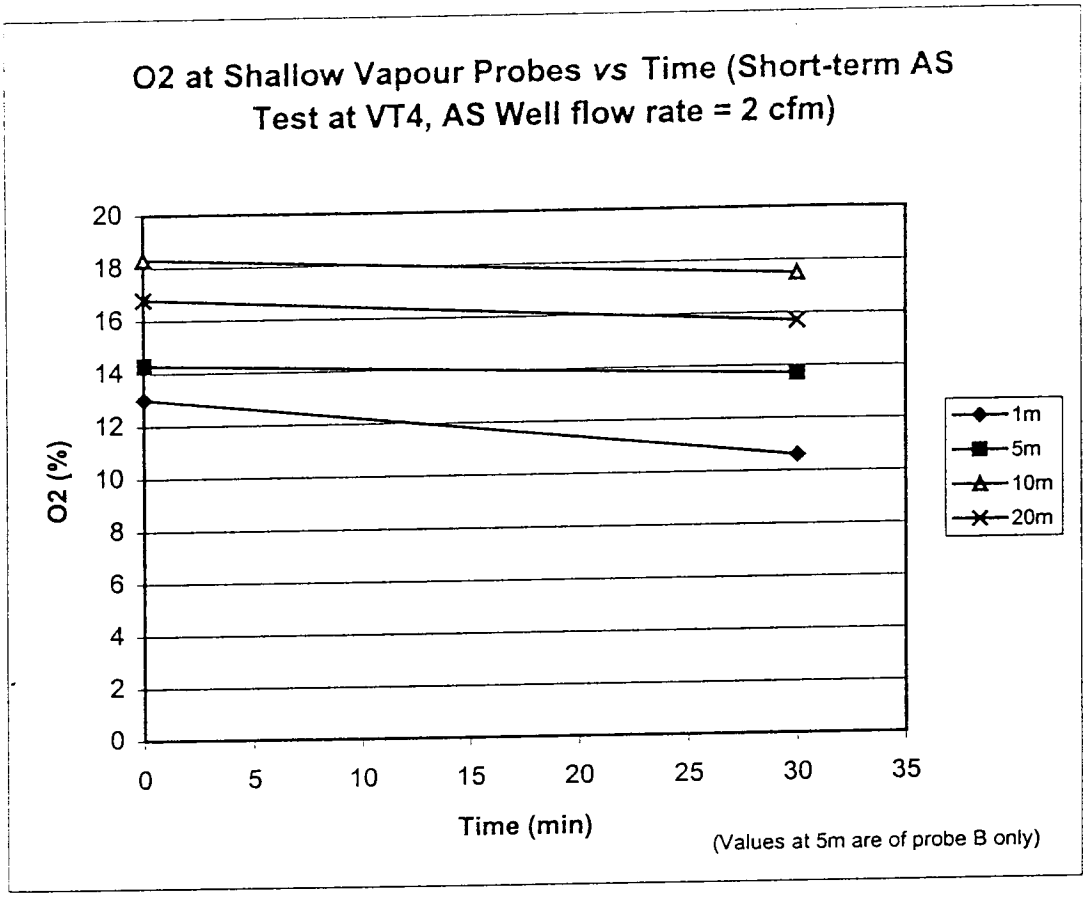

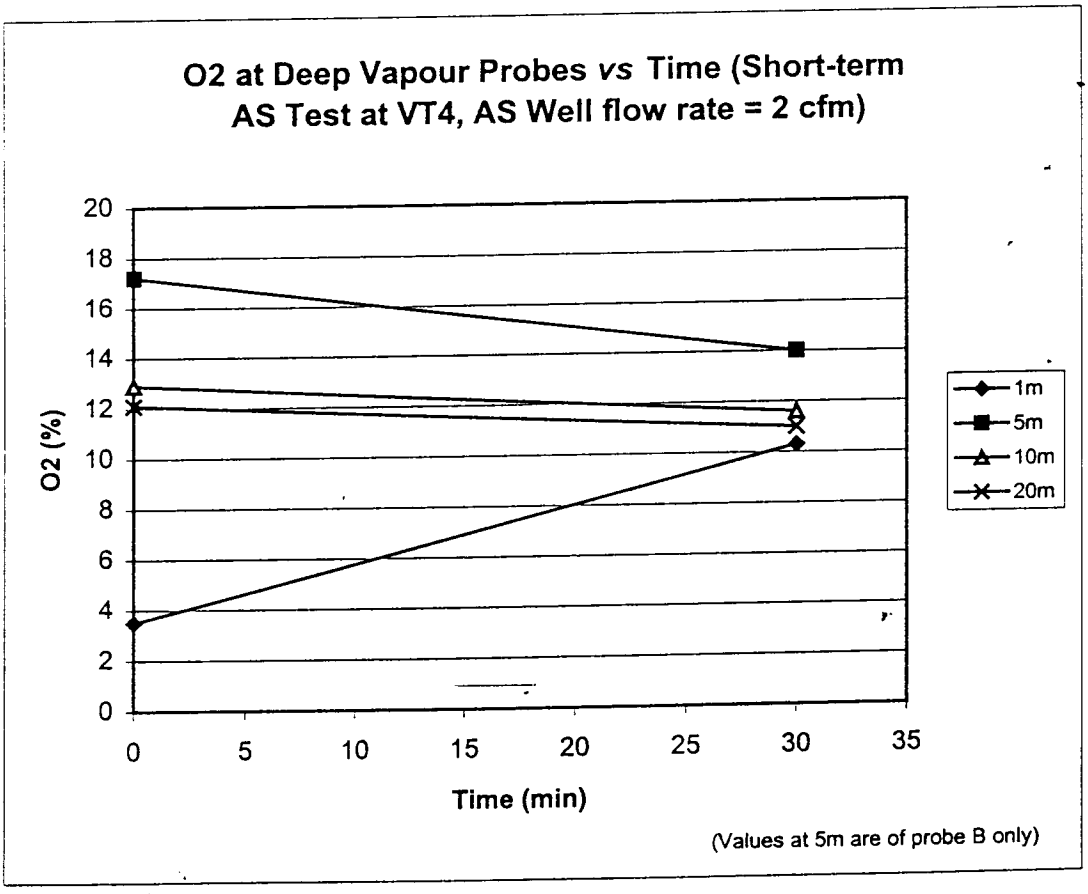

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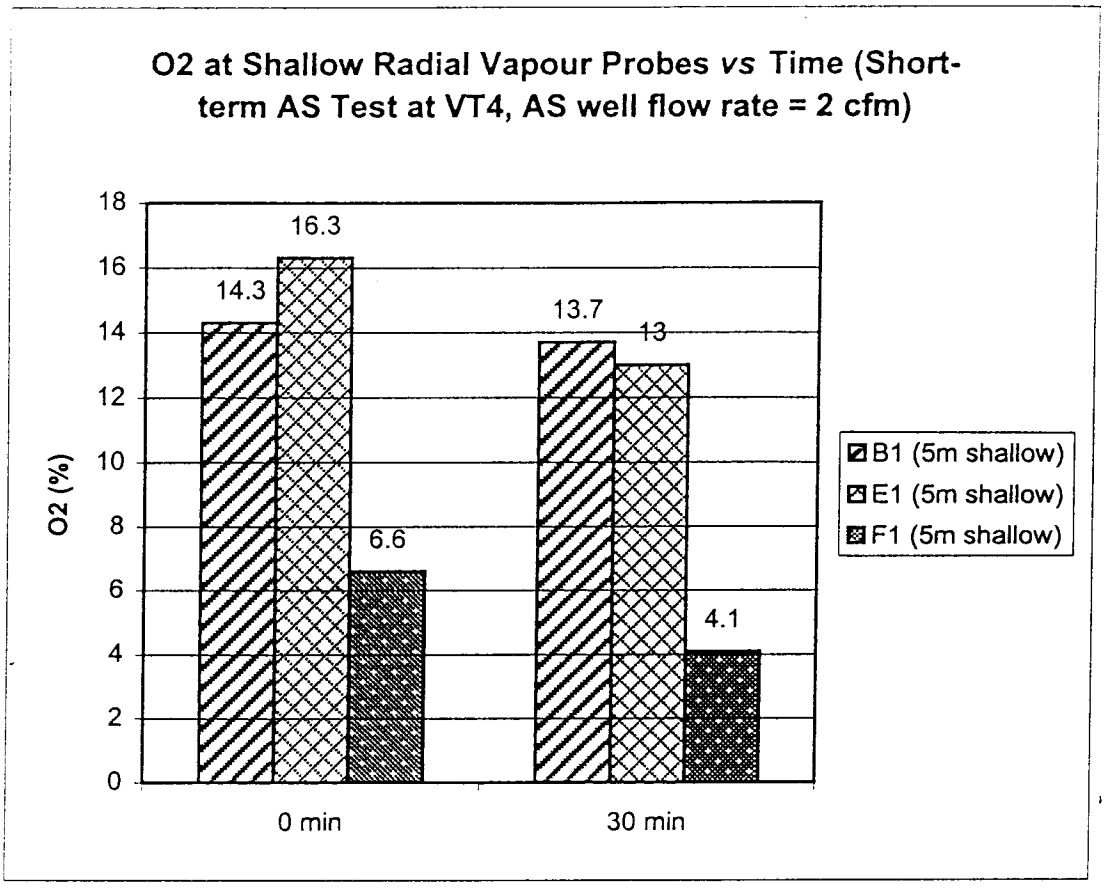

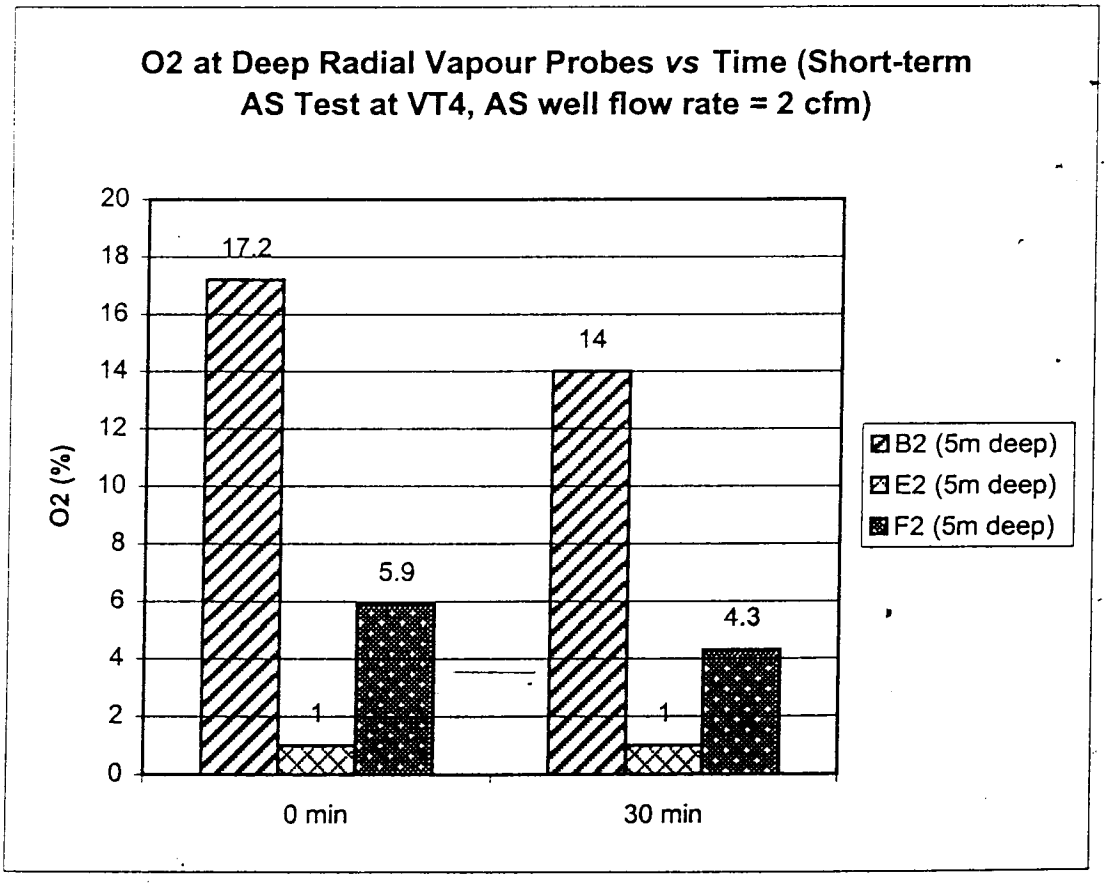

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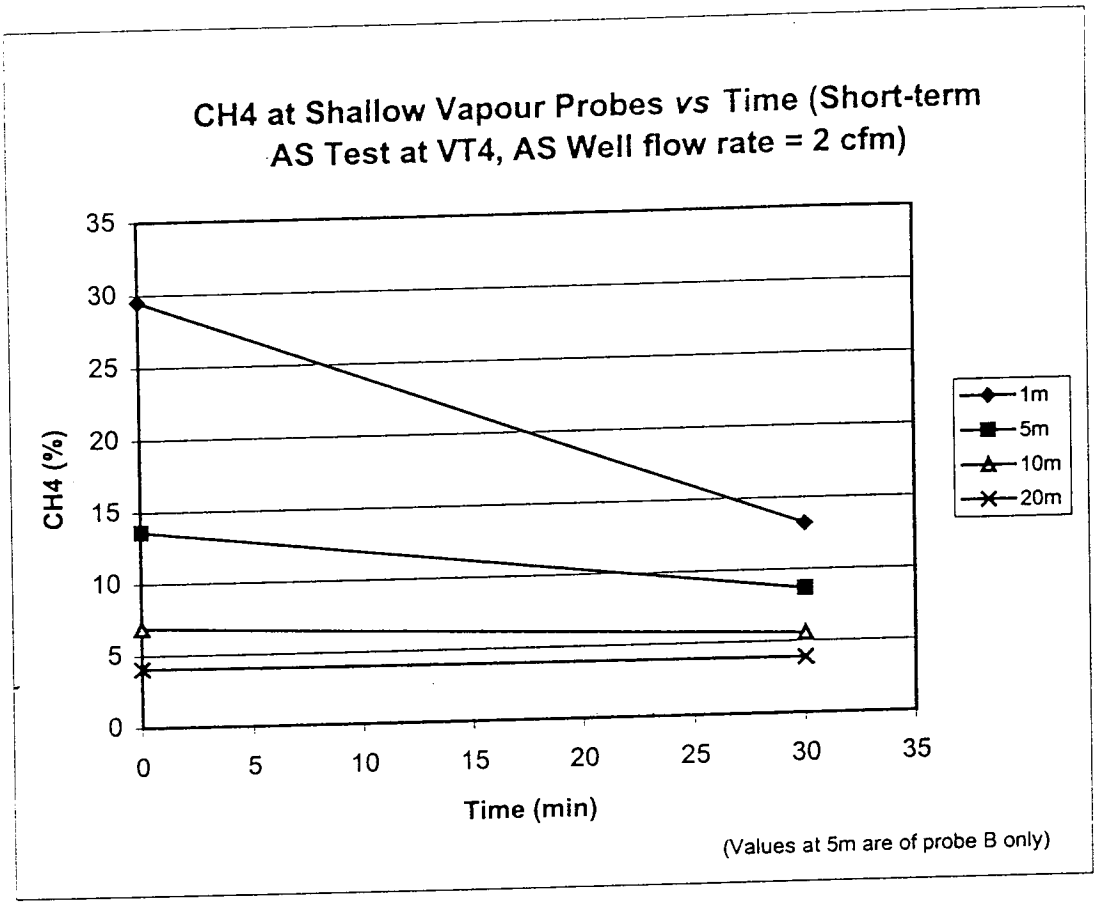

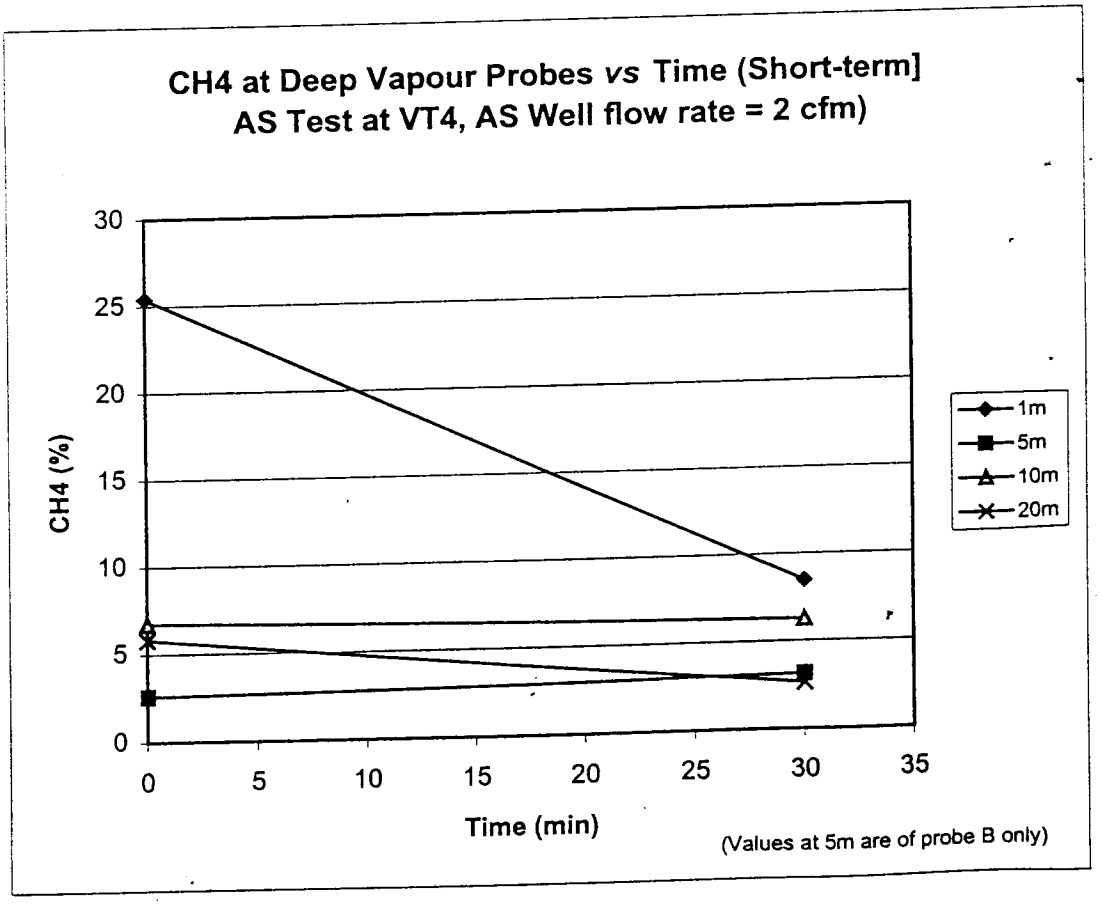

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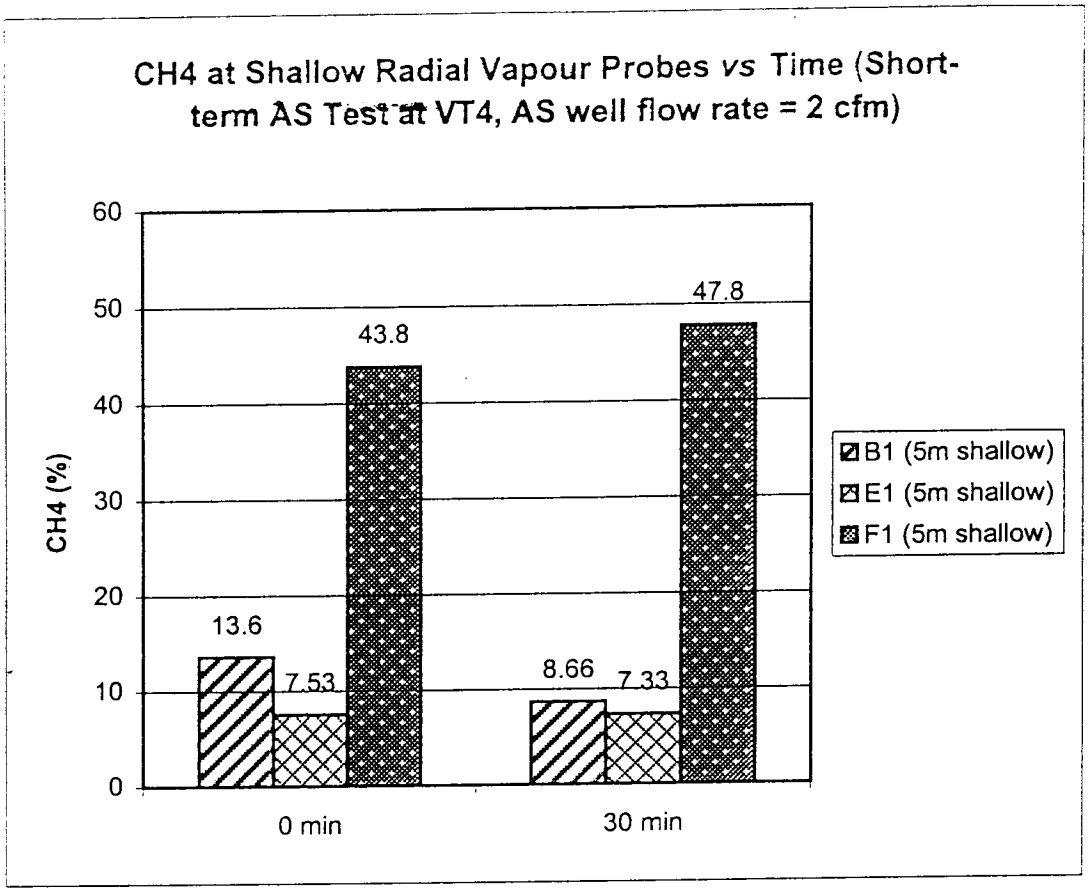

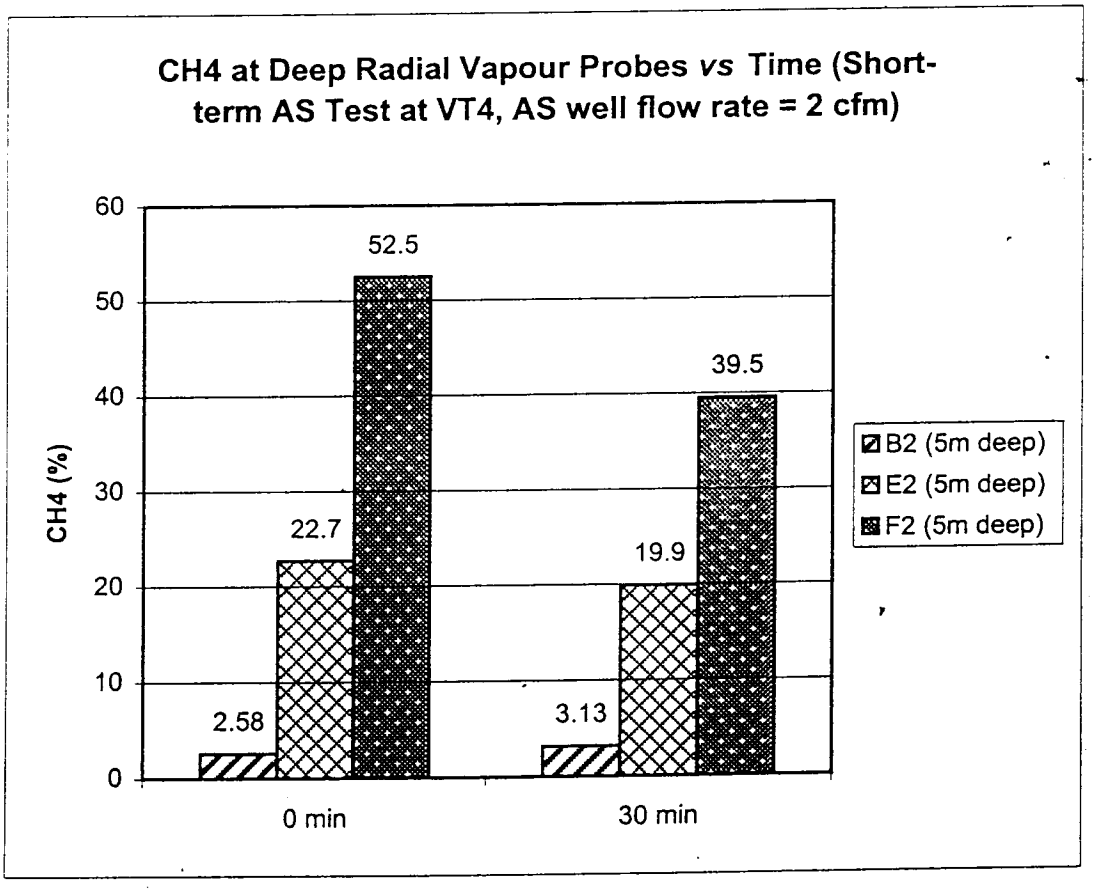

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