1 Field Data and Charts of Data of Short-term Soil Vapour Extraction Tests

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION PILOT TEST (SHORT-TERM)

Date : ..... 18 - 9 - 1998 ..... Location/SVE ID : ..... VT1 .....

Vacuum/Flowrate : ..... 21" H_2O / 10 cfm ..... Sheet (1) of (4)

Time Elapsed (min:sec)	SVE Well		Soil Vapour Monitoring Probe Vacuum (in H_2O) Distance from Extraction Well (m)						Blower Inlet Vacuum (in H_2O)	Blower Outlet						Carbon Adsorber Outlet				
			5m		10m		20m													
	Vacuum (in H_2O)	Depth to Water (m)	Shallow Probe A1	Deep Probe A2	Shallow Probe B1	Deep Probe B2	Shallow Probe C1	Deep Probe C2		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 (%)
00:00	21	2.68	0.0	0.0	0.0	0.0	0.00	-0.20	23	26.0	10	13.5	2.96	8.10	7.01	21.5	ND	2.83	7.80	6.80
05:00	21	2.41	1.2	3.0	0.2	0.3	0.10	-0.20	23	-	-	-	-	-	-	-	-	-	-	-
10:00	21	2.33	1.8	4.8	0.3	0.3	0.30	-0.10	23	-	-	-	-	-	-	-	-	-	-	-
15:00	21	2.28	2.0	5.7	0.3	0.4	0.40	-0.10	23	32.0	10	12.7	2.96	6.80	9.03	22.5	0.1	2.88	6.57	8.91
20:00	21	2.26	2.2	6.2	0.3	0.5	0.45	0.00	23	-	-	-	-	-	-	-	-	-	-	-
25:00	21	2.24	2.2	6.5	0.3	0.4	0.50	0.00	23	-	-	-	-	-	-	-	-	-	-	-
30:00	21	2.23	2.2	6.5	0.3	0.4	0.50	0.00	23	32.5	10	13.5	2.84	8.76	9.50	22.5	0.1	2.56	8.36	8.90
35:00	21	2.21	2.2	6.5	0.3	0.4	0.50	0.00	23	33.0	10	15.8	2.73	8.00	11.40	23.0	0.2	2.63	7.80	10.50

Remarks :

1. ND -- not detected (detection limit: CO_2, O_2, CH_4 < 0.01% VOC < 0.1ppm)
2. The pressure gauge of C2 had been adjusted to zero before test but it dropped below zero just after connected to the monitoring probe.

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION PILOT TEST (SHORT-TERM)

Date : ..... 18 - 9 - 1998 .....

Vacuum/Flowrate : ..... 60" H_2O / 20 cfm .....

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

Sheet (2) of (4)

Time Elapsed (min:sec)	SVE Well		Soil Vapour Monitoring Probe Vacuum (in H_2O) Distance from Extraction Well (m)						Blower Inlet Vacuum (in H_2O)	Blower Outlet						Carbon Adsorber Outlet				
			5m		10m		20m													
	Vacuum (in H_2O)	Depth to Water (m)	Shallow Probe A1	Deep Probe A2	Shallow Probe B1	Deep Probe B2	Shallow Probe C1	Deep Probe C2		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 (%)
00:00	60	2.67	0.0	0.0	0.0	0.0	0.00	0.00	64	36	20	13.5	2.02	10.2	4.91	21	1.2	2.00	9.48	4.43
00:30	-	-	0.0	0.0	0.0	0.0	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-
01:00	-	-	0.2	1.0	0.0	0.0	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-
01:30	-	-	0.7	2.0	0.0	0.2	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-
02:00	-	-	1.0	2.8	0.1	0.3	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-
02:30	-	-	1.5	3.5	0.2	0.4	0.05	0.00	-	-	-	-	-	-	-	-	-	-	-	-
03:00	-	-	1.8	4.2	0.2	0.6	0.10	0.00	-	-	-	-	-	-	-	-	-	-	-	-
03:30	-	-	2.0	5.0	0.2	0.6	0.15	0.00	-	-	-	-	-	-	-	-	-	-	-	-
04:00	-	-	2.2	5.5	0.3	0.7	0.05	0.00	-	-	-	-	-	-	-	-	-	-	-	-
04:30	-	-	2.5	6.2	0.3	0.7	0.10	0.00	-	-	-	-	-	-	-	-	-	-	-	-
05:00	60	2.03	2.8	6.8	0.4	0.8	0.10	0.00	64	-	-	-	-	-	-	-	-	-	-	-
06:00	-	-	3.0	7.8	0.4	0.8	0.15	0.00	-	-	-	-	-	-	-	-	-	-	-	-
07:00	-	-	3.2	8.2	0.5	0.9	0.20	0.05	-	-	-	-	-	-	-	-	-	-	-	-
08:00	-	-	3.5	8.3	0.6	0.9	0.25	0.10	-	-	-	-	-	-	-	-	-	-	-	-
09:00	-	-	3.5	8.3	0.6	1.0	0.25	0.15	-	-	-	-	-	-	-	-	-	-	-	-
10:00	60	1.90	3.7	8.3	0.6	1.0	0.25	0.15	64	-	-	-	-	-	-	-	-	-	-	-
12:00	-	-	3.7	8.3	0.7	0.8	0.35	0.15	-	-	-	-	-	-	-	-	-	-	-	-
14:00	-	-	3.7	8.3	0.7	0.8	0.35	0.15	-	-	-	-	-	-	-	-	-	-	-	-
15:00	60	1.83	-	-	-	-	-	-	64	43	20	20.0	2.53	6.5	8.80	23	1.5	2.44	5.80	8.02
16:00	-	-	3.7	8.3	0.7	0.8	0.35	0.15	-	-	-	-	-	-	-	-	-	-	-	-
18:00	-	-	3.7	8.3	0.8	0.8	0.35	0.15	-	-	-	-	-	-	-	-	-	-	-	-
20:00	60	1.80	3.7	8.3	0.8	0.8	0.40	0.15	64	-	-	-	-	-	-	-	-	-	-	-
22:00	60	1.78	3.7	8.3	0.8	0.9	0.45	0.20	64	45	20	16.2	2.41	6.7	9.00	24	1.4	2.30	6.58	8.80

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION PILOT TEST (SHORT-TERM)

Date : ..... 18 - 9 - 1998 .....

Vacuum/Flowrate : ..... 74 - 79" H_2O / 19 -25 cfm .....

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

Sheet (3) of (4)

Time Elapsed (min:sec)	SVE Well		Soil Vapour Monitoring Probe Vacuum (in H_2O) Distance from Extraction Well (m)						Blower Inlet Vacuum (in H_2O)	Blower Outlet						Carbon Adsorber Outlet				
			5m		10m		20m													
	Vacuum (in H_2O)	Depth to Water (m)	Shallow Probe A1	Deep Probe A2	Shallow Probe B1	Deep Probe B2	Shallow Probe C1	Deep Probe C2		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 (%)
00:00	74	2.65	0.0	0.0	0.0	0.0	0.00	0.00	78	35	25	22.1	2.14	7.50	9.06	22.5	1.2	2.08	7.30	8.87
00:30	-		0.0	0.5	0.0	0.0	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-
01:00	-		0.7	2.0	0.1	0.1	0.05	0.05	-	-	-	-	-	-	-	-	-	-	-	-
01:30	-		1.2	3.0	0.1	0.4	0.05	0.05	-	-	-	-	-	-	-	-	-	-	-	-
02:00	-		1.8	4.0	0.2	0.6	0.05	0.15	-	-	-	-	-	-	-	-	-	-	-	-
02:30	-		2.2	5.0	0.3	0.7	0.10	0.15	-	-	-	-	-	-	-	-	-	-	-	-
03:00	-		2.5	6.0	0.4	0.8	0.15	0.15	-	-	-	-	-	-	-	-	-	-	-	-
03:30	-		2.8	6.8	0.4	0.8	0.05	0.15	-	-	-	-	-	-	-	-	-	-	-	-
04:00	-		3.2	7.8	0.5	0.9	0.10	0.10	-	-	-	-	-	-	-	-	-	-	-	-
04:30	-		3.2	8.2	0.5	1.0	0.15	0.10	-	-	-	-	-	-	-	-	-	-	-	-
05:00	74	1.86	3.5	8.8	0.6	1.0	0.15	0.10	78	-	-	-	-	-	-	-	-	-	-	-
06:00	-		3.7	9.2	0.7	1.1	0.20	0.15	-	-	-	-	-	-	-	-	-	-	-	-
07:00	-		3.8	9.2	0.8	1.1	0.25	0.15	-	-	-	-	-	-	-	-	-	-	-	-
08:00	-		4.0	9.2	0.8	1.1	0.30	0.20	-	-	-	-	-	-	-	-	-	-	-	-
09:00	-		4.0	9.0	0.9	1.1	0.35	0.15	-	-	-	-	-	-	-	-	-	-	-	-
10:00	76	1.74	4.0	9.0	0.9	1.1	0.40	0.20	79	-	-	-	-	-	-	-	-	-	-	-
12:00	-		4.0	9.0	0.9	1.1	0.40	0.20	-	-	-	-	-	-	-	-	-	-	-	-
14:00	-		4.0	8.8	1.0	1.0	0.45	0.20	-	-	-	-	-	-	-	-	-	-	-	-
15:00	78	1.73	-	-	-	-	-	-	80	48	22	25.0	2.21	6.70	9.80	24.0	1.3	2.00	6.58	9.54
16:00	-		4.0	8.5	1.0	0.8	0.50	0.20	-	-	-	-	-	-	-	-	-	-	-	-
18:00	-		4.0	8.5	1.0	0.8	0.50	0.20	-	-	-	-	-	-	-	-	-	-	-	-
20:00	78	1.72	4.0	8.5	0.9	0.8	0.50	0.20	80	-	-	-	-	-	-	-	-	-	-	-
22:00	-		3.8	8.2	0.9	0.7	0.50	0.20	-	-	-	-	-	-	-	-	-	-	-	-
24:00	-		3.8	8.2	0.9	0.7	0.50	0.20	-	-	-	-	-	-	-	-	-	-	-	-
26:00	79	1.72	3.8	8.2	0.9	0.7	0.50	0.20	81	54	19	27.7	1.98	8.20	7.16	24.0	0.9	1.35	7.80	7.20

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION PILOT TEST (SHORT-TERM)

Date : ..... 18 - 9 - 1998 .....

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

Extracted Air Flowrate					10 cfm		20 cfm		19 - 25 cfm	
					Before Test	After Test	Before Test	After Test	Before Test	After Test
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	5m	Shallow Probe (painted)	VOC (ppm)	10.7	2.2	2.2	15.8	15.8	2.8
				CO_2 (%)	0.45	ND	ND	ND	ND	ND
				O_2 (%)	20.0	20.4	20.4	20.8	20.8	19.7
				CH_4 (%)	75.0	0.54	0.54	ND	ND	ND
			Deep Probe	VOC (ppm)	5.6	1.0	1.0	0.1	0.1	1.9
				CO_2 (%)	0.02	ND	ND	ND	ND	ND
				O_2 (%)	20.3	20.7	20.7	21.1	21.1	20.0
				CH_4 (%)	0.11	ND	ND	ND	ND	ND
		10m	Shallow Probe (painted)	VOC (ppm)	6.7	7.4	7.4	7.0	7.0	4.4
				CO_2 (%)	0.02	ND	ND	ND	ND	ND
				O_2 (%)	19.8	20.1	20.1	20.4	20.4	19.2
				CH_4 (%)	1.35	0.90	0.90	0.05	0.05	0.11
			Deep Probe	VOC (ppm)	4.4	2.8	2.8	1.1	1.1	1.5
				CO_2 (%)	ND	ND	ND	ND	ND	ND
				O_2 (%)	20.4	20.5	20.5	20.9	20.9	20.0
				CH_4 (%)	ND	0.15	0.15	ND	ND	ND
		20m	Shallow Probe (painted)	VOC (ppm)	5.8	4.5	4.5	9.8	9.8	2.4
				CO_2 (%)	0.14	0.10	0.10	0.05	0.05	0.20
				O_2 (%)	18.7	19.0	19.0	19.4	19.4	16.0
				CH_4 (%)	6.51	3.29	3.29	1.45	1.45	2.96
			Deep Probe	VOC (ppm)	3.1	5.9	5.9	3.0	3.0	2.2
				CO_2 (%)	ND	ND	ND	ND	ND	ND
				O_2 (%)	20.7	20.7	20.7	21.1	21.1	20.0
				CH_4 (%)	ND	ND	ND	ND	ND	ND
SVE Well				Free Product Thickness	ND	ND	ND	ND	ND	ND

Remarks :

1. ND -- not detected (detection limit: CO_2, O_2, CH_4 < 0.01%; VOC < 0.1 ppm)
2. Gas was measured without pump.
3. Venting was carried out for 20 minutes before test as trial.

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION PILOT TEST (SHORT-TERM)

Date : ..... 19 - 9 - 1998 .....

Vacuum/Flowrate : ..... 10" H_2O / 39 cfm .....

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

Sheet (1) of (3)

Time Elapsed (min:sec)	SVE Well		Soil Vapour Monitoring Probe Vacuum (in H_2O) Distance from Extraction Well (m)						Blower Inlet Vacuum (in H_2O)	Blower Outlet						Carbon Adsorber Outlet				
			5m		10m		20m													
	Vacuum (in H_2O)	Depth to Water (m)	Shallow Probe A1	Deep Probe A2	Shallow Probe B1	Deep Probe B2	Shallow Probe C1	Deep Probe C2		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 (%)
00:00	10	2.16	0.0	0.0	0.0	0.0	0.00	0.00	15	23.0	39	13.0	1.59	10.6	1.52	21	1.3	1.40	9.65	1.38
00:30	-	-	0.0	0.0	0.0	0.0	0.00	0.00	-	-	-	-	-	-	-	-	-	-	-	-
01:00	-	-	0.0	0.0	0.0	0.6	0.05	0.05	-	-	-	-	-	-	-	-	-	-	-	-
01:30	-	-	0.0	0.0	0.0	0.6	0.05	0.05	-	-	-	-	-	-	-	-	-	-	-	-
02:00	-	-	0.0	0.0	0.0	0.6	0.10	0.05	-	-	-	-	-	-	-	-	-	-	-	-
02:30	-	-	0.0	0.0	0.0	0.6	0.10	0.05	-	-	-	-	-	-	-	-	-	-	-	-
03:00	-	-	0.0	0.0	0.0	0.6	0.10	0.10	-	-	-	-	-	-	-	-	-	-	-	-
03:30	-	-	0.0	0.0	0.0	0.6	0.10	0.10	-	-	-	-	-	-	-	-	-	-	-	-
04:00	-	-	0.0	0.0	0.3	0.6	0.10	0.10	-	-	-	-	-	-	-	-	-	-	-	-
04:30	-	-	0.0	0.0	0.3	0.6	0.10	0.10	-	-	-	-	-	-	-	-	-	-	-	-
05:00	10	2.15	0.0	0.0	0.3	0.6	0.15	0.10	15	-	-	-	-	-	-	-	-	-	-	-
06:00	-	-	0.0	0.0	0.3	0.6	0.15	0.10	-	-	-	-	-	-	-	-	-	-	-	-
07:00	-	-	0.0	0.0	0.3	0.6	0.15	0.10	-	-	-	-	-	-	-	-	-	-	-	-
08:00	-	-	0.0	0.0	0.3	0.6	0.15	0.10	-	-	-	-	-	-	-	-	-	-	-	-
09:00	-	-	0.0	0.0	0.3	0.6	0.15	0.10	-	-	-	-	-	-	-	-	-	-	-	-
10:00	10	2.15	0.0	0.0	0.3	0.6	0.15	0.10	15	24.5	39	14.6	1.31	9.60	2.31	22	2.4	1.26	8.70	2.22
12:00	-	-	0.0	0.0	0.3	0.6	0.15	0.10	-	-	-	-	-	-	-	-	-	-	-	-
14:00	10	2.14	0.0	0.0	0.3	0.6	0.15	0.10	15	25.0	39	15.2	1.44	9.80	2.40	22	2.2	1.35	8.85	2.51

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION PILOT TEST (SHORT-TERM)

Date : ..... 19 - 9 - 1998 ..... Location/SVE ID : ..... VT2 .....

Vacuum/Flowrate : ..... 21" H_2O / 100 cfm ..... Sheet (2) of (3)

Time Elapsed (min:sec)	SVE Well		Soil Vapour Monitoring Probe Vacuum (in H_2O) Distance from Extraction Well (m)						Blower Inlet Vacuum (in H_2O)	Blower Outlet						Carbon Adsorber Outlet				
			5m		10m		20m													
	Vacuum (in H_2O)	Depth to Water (m)	Shallow Probe A1	Deep Probe A2	Shallow Probe B1	Deep Probe B2	Shallow Probe C1	Deep Probe C2		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 (%)
00:00	21	2.15	0.0	0.0	0.00	0.00	0.00	0.00	31	37.5	100	12.5	0.93	11.0	1.88	26.5	1.5	0.88	9.70	1.92
00:30	-	-	0.0	0.0	0.20	0.20	0.05	0.05	-	-	-	-	-	-	-	-	-	-	-	-
01:00	-	-	0.2	0.0	0.30	0.30	0.15	0.15	-	-	-	-	-	-	-	-	-	-	-	-
01:30	-	-	0.5	0.0	0.50	0.50	0.25	0.25	-	-	-	-	-	-	-	-	-	-	-	-
02:00	-	-	0.5	0.0	0.55	0.55	0.30	0.30	-	-	-	-	-	-	-	-	-	-	-	-
02:30	-	-	0.5	0.0	0.55	0.55	0.30	0.35	-	-	-	-	-	-	-	-	-	-	-	-
03:00	-	-	0.5	0.0	0.55	0.55	0.35	0.35	-	-	-	-	-	-	-	-	-	-	-	-
03:30	-	-	0.5	0.0	0.60	0.60	0.35	0.40	-	-	-	-	-	-	-	-	-	-	-	-
04:00	-	-	0.5	0.0	0.60	0.60	0.35	0.40	-	-	-	-	-	-	-	-	-	-	-	-
04:30	-	-	0.7	0.0	0.60	0.60	0.40	0.40	-	-	-	-	-	-	-	-	-	-	-	-
05:00	21	2.12	0.7	0.0	0.60	0.60	0.40	0.45	31	-	-	-	-	-	-	-	-	-	-	-
06:00	-	-	0.7	0.0	0.60	0.60	0.40	0.45	-	-	-	-	-	-	-	-	-	-	-	-
07:00	-	-	0.7	0.0	0.60	0.60	0.40	0.45	-	-	-	-	-	-	-	-	-	-	-	-
08:00	-	-	0.7	0.0	0.60	0.60	0.40	0.45	-	-	-	-	-	-	-	-	-	-	-	-
09:00	-	-	0.7	0.0	0.60	0.60	0.40	0.45	-	-	-	-	-	-	-	-	-	-	-	-
10:00	21	2.11	0.7	0.0	0.60	0.60	0.40	0.45	30	47.0	100	11.5	0.65	11.3	2.70	29.0	2.3	0.50	10.5	2.57

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION PILOT TEST (SHORT-TERM)

Date : .....19 - 9 - 1998 ..... Sheet (3) of (3)

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

Extracted Air Flowrate					39 cfm		100 cfm	
					Before Test	After Test	Before Test	After Test
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	5m	Shallow Probe (painted)	VOC (ppm)	4.5	2.3	2.3	2.1
				CO_2 (%)	0.30	0.05	0.05	0.02
				O_2 (%)	18.7	19.5	19.5	19.2
				CH_4 (%)	65.0	1.20	1.20	ND
			Deep Probe	VOC (ppm)	3.3	1.2	1.2	0.9
				CO_2 (%)	0.30	0.02	0.02	0.01
				O_2 (%)	18.3	18.9	18.9	19.6
				CH_4 (%)	67.5	0.80	0.80	ND
		10m	Shallow Probe (painted)	VOC (ppm)	4.5	2.9	2.9	2.8
				CO_2 (%)	0.73	0.50	0.50	0.53
				O_2 (%)	17.3	17.5	17.5	17.4
				CH_4 (%)	62.3	0.90	0.90	ND
			Deep Probe	VOC (ppm)	3.2	1.2	1.2	0.5
				CO_2 (%)	0.03	ND	ND	ND
				O_2 (%)	19.2	19.5	19.5	19.9
				CH_4 (%)	0.27	0.05	0.05	ND
		20m	Shallow Probe (painted)	VOC (ppm)	6.8	3.8	3.8	31.0
				CO_2 (%)	4.53	4.26	4.26	4.13
				O_2 (%)	0.06	1.80	1.80	2.10
				CH_4 (%)	2.78	0.50	0.50	ND
			Deep Probe	VOC (ppm)	3.4	1.8	1.8	1.2
				CO_2 (%)	0.02	0.02	0.02	0.02
				O_2 (%)	19.2	20.7	20.7	20.2
				CH_4 (%)	0.01	ND	ND	ND
SVE Well				Free Product Thickness	ND	ND	ND	ND

Remarks :

1. ND -- not detected (detection limit: CO_2, O_2, CH_4 < 0.01% VOC < 0.1ppm)
2. Gas was measured without pump.

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION PILOT TEST (SHORT-TERM)

Date : ..... 12 - 10 - 1998 .....

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

Vacuum/Flowrate : .....46 - 90" H_2O / 8 cfm .....

Sheet (1) of (4)

Time Elapsed (min:sec)	SVE Well		Depth to Water at Groundwater Wells (m)				Soil Vapour Monitoring Probe Vacuum (in H_2O)												Blower Inlet	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 W5	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	Vacuum (in H_2O)	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 (%)
00:00	46	2.30	2.37	2.38	2.28	2.32	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.00	0.00	102	20	8	63.2	ND	11.8	12.1	15	ND	1.31	8.80	5.02
00:30	-	-	-	-	-	-	0.00	0.45	0.5	0.3	0.15	0.00	0.00	0.00	0.0	0.0	0.10	0.10	-	-	-	-	-	-	-	-	-	-	-	-
01:00	-	-	-	-	-	-	0.00	0.45	0.6	0.4	0.25	0.00	0.00	0.00	0.3	0.0	0.25	0.10	-	-	-	-	-	-	-	-	-	-	-	-
01:30	-	-	-	-	-	-	0.00	0.50	0.6	0.4	0.30	0.00	0.00	0.00	0.3	0.0	0.30	0.20	-	-	-	-	-	-	-	-	-	-	-	-
02:00	-	-	-	-	-	-	0.25	0.75	0.6	0.4	0.30	0.00	0.00	0.00	0.3	0.0	0.30	0.20	-	-	-	-	-	-	-	-	-	-	-	-
02:30	-	-	-	-	-	-	0.25	1.00	0.5	0.3	0.30	0.00	0.00	0.00	0.3	0.0	0.25	0.20	-	-	-	-	-	-	-	-	-	-	-	-
03:00	-	-	-	-	-	-	0.25	1.10	0.5	0.5	0.30	0.00	0.00	0.00	0.3	0.0	0.25	0.20	-	-	-	-	-	-	-	-	-	-	-	-
03:30	-	-	-	-	-	-	0.30	1.25	0.5	0.5	0.30	0.00	0.00	0.00	0.3	0.0	0.25	0.10	-	-	-	-	-	-	-	-	-	-	-	-
04:00	-	-	-	-	-	-	0.30	1.45	0.5	0.5	0.30	0.00	0.05	0.05	0.3	0.0	0.30	0.10	-	-	-	-	-	-	-	-	-	-	-	-
04:30	-	-	-	-	-	-	0.30	1.50	0.5	0.5	0.30	0.00	0.05	0.05	0.3	0.0	0.40	0.20	-	-	-	-	-	-	-	-	-	-	-	-
05:00	-	-	-	-	-	-	0.30	1.75	0.5	0.4	0.30	0.00	0.05	0.05	0.3	0.0	0.40	0.10	-	-	-	-	-	-	-	-	-	-	-	-
06:00	-	-	-	-	-	-	0.30	1.75	0.5	0.6	0.30	0.00	0.05	0.05	0.3	0.0	0.40	0.10	-	-	-	-	-	-	-	-	-	-	-	-
07:00	-	-	-	-	-	-	0.30	2.25	0.4	0.6	0.25	0.10	0.05	0.00	0.3	0.2	0.40	0.10	-	-	-	-	-	-	-	-	-	-	-	-
08:00	-	-	-	-	-	-	0.40	2.25	0.5	0.4	0.25	0.10	0.05	0.00	0.3	0.2	0.40	0.10	-	-	-	-	-	-	-	-	-	-	-	-
09:00	-	-	-	-	-	-	0.40	2.25	0.5	0.4	0.25	0.10	0.05	0.05	0.3	0.2	0.40	0.10	-	-	-	-	-	-	-	-	-	-	-	-
10:00	90	-	2.37	2.38	2.30	2.39	0.40	2.25	0.5	0.5	0.25	0.10	0.05	0.05	0.3	0.0	0.40	0.10	92	40	8	74.1	ND	13.5	9.30	17	ND	1.35	13.0	7.27
12:00	-	-	-	-	-	-	0.50	2.50	0.5	0.5	0.25	0.10	0.05	0.05	0.3	0.0	0.40	0.10	-	-	-	-	-	-	-	-	-	-	-	-
14:00	-	-	-	-	-	-	0.50	2.50	0.4	0.6	0.25	0.05	0.10	0.05	0.3	0.1	0.40	0.10	-	-	-	-	-	-	-	-	-	-	-	-
16:00	-	-	-	-	-	-	0.50	2.75	0.4	0.4	0.25	0.05	0.05	0.00	0.3	0.2	0.25	0.10	-	-	-	-	-	-	-	-	-	-	-	-
18:00	80	-	2.38	2.38	2.31	2.37	0.65	2.85	0.4	0.4	0.20	0.05	0.00	0.00	0.3	0.2	0.25	0.10	88	59	8	79.3	ND	14.3	8.78	18	ND	1.11	14.3	6.69

Remarks :

1. ND -- not detected (detection limit: CO_2, O_2, CH_4 < 0.01% VOC < 0.1ppm)
2. The water level of SVE well could not be measured due to bubbling.
3. Groundwater was pumped out from the SVE well during the test.

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION PILOT TEST (SHORT-TERM)

Date : ..... 12 - 10 - 1998 .....

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

Vacuum/Flowrate : ..... 58 - 60 " H_2O / 4.3 - 10.7 cfm .....

Sheet (2) of (4)

Time Elapsed (min:sec)	SVE Well		Depth to Water at Groundwater Wells (m)				Soil Vapour Monitoring Probe Vacuum (in H_2O)												Blower Inlet	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	Vacuum (in H_2O)	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 (%)
00:00	60	2.25	2.38	2.37	2.24	2.33	0.00	0.00	0.0	0.0	0.00	0.00	0	0.00	0	0	0.00	0.00	62	20	10.7	48.1	0.01	15.0	7.25	15	5.7	0.80	14.2	6.32
00:30	-	-	-	-	-	-	1.75	2.75	0.4	0.2	0.15	0.10	0	0.05	0	0	0.10	0.10	-	-	-	-	-	-	-	-	-	-	-	-
01:00	-	-	-	-	-	-	1.25	2.00	0.4	0.2	0.15	0.15	0	0.05	0	0	0.20	0.10	-	-	-	-	-	-	-	-	-	-	-	-
01:30	-	-	-	-	-	-	1.00	2.00	0.4	0.2	0.15	0.15	0	0.05	0	0	0.20	0.10	-	-	-	-	-	-	-	-	-	-	-	-
02:00	-	-	-	-	-	-	0.75	1.90	0.3	0.1	0.15	0.15	0	0.05	0	0	0.20	0.10	-	-	-	-	-	-	-	-	-	-	-	-
02:30	-	-	-	-	-	-	0.75	1.80	0.3	0.1	0.15	0.15	0	0.05	0	0	0.25	0.20	-	-	-	-	-	-	-	-	-	-	-	-
03:00	-	-	-	-	-	-	0.50	1.80	0.3	0.1	0.15	0.15	0	0.05	0	0	0.25	0.20	-	-	-	-	-	-	-	-	-	-	-	-
03:30	-	-	-	-	-	-	0.50	1.80	0.3	0.2	0.15	0.15	0	0.05	0	0	0.20	0.10	-	-	-	-	-	-	-	-	-	-	-	-
04:00	-	-	-	-	-	-	0.50	1.80	0.3	0.2	0.15	0.15	0	0.05	0	0	0.20	0.10	-	-	-	-	-	-	-	-	-	-	-	-
04:30	-	-	-	-	-	-	0.50	1.80	0.3	0.2	0.15	0.15	0	0.05	0	0	0.20	0.10	-	-	-	-	-	-	-	-	-	-	-	-
05:00	-	-	-	-	-	-	0.50	1.80	0.3	0.2	0.15	0.15	0	0.05	0	0	0.20	0.10	-	-	-	-	-	-	-	-	-	-	-	-
06:00	-	-	-	-	-	-	0.50	1.80	0.3	0.2	0.15	0.15	0	0.05	0	0	0.20	0.10	-	-	-	-	-	-	-	-	-	-	-	-
07:00	-	-	-	-	-	-	0.50	1.80	0.3	0.2	0.15	0.15	0	0.10	0	0	0.20	0.10	-	-	-	-	-	-	-	-	-	-	-	-
08:00	-	-	-	-	-	-	0.50	1.80	0.3	0.2	0.15	0.15	0	0.05	0	0	0.20	0.10	-	-	-	-	-	-	-	-	-	-	-	-
09:00	58	0.40	2.38	2.37	2.25	2.36	0.50	1.80	0.3	0.2	0.15	0.15	0	0.05	0	0	0.20	0.10	60	21	4.3	39.4	0.01	16.3	5.50	15	4.4	0.53	16.4	4.50

Remarks :

The water level of SVE well could not be measured due to bubbling. The measured value was the level of bubbles.

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION PILOT TEST (SHORT-TERM)

Date : ..... 14 - 10 - 1998 .....

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

Vacuum/Flowrate : ..... 48 - 50 " H_2O / 5.5 - 9.4 cfm .....

Sheet (3) of (4)

Time Elapsed (min:sec)	SVE Well		Depth to Water at Groundwater Wells (m)				Soil Vapour Monitoring Probe Vacuum (in H_2O)												Blower Inlet	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	Vacuum (in H_2O)	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 (%)
00:00	48	2.30	2.37	2.36	2.28	2.30	0.00	0.00	0.0	0.0	0.00	0.00	0	0.00	0.00	0.0	0.00	0.00	50	20	9.4	48.6	ND	13.2	13.6	15	8.2	0.53	13.2	3.56
00:30	-	-	-	-	-	-	1.10	1.00	0.3	0.3	0.10	0.10	0	0.10	0.00	0.0	0.25	0.25	-	-	-	-	-	-	-	-	-		-	-
01:00	-	-	-	-	-	-	1.10	1.10	0.4	0.4	0.20	0.25	0	0.10	0.25	0.0	0.25	0.30	-	-	-	-	-	-	-	-	-	-	-	-
01:30	-	-	-	-	-	-	1.20	1.20	0.4	0.4	0.25	0.30	0	0.05	0.25	0.0	0.25	0.30	-	-	-	-	-	-	-	-	-	-	-	-
02:00	-	-	-	-	-	-	1.20	1.20	0.4	0.4	0.25	0.30	0	0.05	0.25	0.0	0.25	0.30	-	-	-	-	-	-	-	-	-	-	-	-
02:30	-	-	-	-	-	-	1.20	1.20	0.4	0.4	0.25	0.30	0	0.00	0.25	0.1	0.25	0.30	-	-	-	-	-	-	-	-	-	-	-	-
03:00	-	-	-	-	-	-	1.20	1.20	0.4	0.4	0.25	0.35	0	0.00	0.25	0.1	0.25	0.30	-	-	-	-	-	-	-	-	-	-	-	-
03:30	-	-	-	-	-	-	1.10	1.00	0.4	0.4	0.25	0.30	0	0.00	0.25	0.1	0.25	0.30	-	-	-	-	-	-	-	-	-	-	-	-
04:00	-	-	-	-	-	-	1.10	1.00	0.4	0.4	0.25	0.30	0	0.00	0.25	0.1	0.25	0.30	-	-	-	-	-	-	-	-	-	-	-	-
04:30	-	-	-	-	-	-	1.10	1.00	0.4	0.4	0.25	0.30	0	0.00	0.25	0.1	0.25	0.30	-	-	-	-	-	-	-	-	-	-	-	-
05:00	-	-	-	-	-	-	1.10	1.00	0.4	0.4	0.25	0.30	0	0.00	0.25	0.1	0.25	0.30	-	-	-	-	-	-	-	-	-	-	-	-
06:00	-	-	-	-	-	-	1.10	1.00	0.3	0.3	0.25	0.30	0	0.00	0.25	0.1	0.25	0.30	-	-	-	-	-	-	-	-	-	-	-	-
07:00	-	-	-	-	-	-	1.00	1.00	0.3	0.3	0.20	0.25	0	0.00	0.25	0.1	0.25	0.30	-	-	-	-	-	-	-	-	-	-	-	-
08:00	-	-	-	-	-	-	0.90	1.00	0.3	0.3	0.20	0.25	0	0.00	0.25	0.1	0.25	0.30	-	-	-	-	-	-	-	-	-	-	-	-
09:00	-	-	-	-	-	-	0.90	1.00	0.3	0.3	0.20	0.25	0	0.00	0.25	0.1	0.25	0.30	-	-	-	-	-	-	-	-	-	-	-	-
10:00	50	0.75	2.38	2.37	2.31	2.36	0.90	1.00	0.3	0.3	0.15	0.20	0	0.00	0.25	0.1	0.25	0.30	50	21	5.5	52.0	ND	13.6	10.9	15	4.1	0.52	14.1	5.66
12:00	-	-	-	-	-	-	0.80	1.00	0.3	0.3	0.15	0.20	0	0.00	0.25	0.1	0.25	0.30	-	-	-	-	-	-	-	-	-	-	-	-
14:00	-	-	-	-	-	-	0.60	1.00	0.3	0.3	0.15	0.20	0	0.00	0.25	0.1	0.25	0.30	-	-	-	-	-	-	-	-	-	-	-	-
16:00	-	-	-	-	-	-	0.60	1.00	0.2	0.2	0.15	0.20	0	0.00	0.25	0.0	0.25	0.30	-	-	-	-	-	-	-	-	-	-	-	-
18:00	-	-	-	-	-	-	0.40	1.00	0.2	0.2	0.15	0.20	0	0.00	0.25	0.0	0.25	0.30	-	-	-	-	-	-	-	-	-	-	-	-
20:00	-	-	-	-	-	-	0.40	1.00	0.2	0.2	0.15	0.20	0	0.00	0.25	0.0	0.25	0.30	-	-	-	-	-	-	-	-	-	-	-	-
22:00	-	-	-	-	-	-	0.40	1.00	0.2	0.2	0.15	0.20	0	0.00	0.25	0.0	0.25	0.30	-	-	-	-	-	-	-	-	-	-	-	-
24:00	48	0.77	2.38	2.37	2.30	2.32	0.40	1.00	0.2	0.2	0.15	0.20	0	0.00	0.25	0.0	0.25	0.30	50	21	5.8	49.2	ND	14	9.7	15	2.8	0.45	14.0	6.10

Remarks :

The water level of SVE well could not be measured due to bubbling. The measured value was the level of bubbles.

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION PILOT TEST (SHORT-TERM)

Date : .....12 - 10 - 1998 / 14 - 10 - 1998 ..... Sheet (4) of (4)

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

Extracted Air Flowrate					8 cfm		4.3 - 10.7 cfm		5.5 - 9.4 cfm	
					Before Test	After Test	Before Test	After Test	Before Test	After Test
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	1m (3A)	Shallow Probe (painted)	VOC (ppm)	11.4	19.2	19.2	17.4	8.0	7.1
				CO_2 (%)	0.14	ND	ND	ND	0.10	ND
				O_2 (%)	20.1	20.9	20.9	21.0	19.8	20.2
				CH_4 (%)	75.0	ND	ND	ND	73.5	ND
			Deep Probe	VOC (ppm)	9.5	14.9	14.9	28.0	13.8	14.2
				CO_2 (%)	0.01	ND	ND	ND	ND	ND
				O_2 (%)	20.5	20.5	20.5	20.5	20.0	20.2
				CH_4 (%)	ND	ND	ND	ND	1.2	ND
		5m (3B)	Shallow Probe (painted)	VOC (ppm)	61.0	26.1	26.1	45.0	35.9	38.6
				CO_2 (%)	0.01	ND	ND	ND	0.02	ND
				O_2 (%)	4.30	1.10	1.10	3.70	2.00	2.00
				CH_4 (%)	17.6	12.8	12.8	14.0	16.2	14.8
			Deep Probe	VOC (ppm)	33.1	24.9	24.9	33.5	34.8	28.4
				CO_2 (%)	0.01	ND	ND	ND	ND	ND
				O_2 (%)	10.4	3.40	3.40	2.40	0.20	0.70
				CH_4 (%)	8.20	12.8	12.8	11.9	41.1	13.6
		10m (3C)	Shallow Probe (painted)	VOC (ppm)	28.1	21.0	21.0	16.4	36.6	32.7
				CO_2 (%)	ND	ND	ND	ND	0.01	0
				O_2 (%)	20.4	19.9	19.9	20.9	19.4	19.0
				CH_4 (%)	0.23	ND	ND	0.03	0.27	0.42
			Deep Probe	VOC (ppm)	20.2	14.9	14.9	14.8	14.8	16.8
				CO_2 (%)	0.25	ND	ND	0.02	ND	ND
				O_2 (%)	3.60	1.30	1.30	2.30	0.20	2.30
				CH_4 (%)	20.5	20.2	20.2	14.8	60.8	17.1
		20m (3D)	Shallow Probe (painted)	VOC (ppm)	25.9	14.4	14.4	33.0	23.1	18.3
				CO_2 (%)	0.25	0.10	0.10	0.30	0.88	0.96
				O_2 (%)	14.5	16.7	16.7	15.0	4.90	6.40
				CH_4 (%)	3.60	1.92	1.92	1.13	15.6	9.70
			Deep Probe	VOC (ppm)	15.1	28.4	28.4	12.1	23.7	14.9
				CO_2 (%)	0.65	0.60	0.60	0.30	0.98	1.19
				O_2 (%)	16.8	16.0	16.0	15.0	13.0	12.0
				CH_4 (%)	2.40	2.05	2.05	1.13	3.74	4.78
		5m (3E)	Shallow Probe (painted)	VOC (ppm)	120	106	106	155	128	103
				CO_2 (%)	0.10	0.29	0.29	0.33	0.30	0.33
				O_2 (%)	10.4	1.80	1.80	2.00	0.10	0.20
				CH_4 (%)	11.9	16.0	16.0	16.1	20.3	16.4
			Deep Probe	VOC (ppm)	19.4	20.1	20.1	15.5	14.1	14.9
				CO_2 (%)	0.01	ND	ND	ND	ND	ND
				O_2 (%)	20.9	21.5	21.5	21.2	20.1	20.4
				CH_4 (%)	0.01	ND	ND	ND	ND	ND
		5m (3F)	Shallow Probe (painted)	VOC (ppm)	8.1	20.0	20.0	6.5	5.7	5.5
				CO_2 (%)	0.06	0.53	0.53	0.41	0.41	0.53
				O_2 (%)	17.7	8.20	8.20	10.4	3.90	5.00
				CH_4 (%)	4.70	20.7	20.7	28.7	31.3	26.2
			Deep Probe	VOC (ppm)	8.5	6.5	6.5	16.2	3.0	4.8
				CO_2 (%)	0.50	0.72	0.72	0.14	0.92	0.88
				O_2 (%)	11.7	6.50	6.50	19.9	6.00	6.40
				CH_4 (%)	18.0	24.0	24.0	2.23	25.0	21.9
SVE Well				Free Product Thickness	ND	ND	ND	ND	ND	ND

Remarks :

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

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION PILOT TEST (SHORT-TERM)

Date : ..... 21 - 9 - 1998 ..... Location/SVE ID : ..... VT4 .....

Vacuum/Flowrate : ..... 5.5" H_2O / 81 cfm ..... Sheet (1) of (4)

Time Elapsed (min:sec)	SVE Well		Soil Vapour Monitoring Probe Vacuum (in H_2O) Distance from Extraction Well (m)						Blower Inlet Vacuum (in H_2O)	Blower Outlet						Carbon Adsorber Outlet				
			5m		10m		20m													
	Vacuum (in H_2O)	Depth to Water (m)	Shallow Probe A1	Deep Probe A2	Shallow Probe B1	Deep Probe B2	Shallow Probe C1	Deep Probe C2		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 (%)
00:00	5.5	2.67	0.0	0.0	0.0	0.0	0.00	0.00	13	26	81	38.8	18.6	1.40	71.0	24.0	3.2	17.5	1.32	68.0
00:30	-	-	0.2	0.2	0.2	0.3	0.15	0.00	-	-	-	-	-	-	-	-	-	-	-	-
01:00	-	-	0.4	0.4	0.3	0.5	0.25	0.00	-	-	-	-	-	-	-	-	-	-	-	-
01:30	-	-	0.5	0.5	0.4	0.6	0.35	0.00	-	-	-	-	-	-	-	-	-	-	-	-
02:00	-	-	0.5	0.5	0.5	0.6	0.40	0.00	-	-	-	-	-	-	-	-	-	-	-	-
02:30	-	-	0.5	0.5	0.5	0.6	0.45	0.00	-	-	-	-	-	-	-	-	-	-	-	-
03:00	-	-	0.5	0.5	0.5	0.6	0.45	0.05	-	-	-	-	-	-	-	-	-	-	-	-
03:30	-	-	0.7	0.5	0.5	0.6	0.50	0.10	-	-	-	-	-	-	-	-	-	-	-	-
04:00	-	-	0.7	0.5	0.6	0.6	0.50	0.10	-	-	-	-	-	-	-	-	-	-	-	-
04:30	-	-	0.7	0.5	0.6	0.6	0.55	0.15	-	-	-	-	-	-	-	-	-	-	-	-
05:00	5.5	-	0.7	0.5	0.6	0.6	0.55	0.20	13	-	-	-	-	-	-	-	-	-	-	-
06:00	-	-	0.7	0.5	0.6	0.7	0.55	0.20	-	-	-	-	-	-	-	-	-	-	-	-
07:00	-	-	0.7	0.5	0.7	0.7	0.60	0.25	-	-	-	-	-	-	-	-	-	-	-	-
08:00	-	-	0.7	0.7	0.7	0.8	0.60	0.30	-	-	-	-	-	-	-	-	-	-	-	-
09:00	-	-	0.7	0.7	0.7	0.8	0.60	0.40	-	-	-	-	-	-	-	-	-	-	-	-
10:00	5.5	-	0.7	0.7	0.7	0.8	0.60	0.30	13	-	-	-	-	-	-	-	-	-	-	-
12:00	-	-	0.7	0.7	0.7	0.8	0.65	0.45	-	-	-	-	-	-	-	-	-	-	-	-
14:00	-	-	0.7	0.7	0.7	0.8	0.65	0.40	-	-	-	-	-	-	-	-	-	-	-	-
15:00	5.5	2.65	-	-	-	-	-	-	13	29	81	34.5	15.3	3.70	58.6	25.0	2.8	15.4	3.52	57.2
16:00	-	-	0.8	0.8	0.7	0.8	0.70	0.45	-	-	-	-	-	-	-	-	-	-	-	-
18:00	-	-	0.8	0.8	0.7	0.8	0.65	0.50	-	-	-	-	-	-	-	-	-	-	-	-
20:00	5.5	-	0.8	0.8	0.7	0.7	0.65	0.40	13	-	-	-	-	-	-	-	-	-	-	-
22:00	-	-	0.8	0.8	0.7	0.8	0.65	0.50	-	-	-	-	-	-	-	-	-	-	-	-
24:00	-	-	0.8	0.8	0.7	0.8	0.65	0.40	-	-	-	-	-	-	-	-	-	-	-	-
26:00	5.5	2.65	0.8	0.8	0.7	0.8	0.70	0.45	13	29	81	46.7	17.8	2.40	65.9	26.5	3.5	17.5	2.20	63.3

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION PILOT TEST (SHORT-TERM)

Date : ..... 21 - 9 - 1998 ..... Location/SVE ID : ..... VT4 .....

Vacuum/Flowrate : ..... 6" H_2O / 90 cfm ..... Sheet (2) of (4)

Time Elapsed (min:sec)	SVE Well		Soil Vapour Monitoring Probe Vacuum (in H_2O) Distance from Extraction Well (m)						Blower Inlet Vacuum (in H_2O)	Blower Outlet						Carbon Adsorber Outlet				
			5m		10m		20m													
	Vacuum (in H_2O)	Depth to Water (m)	Shallow Probe A1	Deep Probe A2	Shallow Probe B1	Deep Probe B2	Shallow Probe C1	Deep Probe C2		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 (%)
00:00	6	2.65	0.0	0.0	0.0	0.0	0.00	0.00	14	30	90	33.3	19.8	0.20	75.0	25.0	3.5	18.2	0.10	73.4
00:30	-	-	0.4	0.4	0.4	0.5	0.25	0.05	-	-	-	-	-	-	-	-	-	-	-	-
01:00	-	-	0.5	0.4	0.5	0.6	0.35	0.05	-	-	-	-	-	-	-	-	-	-	-	-
01:30	-	-	0.6	0.4	0.5	0.7	0.40	0.05	-	-	-	-	-	-	-	-	-	-	-	-
02:00	-	-	0.6	0.4	0.5	0.7	0.40	0.10	-	-	-	-	-	-	-	-	-	-	-	-
02:30	-	-	0.7	0.5	0.6	0.7	0.50	0.10	-	-	-	-	-	-	-	-	-	-	-	-
03:00	-	-	0.7	0.5	0.6	0.8	0.50	0.10	-	-	-	-	-	-	-	-	-	-	-	-
03:30	-	-	0.7	0.5	0.6	0.8	0.50	0.10	-	-	-	-	-	-	-	-	-	-	-	-
04:00	-	-	0.8	0.5	0.7	0.8	0.55	0.15	-	-	-	-	-	-	-	-	-	-	-	-
04:30	-	-	0.8	0.5	0.7	0.8	0.55	0.20	-	-	-	-	-	-	-	-	-	-	-	-
05:00	6	-	0.8	0.6	0.7	0.8	0.60	0.25	-	-	-	-	-	-	-	-	-	-	-	-
06:00	-	-	0.8	0.6	0.7	0.9	0.65	0.35	-	-	-	-	-	-	-	-	-	-	-	-
07:00	-	-	0.9	0.7	0.7	0.9	0.65	0.35	-	-	-	-	-	-	-	-	-	-	-	-
08:00	-	-	0.9	0.7	0.7	0.9	0.65	0.40	-	-	-	-	-	-	-	-	-	-	-	-
09:00	-	-	0.9	0.7	0.8	0.9	0.65	0.35	-	-	-	-	-	-	-	-	-	-	-	-
10:00	6	-	0.9	0.7	0.8	0.9	0.70	0.30	14	31	90	11.9	17.8	0.40	69.5	27.0	3.2	17.5	0.30	70.0
12:00	-	-	0.9	0.7	0.8	1.0	0.70	0.30	-	-	-	-	-	-	-	-	-	-	-	-
14:00	-	-	1.0	0.7	0.8	1.0	0.70	0.30	-	-	-	-	-	-	-	-	-	-	-	-
15:00	6	2.64	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-	-	-	-
16:00	-	-	1.0	0.8	0.8	1.0	0.70	0.35	-	-	-	-	-	-	-	-	-	-	-	-
18:00	-	-	1.0	0.8	0.9	1.0	0.75	0.35	-	-	-	-	-	-	-	-	-	-	-	-
20:00	6	-	1.1	0.8	0.9	1.0	0.75	0.30	14	31	90	10.7	17.4	1.00	68.3	27.0	3.5	17.0	0.85	67.3
22:00	-	-	1.1	0.8	0.9	1.0	0.75	0.45	-	-	-	-	-	-	-	-	-	-	-	-
24:00	-	-	1.1	0.8	0.9	1.0	0.75	0.50	-	-	-	-	-	-	-	-	-	-	-	-
30:00	6	2.63	1.1	0.8	0.9	1.0	0.75	0.50	14	32	90	8.7	17.0	1.20	64.0	28.5	3.4	17.3	1.15	65.4
35:00	6	2.63	1.1	0.8	0.9	1.0	0.75	0.55	14	32	90	8.5	17.3	1.30	65.5	28.5	3.6	17.0	1.20	65.0

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION PILOT TEST (SHORT-TERM)

Date : ..... 21 - 9 - 1998 ..... Location/SVE ID : ..... VT4 .....

Vacuum/Flowrate : ..... 8" H_2O / 105 cfm ..... Sheet (3) of (4)

Time Elapsed (min:sec)	SVE Well		Soil Vapour Monitoring Probe Vacuum (in H_2O) Distance from Extraction Well (m)						Blower Inlet Vacuum (in H_2O)	Blower Outlet						Carbon Adsorber Outlet				
			5m		10m		20m													
	Vacuum (in H_2O)	Depth to Water (m)	Shallow Probe A1	Deep Probe A2	Shallow Probe B1	Deep Probe B2	Shallow Probe C1	Deep Probe C2		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 (%)
00:00	8	2.63	0.00	0.00	0.0	0.0	0.00	0.00	20	36	105	10.5	17.8	1.60	68.0	28	3.50	17.5	1.40	65.8
00:30	-	-	0.80	0.40	0.5	0.6	0.40	0.20	-	-	-	-	-	-	-	-	-	-	-	-
01:00	-	-	0.80	0.40	0.6	0.7	0.50	0.40	-	-	-	-	-	-	-	-	-	-	-	-
01:30	-	-	0.90	0.40	0.7	0.8	0.55	0.55	-	-	-	-	-	-	-	-	-	-	-	-
02:00	-	-	1.00	0.50	0.7	0.8	0.60	0.70	-	-	-	-	-	-	-	-	-	-	-	-
02:30	-	-	1.00	0.60	0.8	0.9	0.60	0.80	-	-	-	-	-	-	-	-	-	-	-	-
03:00	-	-	1.05	0.60	0.8	0.9	0.65	0.80	-	-	-	-	-	-	-	-	-	-	-	-
03:30	-	-	1.10	0.60	0.9	0.9	0.70	0.80	-	-	-	-	-	-	-	-	-	-	-	-
04:00	-	-	1.10	0.60	0.9	0.9	0.75	1.00	-	-	-	-	-	-	-	-	-	-	-	-
04:30	-	-	1.10	0.70	0.9	1.0	0.75	1.00	-	-	-	-	-	-	-	-	-	-	-	-
05:00	8	-	1.10	0.70	0.9	1.0	0.75	1.05	20	-	-	-	-	-	-	-	-	-	-	-
06:00	-	-	1.10	0.70	1.0	1.0	0.80	1.15	-	-	-	-	-	-	-	-	-	-	-	-
07:00	-	-	1.10	0.70	1.0	1.0	0.85	1.20	-	-	-	-	-	-	-	-	-	-	-	-
08:00	-	-	1.10	0.70	1.0	1.0	0.85	1.20	-	-	-	-	-	-	-	-	-	-	-	-
09:00	-	-	1.10	0.70	1.0	1.0	0.85	1.20	-	-	-	-	-	-	-	-	-	-	-	-
10:00	8	-	1.15	0.70	1.0	1.1	0.90	1.20	20	34	105	5.2	13.9	1.70	64.0	29	3.00	12.5	1.40	65.0
12:00	-	-	1.15	0.70	1.1	1.1	0.95	1.20	-	-	-	-	-	-	-	-	-	-	-	-
14:00	-	-	1.15	0.80	1.1	1.1	0.95	1.35	-	-	-	-	-	-	-	-	-	-	-	-
15:00	8	2.61	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-
16:00	-	-	1.15	0.80	1.1	1.1	0.95	1.25	-	-	-	-	-	-	-	-	-	-	-	-
18:00	-	-	1.15	0.80	1.1	1.1	0.95	1.35	-	-	-	-	-	-	-	-	-	-	-	-
20:00	8	-	1.15	0.90	1.1	1.1	0.95	1.35	20	37	105	8.0	17.8	1.30	68.8	29	3.80	17.4	1.25	67.2
22:00	-	-	1.15	0.90	1.1	1.1	0.95	1.30	-	-	-	-	-	-	-	-	-	-	-	-
24:00	-	-	1.15	0.90	1.1	1.1	0.95	1.35	-	-	-	-	-	-	-	-	-	-	-	-
30:00	8	2.60	1.15	0.90	1.1	1.1	0.95	1.35	20	37	105	8.9	16.6	1.40	66.0	29	3.50	16.3	1.20	65.0

FIELD DATA SHEET : SOIL VAPOUR EXTRACTION PILOT TEST (SHORT-TERM)

Date : .....21 - 9 - 1998 .....

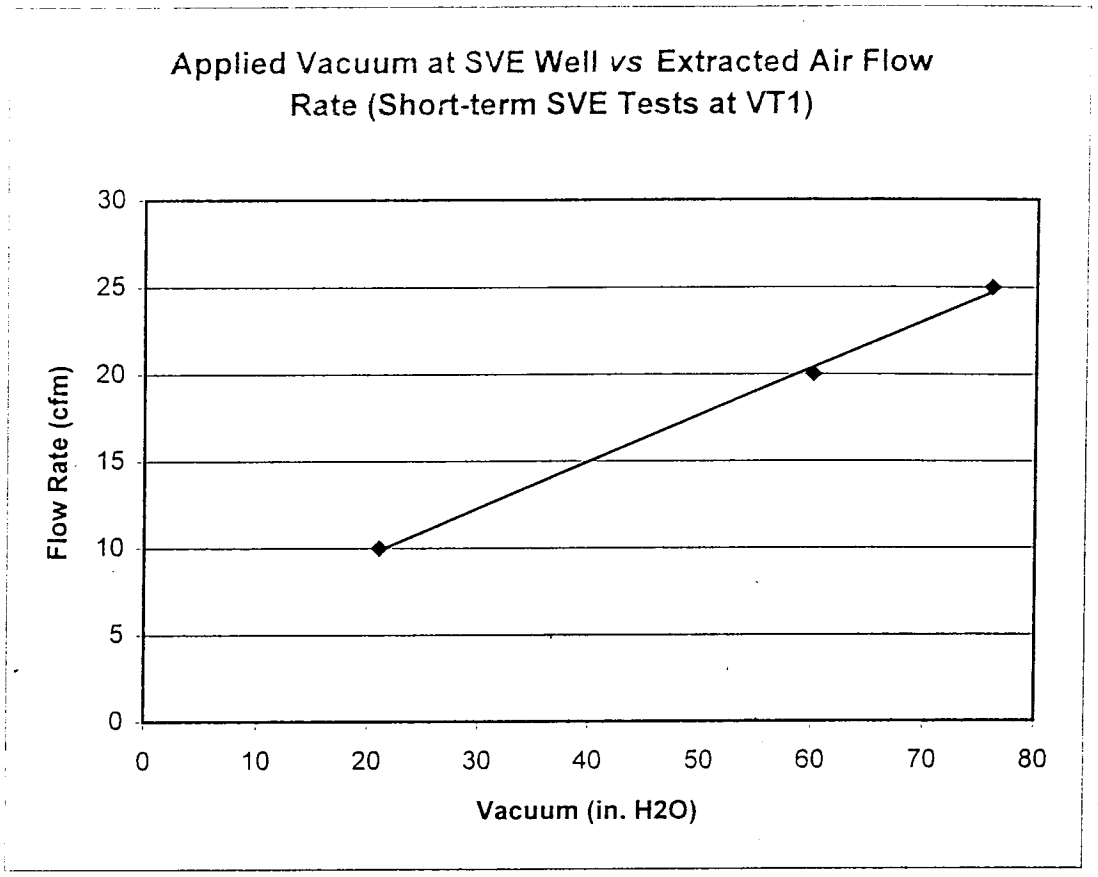
Sheet (4) of (4)

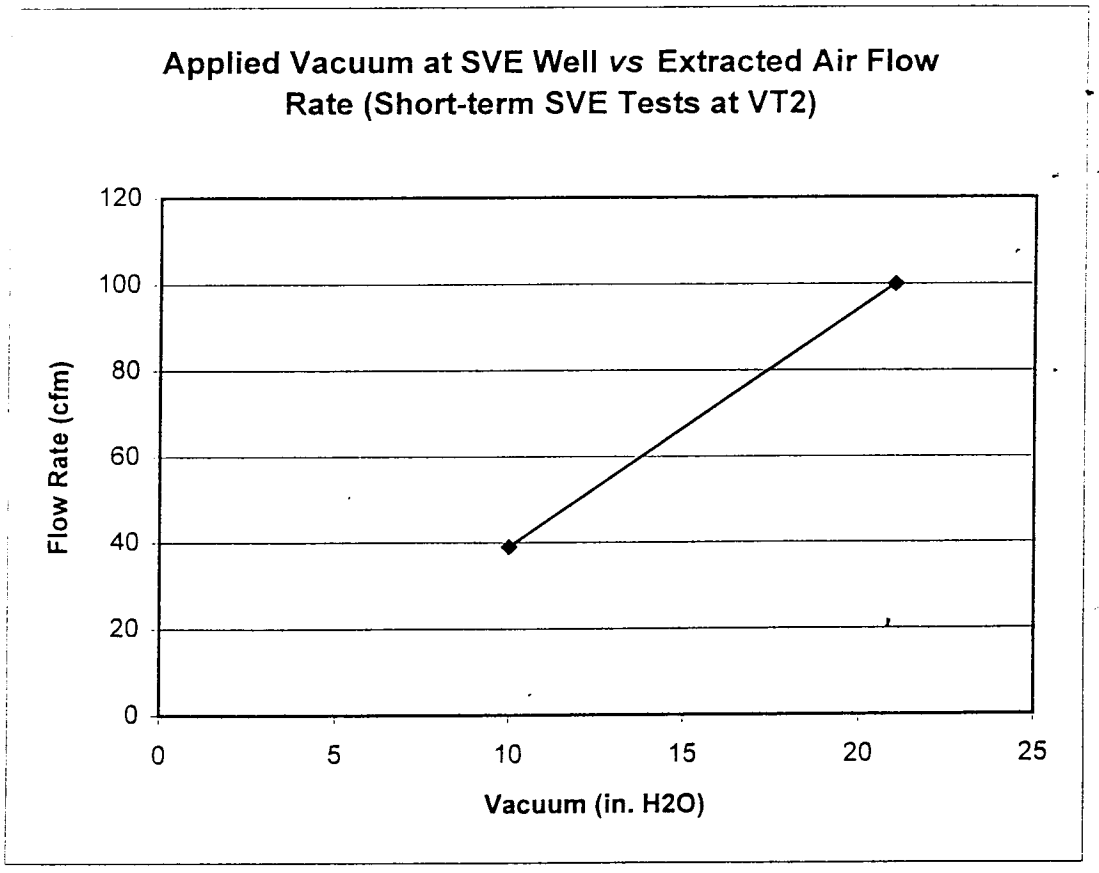
Location/SVE ID : ..... VT4 .....

Extracted Air Flowrate					81 cfm		90 cfm		105 cfm	
					Before Test	After Test	Before Test	After Test	Before Test	After Test
Soil Vapour Monitoring Probe	Distance from Extraction Well (m)	5m	Shallow Probe (painted)	VOC (ppm)	21.0	18.0	18.0	19.3	19.3	23.5
				CO_2 (%)	8.64	5.30	5.30	1.40	1.40	ND
				O_2 (%)	1.00	12.4	12.4	18.2	18.2	21.7
				CH_4 (%)	85.3	5.50	5.50	1.20	1.20	ND
			Deep Probe	VOC (ppm)	66.0	22.0	22.0	21.3	21.3	21.5
				CO_2 (%)	22.9	8.30	8.30	2.40	2.40	ND
				O_2 (%)	1.00	13.2	13.2	18.5	18.5	21.8
				CH_4 (%)	72.5	5.40	5.40	0.90	0.90	ND
		10m	Shallow Probe (painted)	VOC (ppm)	74.0	25.0	25.0	23.2	23.2	22.6
				CO_2 (%)	22.9	8.40	8.40	1.22	1.22	ND
				O_2 (%)	1.00	13.4	13.4	18.7	18.7	21.8
				CH_4 (%)	71.6	5.40	5.40	1.21	1.21	ND
			Deep Probe	VOC (ppm)	102	32.0	32.0	25.0	25.0	22.0
				CO_2 (%)	22.9	7.20	7.20	1.33	1.33	ND
				O_2 (%)	1.00	15.5	15.5	19.3	19.3	21.6
				CH_4 (%)	72.5	5.30	5.30	1.20	1.20	ND
		20m	Shallow Probe (painted)	VOC (ppm)	99.0	17.5	17.5	13.8	13.8	12.7
				CO_2 (%)	14.7	5.60	5.60	0.80	0.80	ND
				O_2 (%)	1.00	16.4	16.4	19.5	19.5	21.7
				CH_4 (%)	78.3	4.80	4.80	0.96	0.96	ND
			Deep Probe	VOC (ppm)	85.5	12.0	12.0	7.5	7.5	6.8
				CO_2 (%)	21.2	6.40	6.40	0.85	0.85	ND
				O_2 (%)	0.90	16.5	16.5	20.5	20.5	21.9
				CH_4 (%)	74.4	4.30	4.30	0.89	0.89	ND
SVE Well				Free Product Thickness	ND	ND	ND	ND	ND	ND

Remark:

1. ND -- not detected (detection limit: CO_2, O_2, CH_4 < 0.01% VOC < 0.1ppm)





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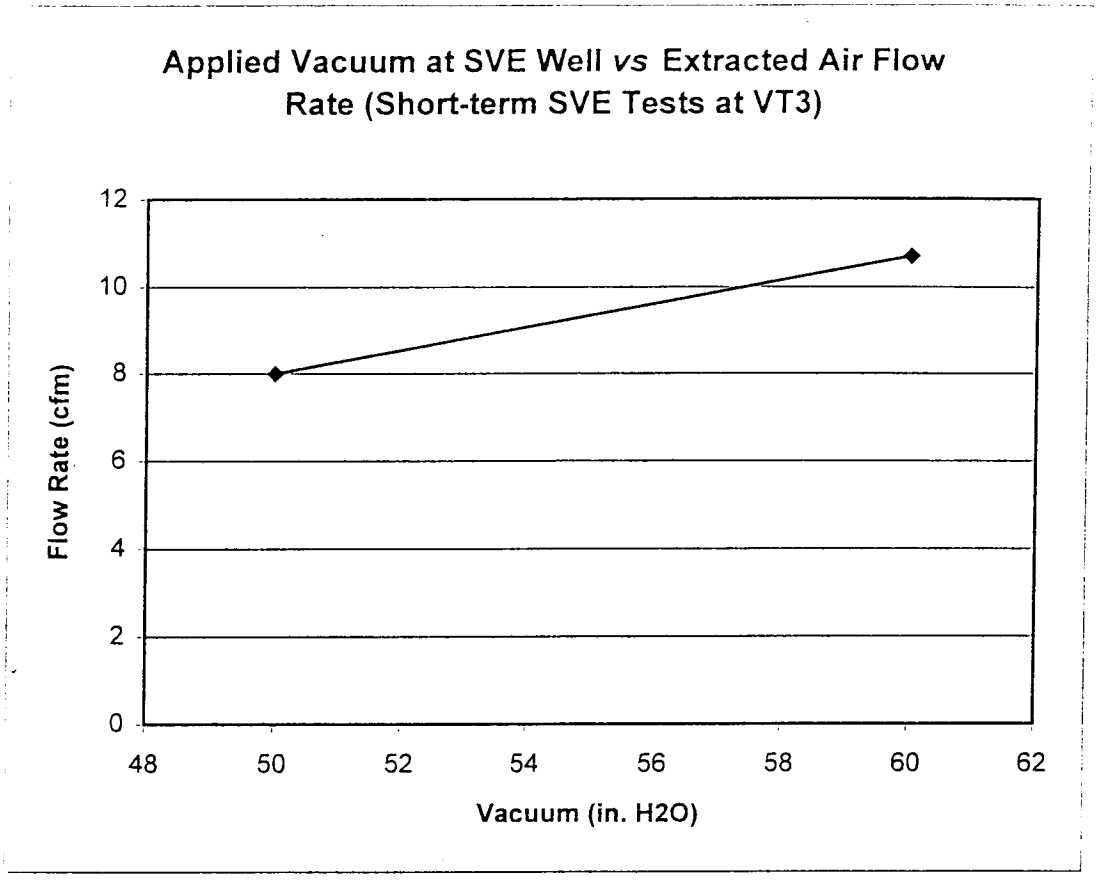

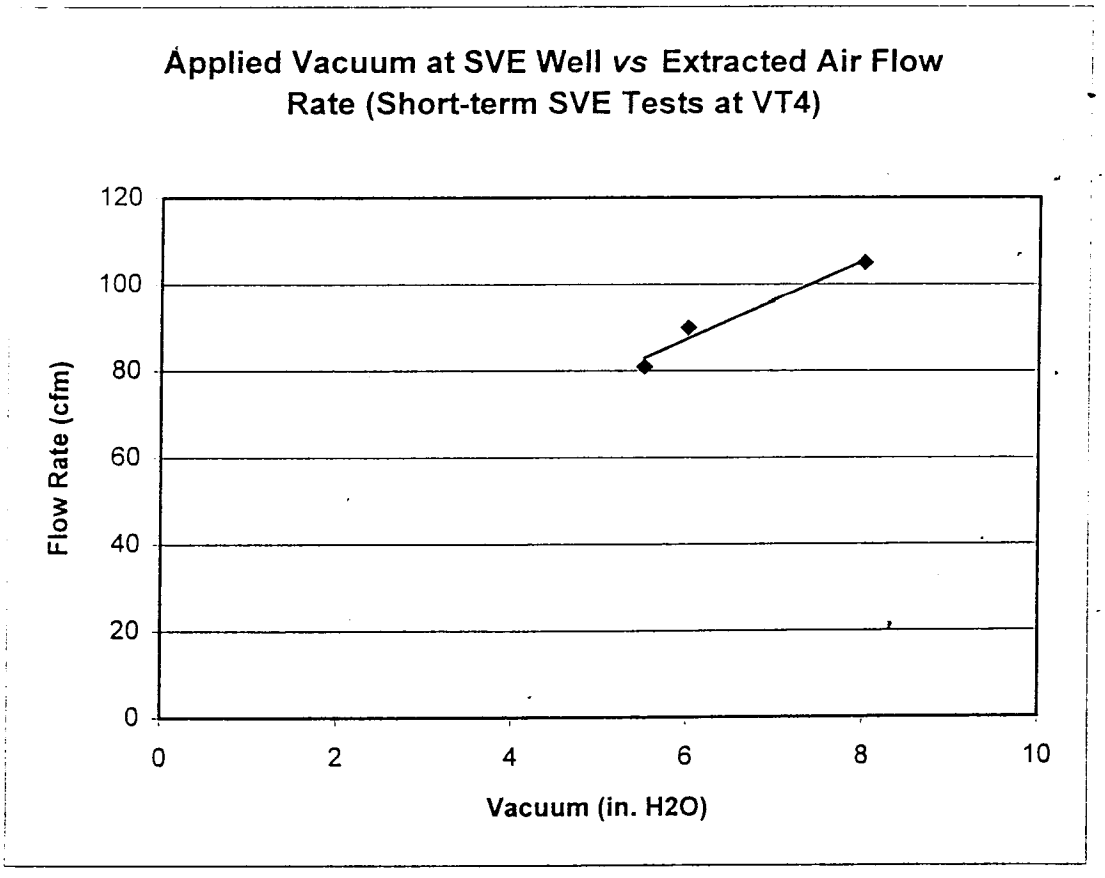

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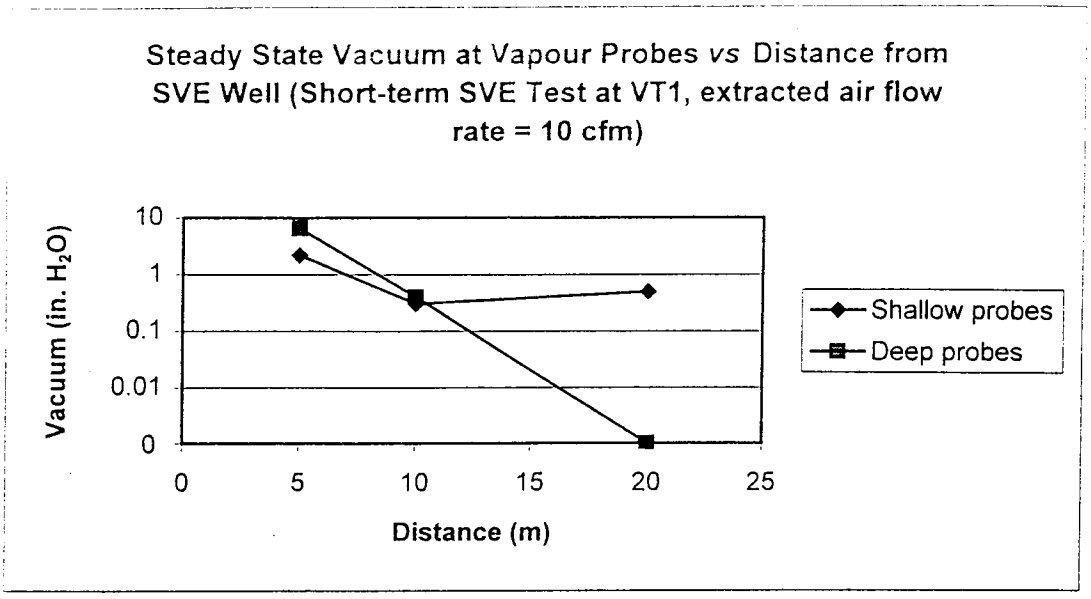

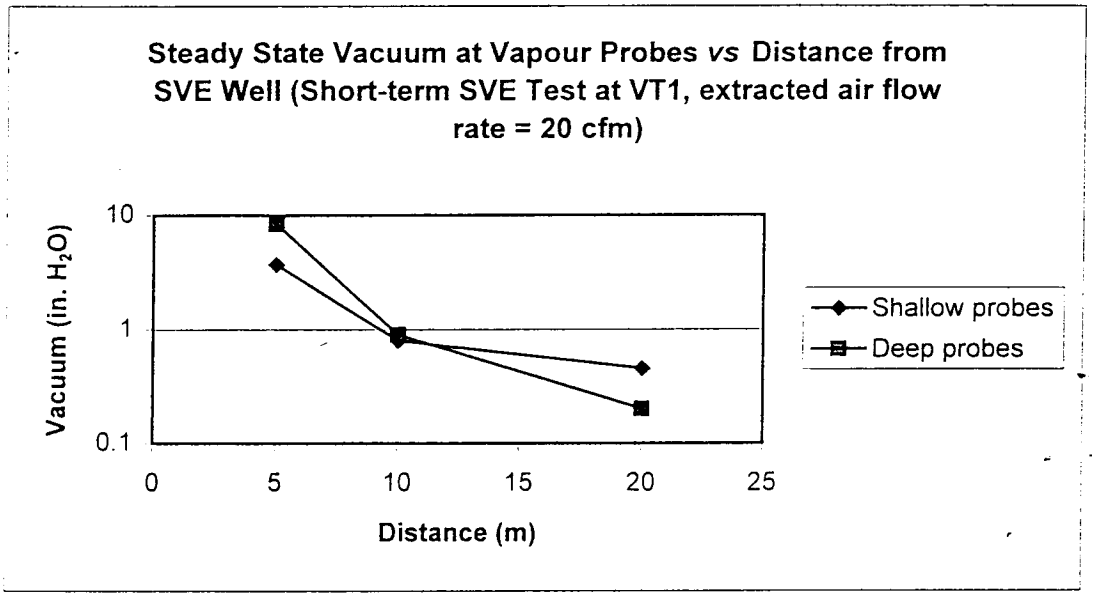

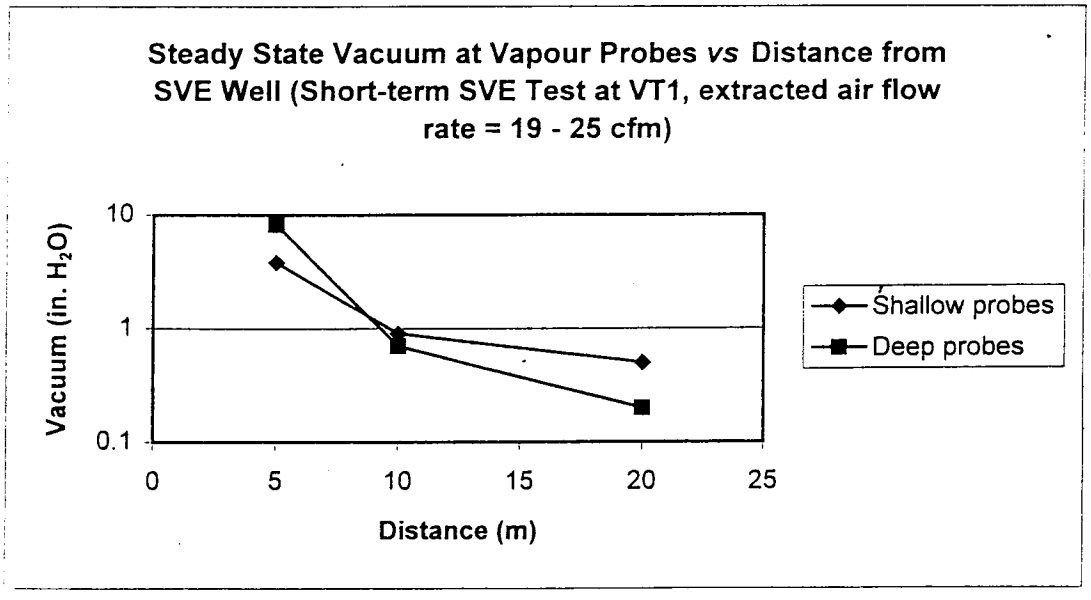

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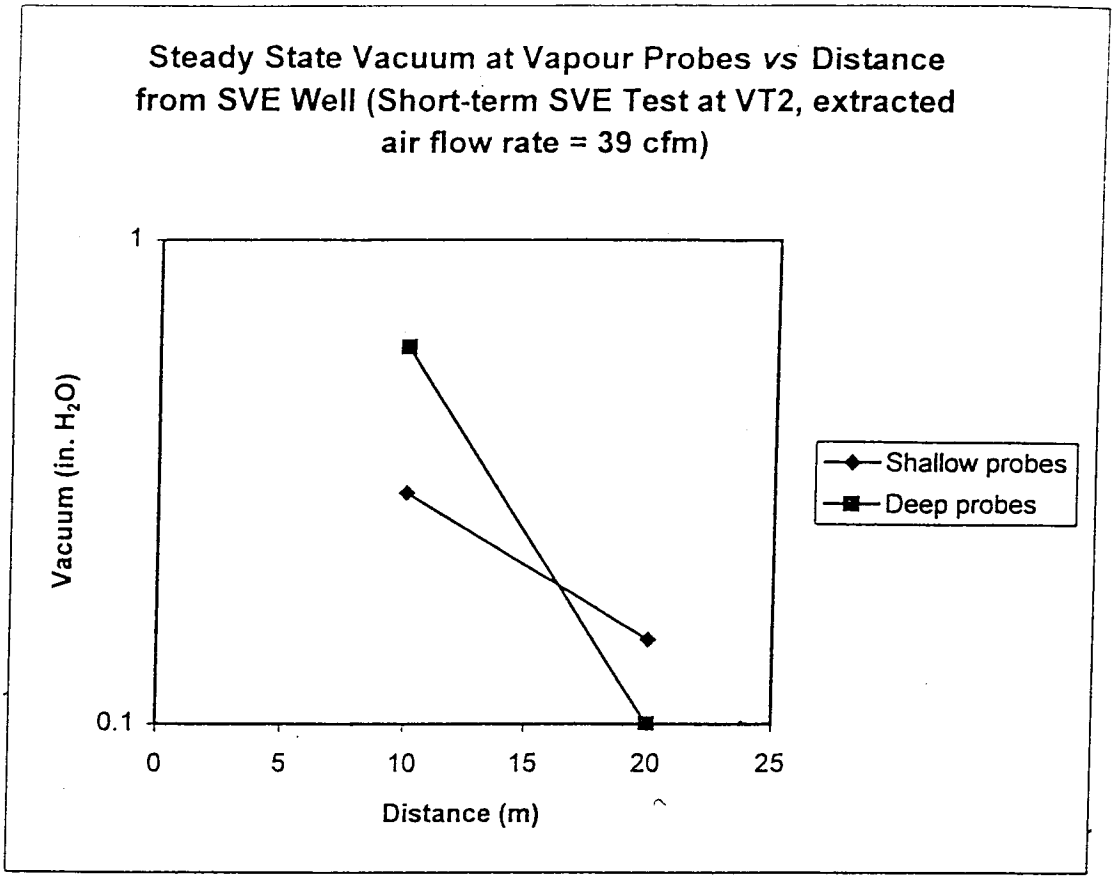
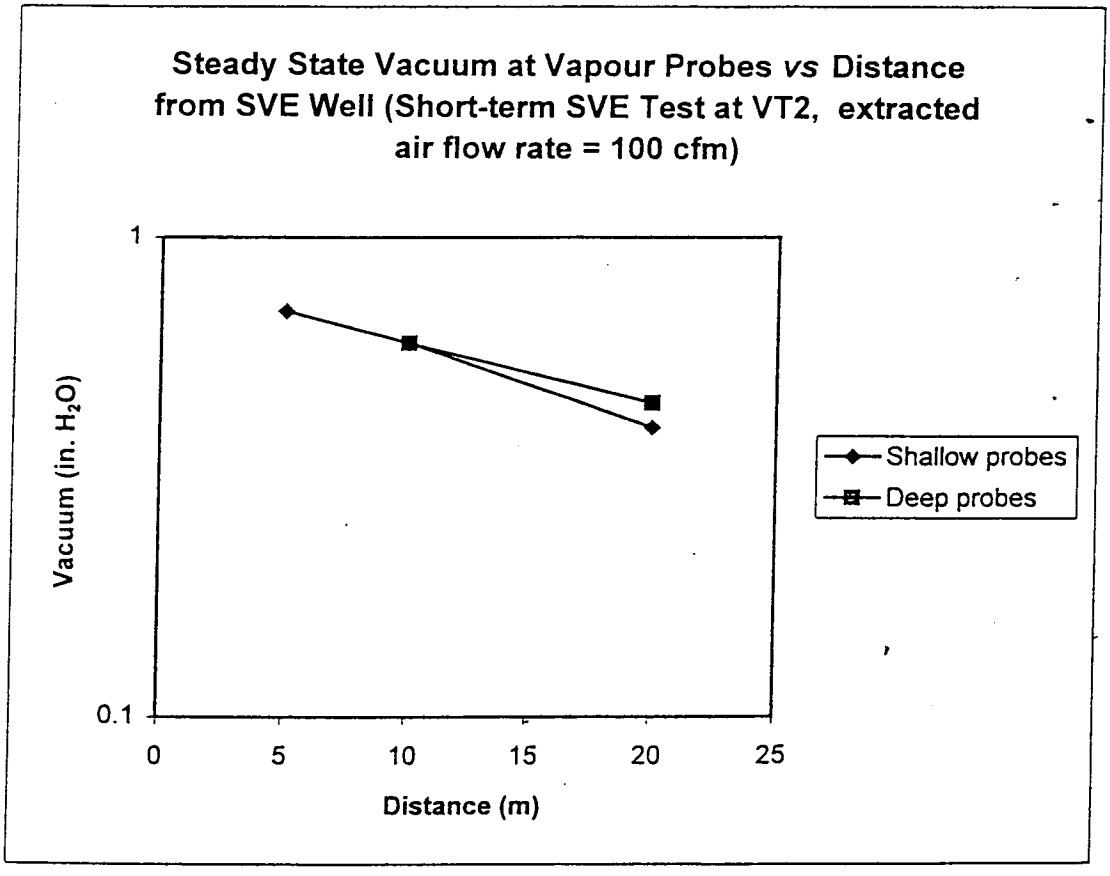
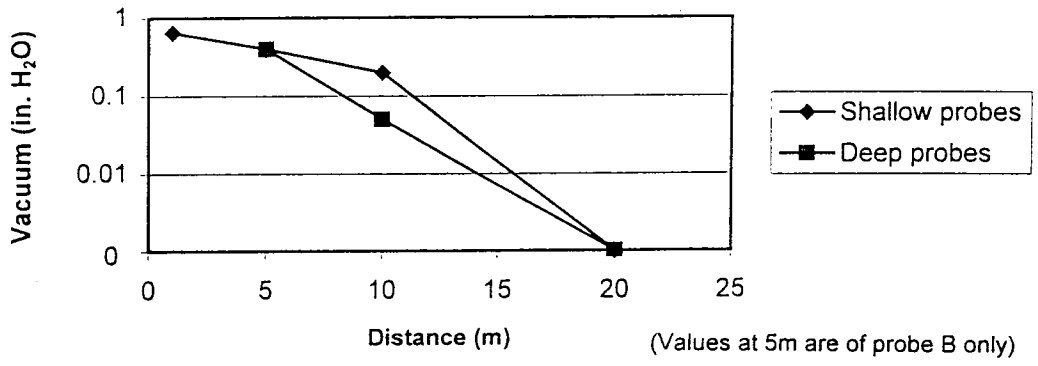

Steady State Vacuum at Vapour Probes vs Distance from SVE Well (Short-term SVE Test at VT2, extracted air flow rate = 39 cfm)
Vacuum (in. H_2O)
1
0.1
0
5
10
15
20
25
Distance (m)
Shallow probes
Deep probes

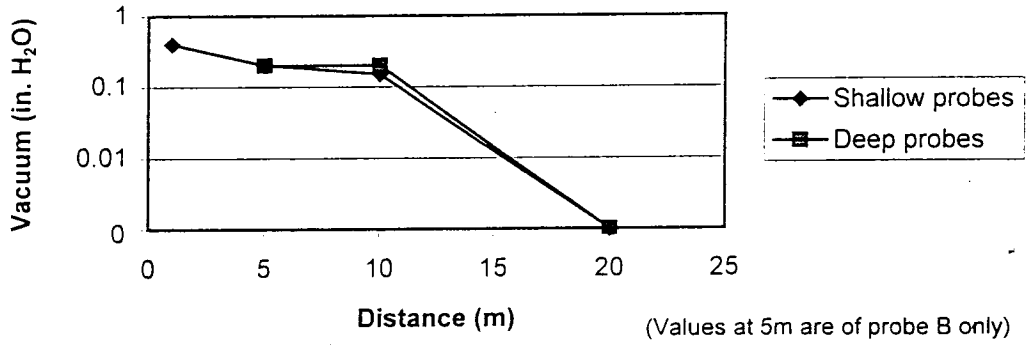

Steady State Vacuum at Vapour Probes vs Distance from SVE Well (Short-term SVE Test at VT2, extracted air flow rate = 100 cfm)
Vacuum (in. H_2O)
1
0.1
0
5
10
15
20
25
Distance (m)
Shallow probes
Deep probes

Steady State Vacuum at Vapour Probes *vs* Distance from SVE Well (Short-term SVE Test at VT3, extracted air flow rate = 8 cfm)



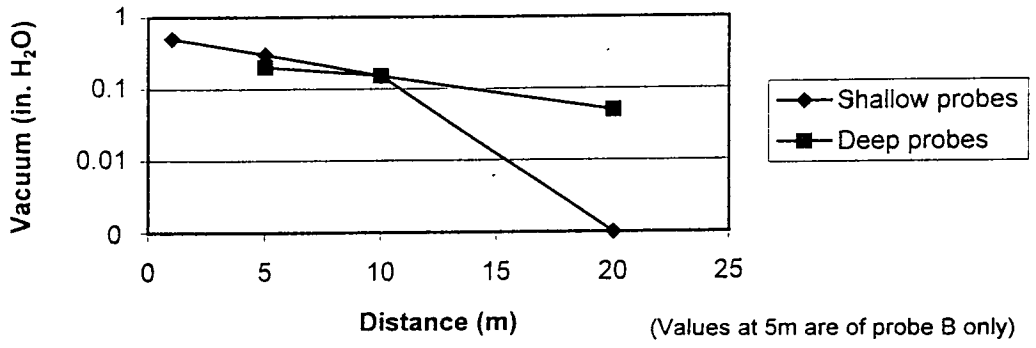
(Values at 5m are of probe B only)

Steady State Vacuum at Vapour Probes *vs* Distance from SVE Well (Short-term SVE Test at VT3, extracted air flow rate = 5.5 - 9.4 cfm)



(Values at 5m are of probe B only)

Steady State Vacuum at Vapour Probes *vs* Distance from SVE Well (Short-term SVE Test at VT3, extracted air flow rate = 4.3 - 10.7 cfm)



(Values at 5m are of probe B only)

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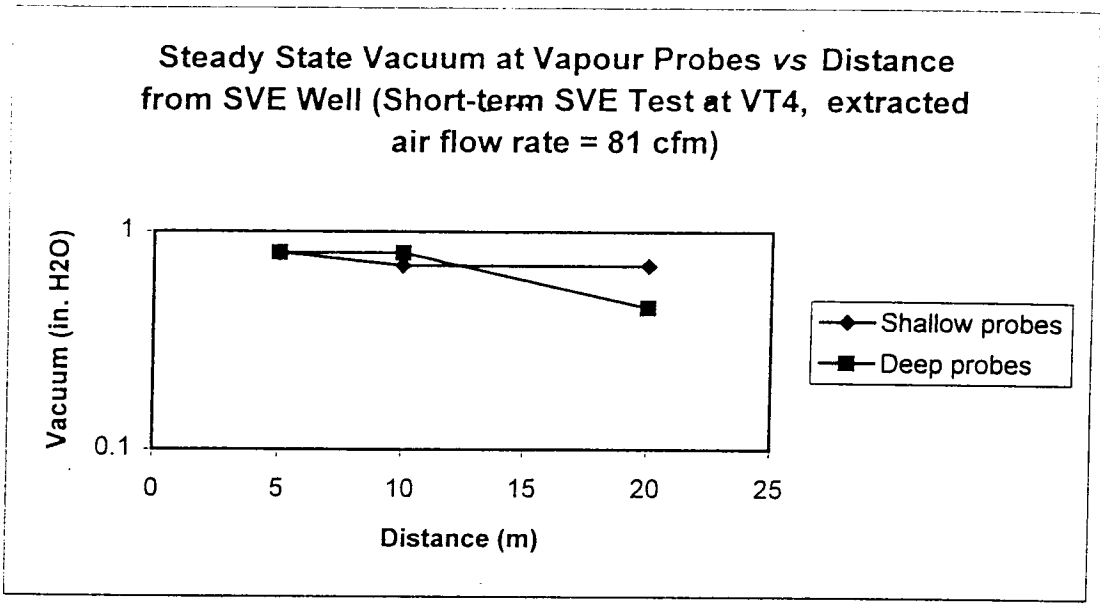

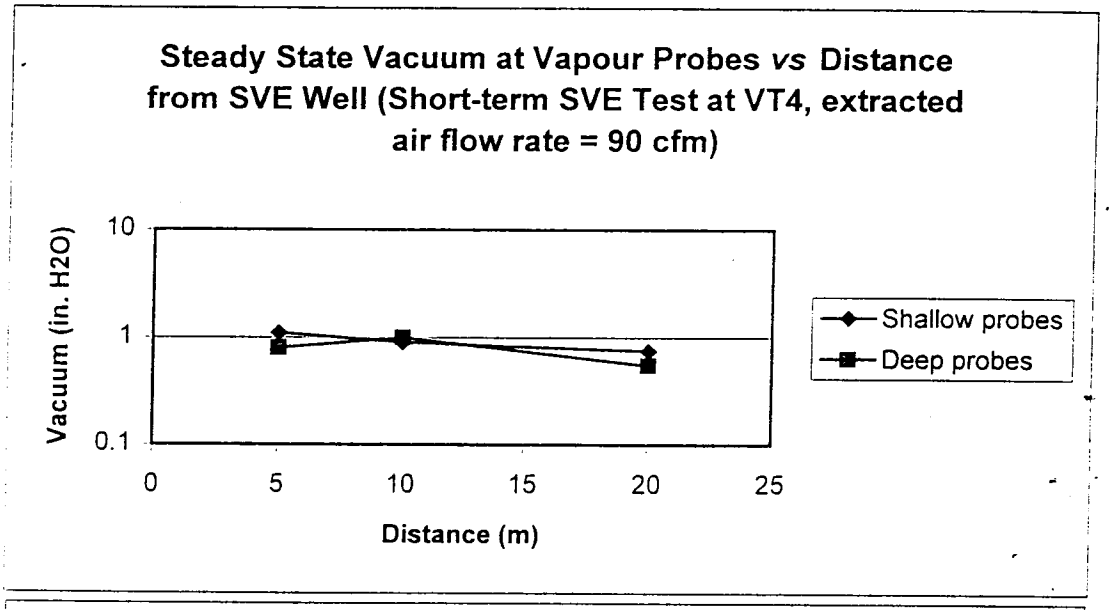

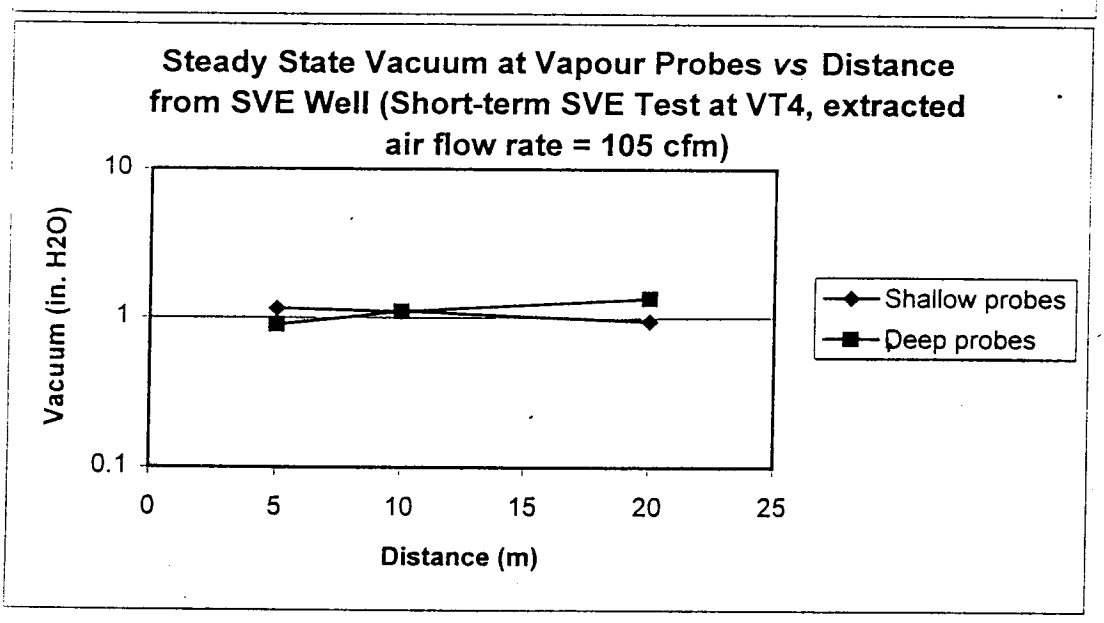

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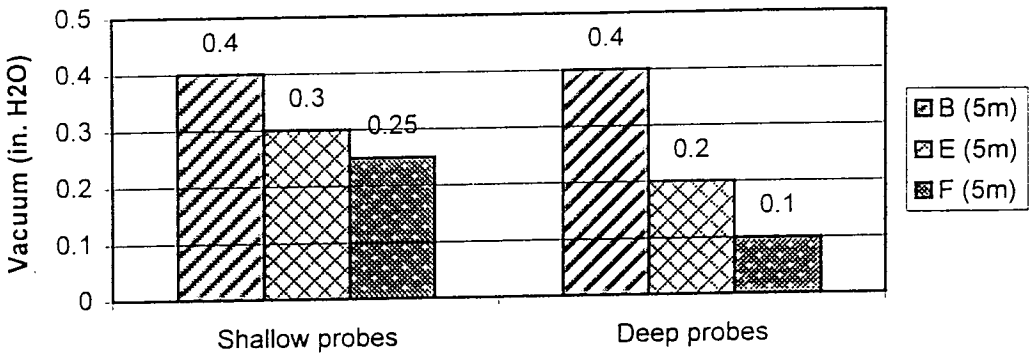
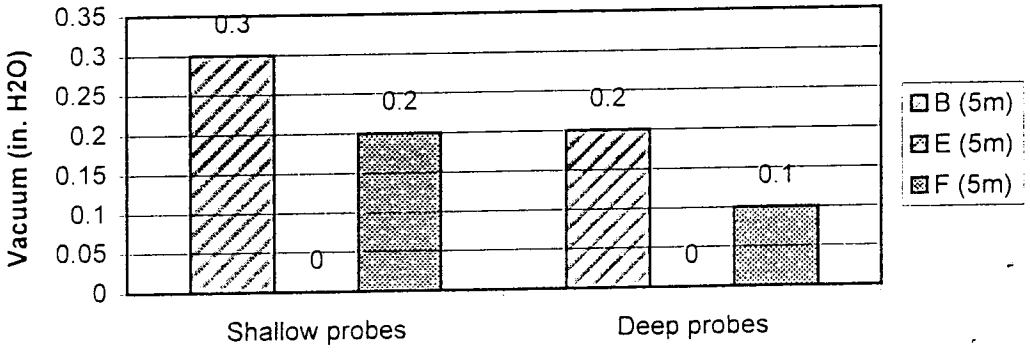
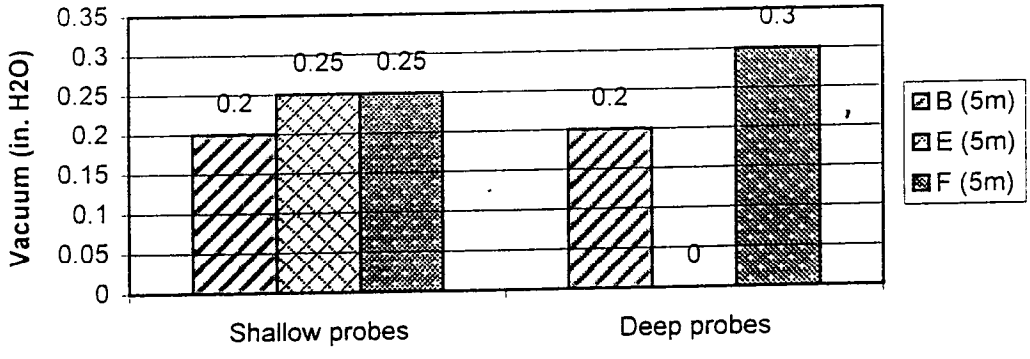
Steady State Vacuum at Radial Vapour Probes *vs* Direction from SVE Well (Short-term SVE Tests at VT3, extracted air flow rate = 8 cfm)



Steady State Vacuum at Radial Vapour Probes *vs* Direction from SVE Well (Short-term SVE Tests at VT3, vacuum at SVE well = 50" H2O)



Steady State Vacuum at Radial Vapour Probes *vs* Direction from SVE Well (Short-term SVE Tests at VT3, vacuum at SVE well = 60 in. H2O)



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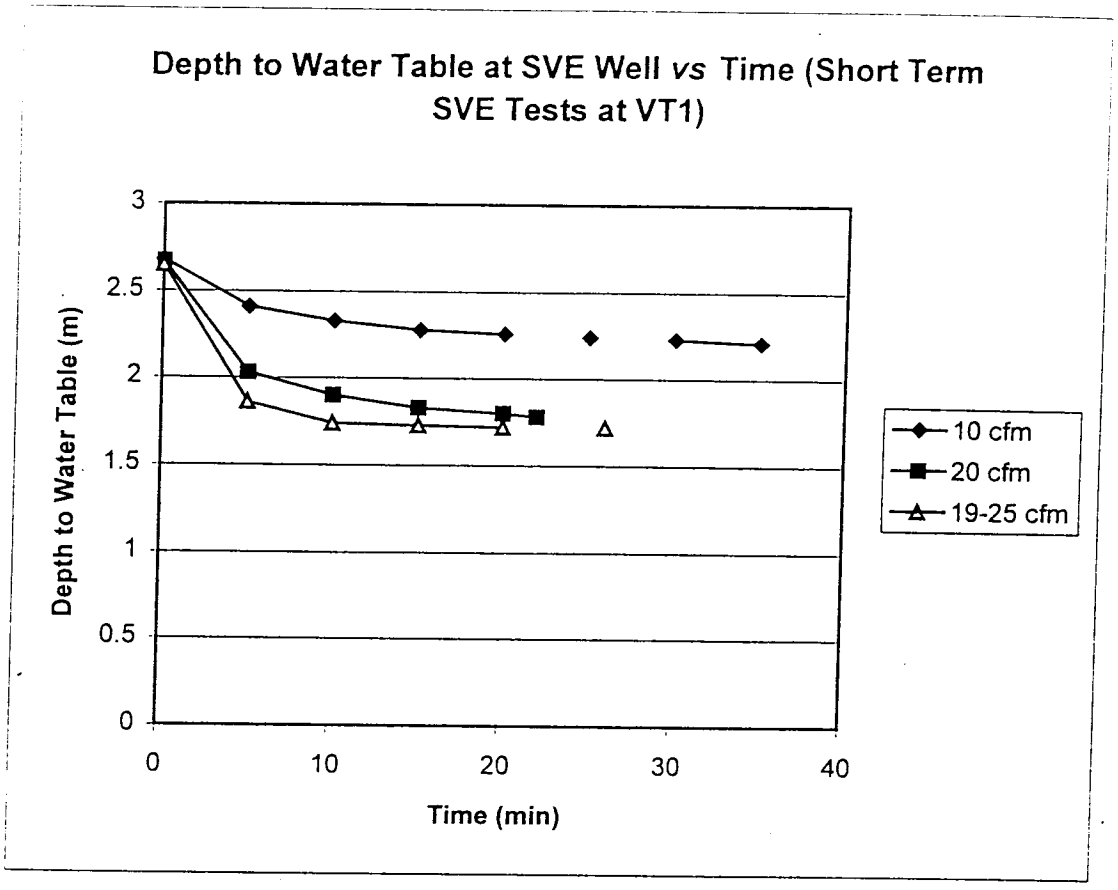

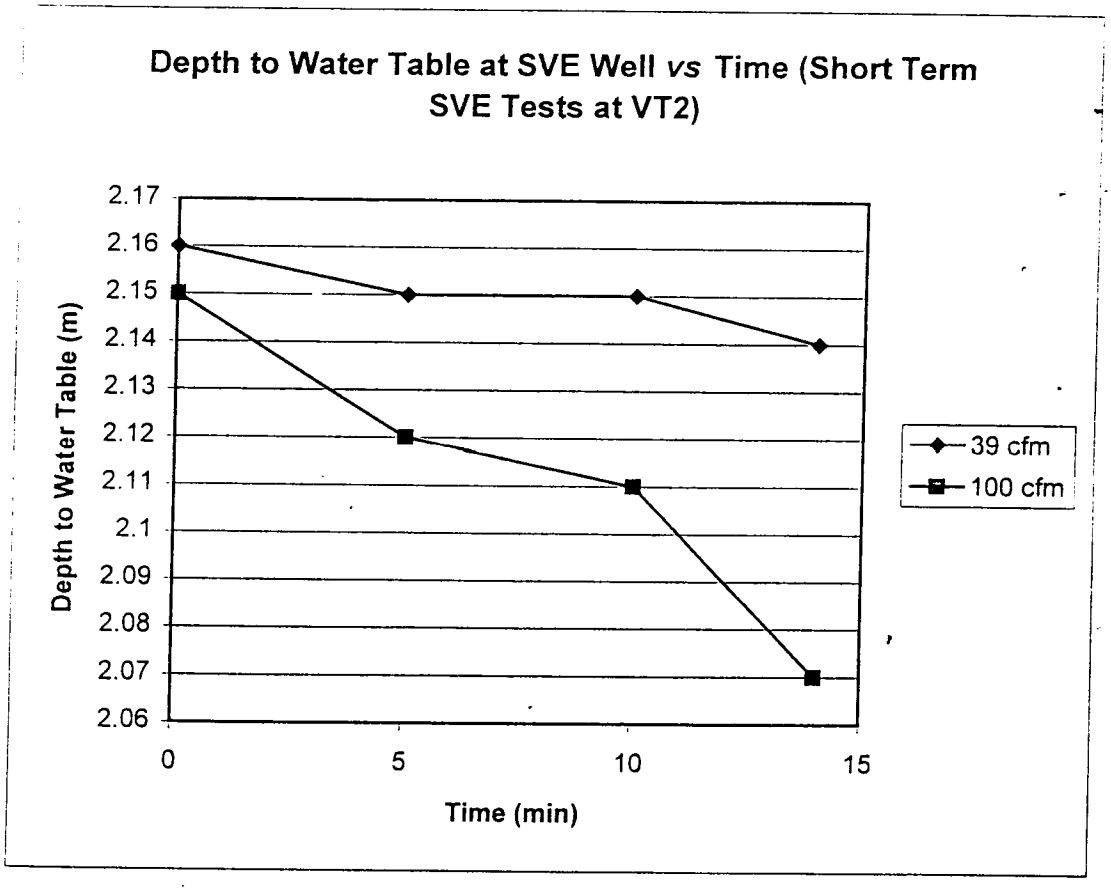

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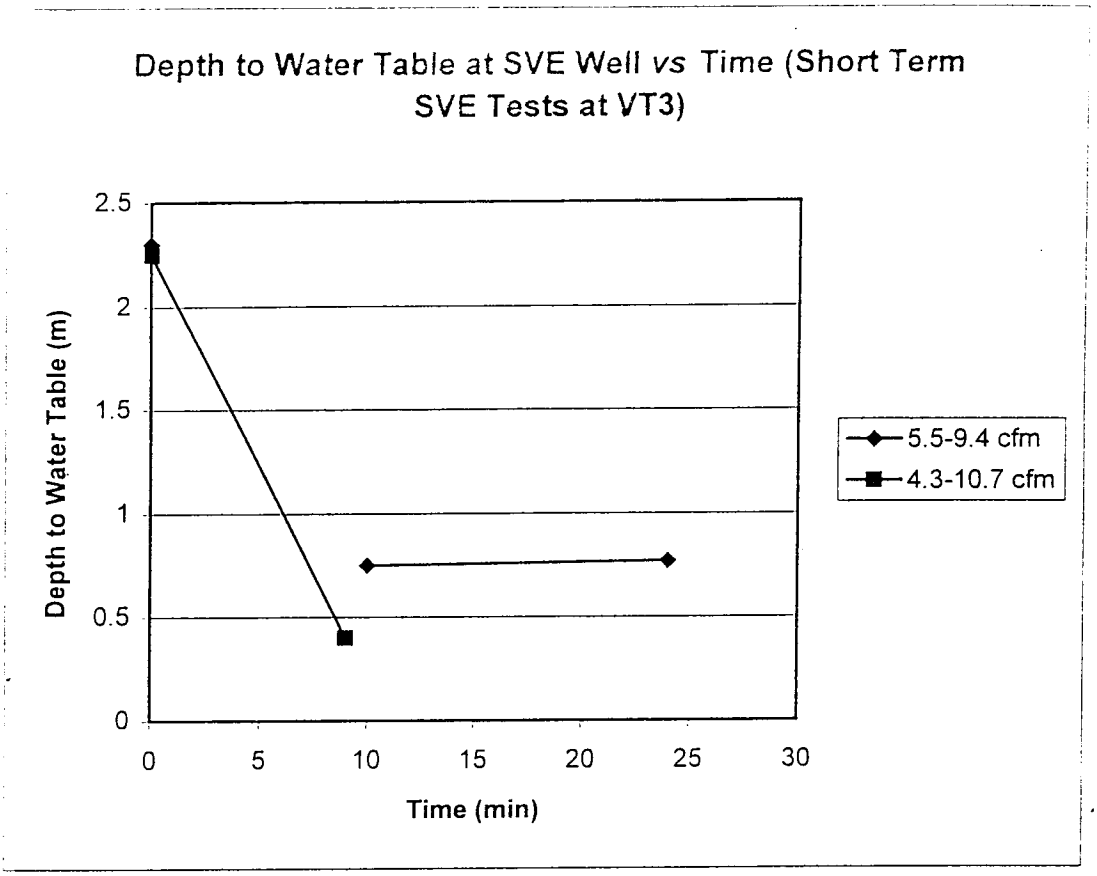

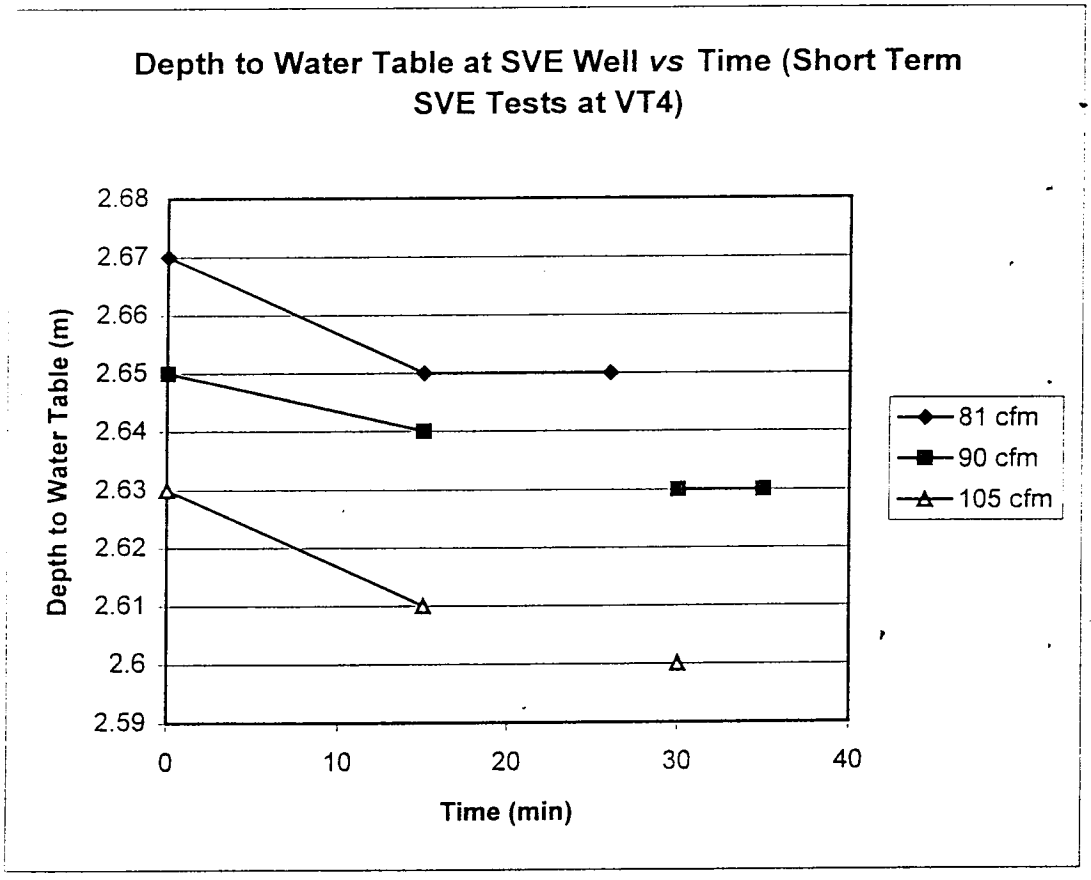

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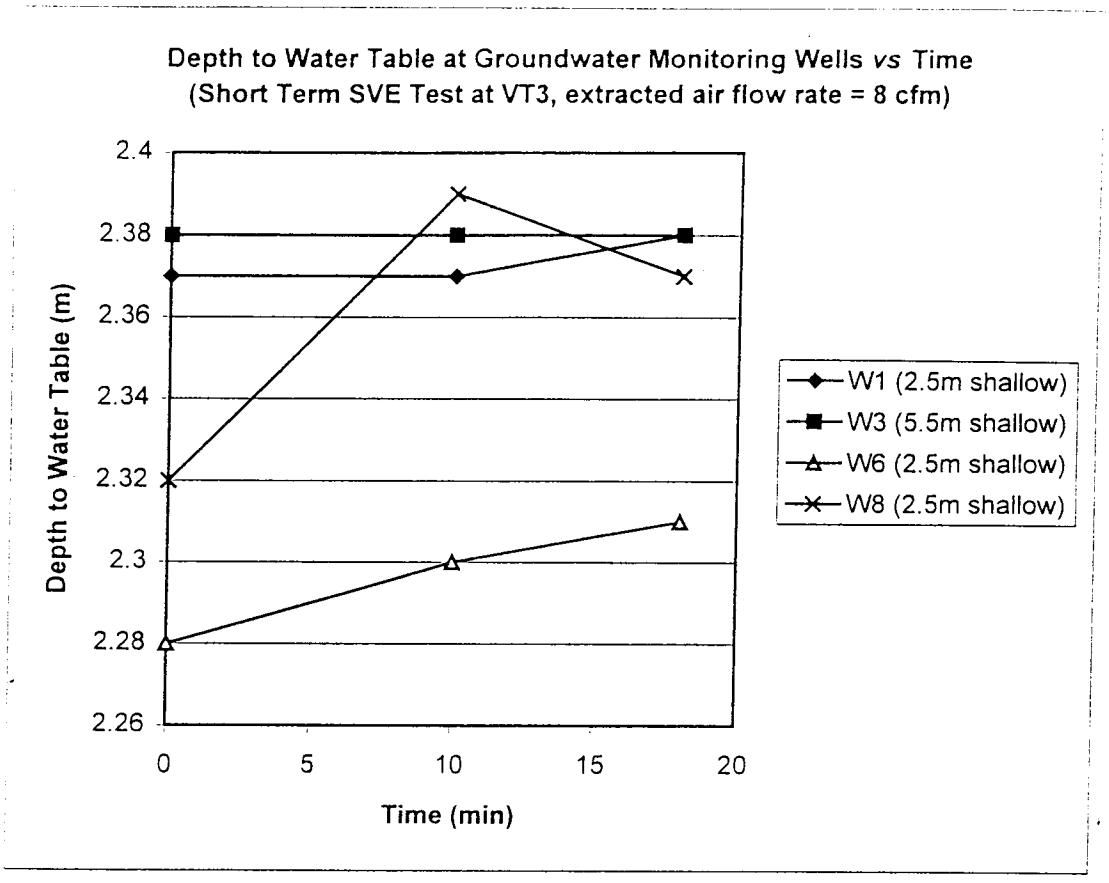

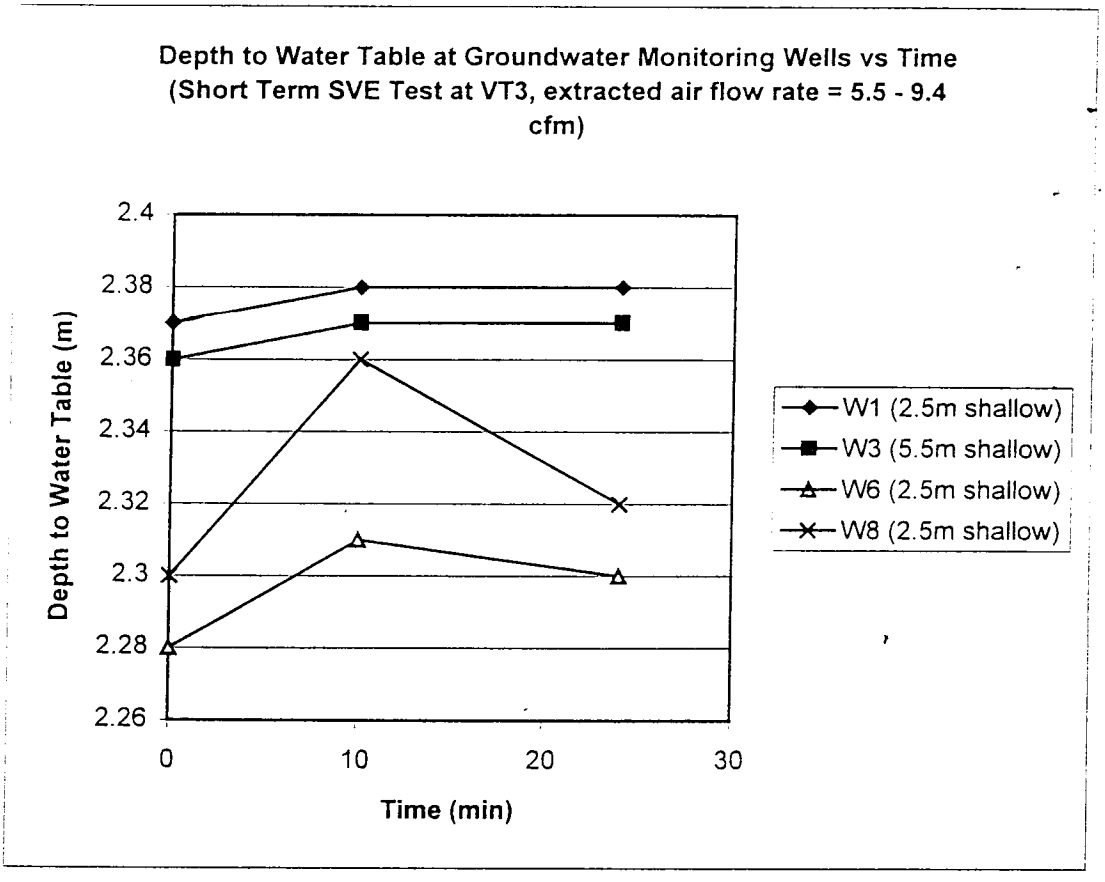

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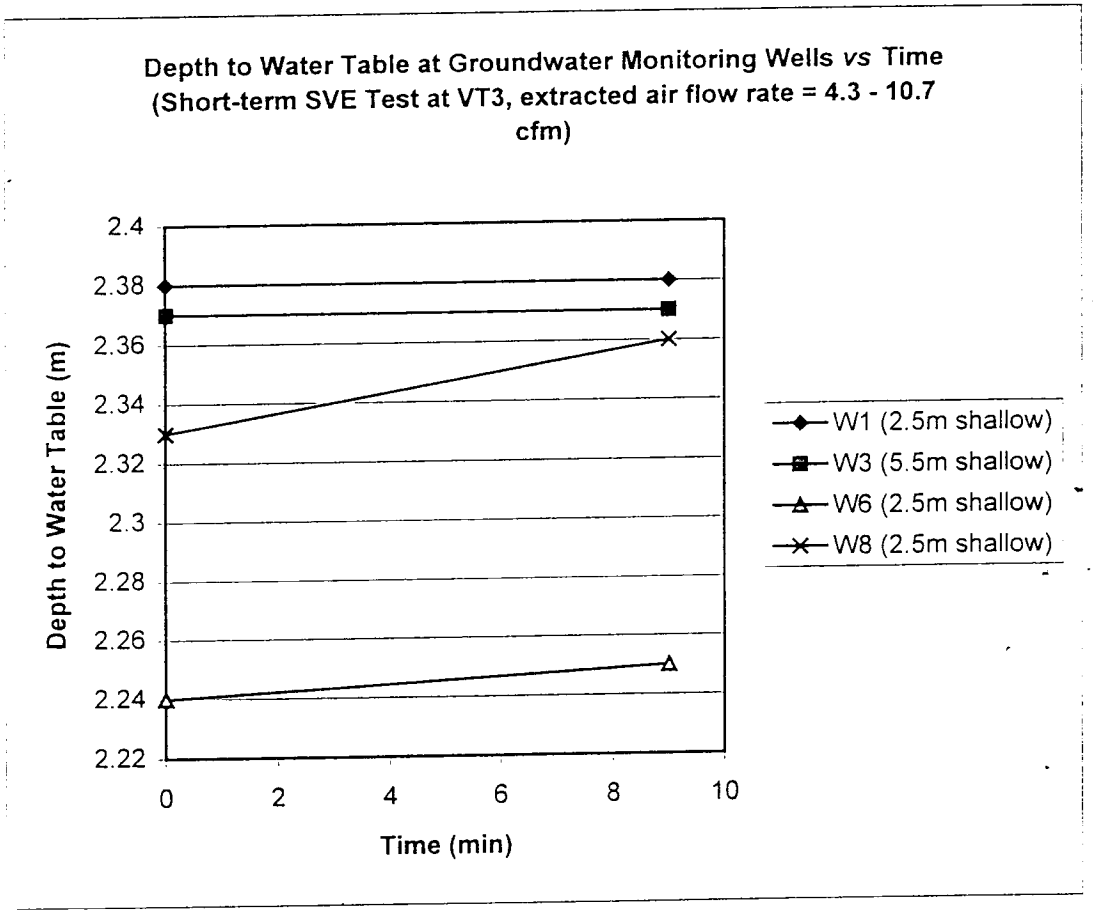
Depth to Water Table at Groundwater Monitoring Wells vs Time
(Short-term SVE Test at VT3, extracted air flow rate = 4.3 - 10.7 cfm)
Depth to Water Table (m)
2.4
2.38
2.36
2.34
2.32
2.3
2.28
2.26
2.24
2.22
0
2
4
6
8
10
Time (min)
W1 (2.5m shallow)
W3 (5.5m shallow)
W6 (2.5m shallow)
W8 (2.5m shallow)