

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 95-100

HOLE NO. JD-102

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	14.4	2.88	5.0	76.0	1.83	52.18	7.401	5.04E-05
4.0	24.2	4.84	5.0	76.0	1.83	52.18	9.401	6.66E-05
7.0	42.2	8.44	5.0	76.0	1.83	52.18	12.401	8.81E-05
10.0	71.8	14.36	5.0	76.0	1.83	52.18	15.401	1.21E-04
7.0	36.5	7.30	5.0	76.0	1.83	52.18	12.401	7.62E-05
4.0	21.0	4.20	5.0	76.0	1.83	52.18	9.401	5.78E-05
2.0	16.5	3.30	5.0	76.0	1.83	52.18	7.401	5.77E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 5.71 7.39E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 100-105

HOLE NO. JD-102

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	2.6	0.52	5.0	76.0	2.83	49.13	7.196	9.35E-06
4.0	5.4	1.08	5.0	76.0	2.83	49.13	9.196	1.52E-05
7.0	10.4	2.08	5.0	76.0	2.83	49.13	12.196	2.21E-05
10.0	18.6	3.72	5.0	76.0	2.83	49.13	15.196	3.17E-05
7.0	16.0	3.20	5.0	76.0	2.83	49.13	12.196	2.62E-05
4.0	11.5	2.30	5.0	76.0	2.83	49.13	9.196	3.24E-05
2.0	8.5	1.70	5.0	76.0	2.83	49.13	7.196	3.06E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 1.93 2.50E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 105-110

HOLE NO. JD-102

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	1.8	0.36	5.0	76.0	0.85	74.10	9.495	4.91E-06
4.0	5.6	1.12	5.0	76.0	0.85	74.10	11.495	1.26E-05
7.0	10.4	2.08	5.0	76.0	0.85	74.10	14.495	1.86E-05
10.0	18.2	3.64	5.0	76.0	0.85	74.10	17.495	2.69E-05
7.0	18.0	3.60	5.0	76.0	0.85	74.10	14.495	3.21E-05
4.0	6.5	1.30	5.0	76.0	0.85	74.10	11.495	1.46E-05
2.0	5.0	1.00	5.0	76.0	0.85	74.10	9.495	1.36E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 1.36 1.76E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 110-115

HOLE NO. JD-102

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	5.2	1.04	5.0	76.0	1.83	86.14	10.797	1.25E-05
4.0	14.6	2.92	5.0	76.0	1.83	86.14	12.797	2.95E-05
7.0	30.4	6.08	5.0	76.0	1.83	86.14	15.797	4.98E-05
10.0	39.8	7.96	5.0	76.0	1.83	86.14	18.797	5.48E-05
7.0	35.0	7.00	5.0	76.0	1.83	86.14	15.797	5.74E-05
4.0	18.5	3.70	5.0	76.0	1.83	86.14	12.797	3.74E-05
2.0	14.0	2.80	5.0	76.0	1.83	86.14	10.797	3.36E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 3.03 3.93E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 115-120

HOLE NO. JD-102

GUAGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GUAGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	11.2	2.24	5.0	76.0	2.80	78.56	10.136	2.21	2.86E-05
4.0	24.4	4.88	5.0	76.0	2.80	78.56	12.136	4.02	5.20E-05
7.0	27.4	5.48	5.0	76.0	2.80	78.56	15.136	3.62	4.69E-05
10.0	43.8	8.76	5.0	76.0	2.80	78.56	18.136	4.83	6.25E-05
7.0	26.0	5.20	5.0	76.0	2.80	78.56	15.136	3.44	4.45E-05
4.0	14.0	2.80	5.0	76.0	2.80	78.56	12.136	2.31	2.99E-05
2.0	9.0	1.80	5.0	76.0	2.80	78.56	10.136	1.78	2.30E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 3.17 4.11E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 120-125

HOLE NO. JD-102

GUAGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GUAGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	14.4	2.88	5.0	76.0	0.82	76.40	9.722	2.96	3.83E-05
4.0	29.8	5.96	5.0	76.0	0.82	76.40	11.722	5.08	6.58E-05
7.0	42.0	8.40	5.0	76.0	0.82	76.40	14.722	5.71	7.39E-05
10.0	65.4	13.08	5.0	76.0	0.82	76.40	17.722	7.38	9.55E-05
7.0	40.5	8.10	5.0	76.0	0.82	76.40	14.722	5.50	7.12E-05
4.0	32.0	6.40	5.0	76.0	0.82	76.40	11.722	5.46	7.07E-05
2.0	24.0	4.80	5.0	76.0	0.82	76.40	9.722	4.94	6.39E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 5.29 6.85E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 125-130

HOLE NO. JD-102

GUAGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GUAGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	15.6	3.12	5.0	76.0	1.83	78.55	10.038	3.11	4.02E-05
4.0	18.6	3.72	5.0	76.0	1.83	78.55	12.038	3.09	4.00E-05
7.0	25.4	5.08	5.0	76.0	1.83	78.55	15.038	3.38	4.37E-05
10.0	51.8	10.36	5.0	76.0	1.83	78.55	18.038	5.74	7.43E-05
7.0	30.5	6.10	5.0	76.0	1.83	78.55	15.038	4.06	5.25E-05
4.0	28.5	5.70	5.0	76.0	1.83	78.55	12.038	4.74	6.13E-05
2.0	25.5	5.10	5.0	76.0	1.83	78.55	10.038	5.08	6.58E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 4.17 5.40E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 130-135

HOLE NO. JD-102

GUAGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GUAGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	22.4	4.48	5.0	76.0	2.83	78.52	10.135	4.42	5.72E-05
4.0	31.4	6.28	5.0	76.0	2.83	78.52	12.135	5.18	6.70E-05
7.0	45.6	9.12	5.0	76.0	2.83	78.52	15.135	6.03	7.80E-05
10.0	65.8	13.16	5.0	76.0	2.83	78.52	18.135	7.26	9.39E-05
7.0	47.5	9.50	5.0	76.0	2.83	78.52	15.135	6.28	8.12E-05
4.0	36.0	7.20	5.0	76.0	2.83	78.52	12.135	5.93	7.68E-05
2.0	21.0	4.20	5.0	76.0	2.83	78.52	10.135	4.14	5.36E-05

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 5.60 7.25E-05

k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 135-140

HOLE NO. JD-102

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	27.0	5.40	5.0	76.0	0.83	79.40	10.023	5.39	6.97E-05
4.0	35.8	7.16	5.0	76.0	0.83	79.40	12.023	5.96	7.71E-05
7.0	50.8	10.16	5.0	76.0	0.83	79.40	15.023	6.76	8.75E-05
10.0	78.4	15.68	5.0	76.0	0.83	79.40	18.023	8.70	1.13E-04
7.0	56.5	11.30	5.0	76.0	0.83	79.40	15.023	7.52	9.74E-05
4.0	46.0	9.20	5.0	76.0	0.83	79.40	12.023	7.65	9.90E-05
2.0	30.5	6.10	5.0	76.0	0.83	79.40	10.023	6.09	7.88E-05

AVERAGE  
k-VALUE: COEFFICIENT OF PERMEABILITY

6.87 8.89E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 140-145

HOLE NO. JD-102

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	18.0	3.60	5.0	76.0	1.83	78.80	10.063	3.58	4.63E-05
4.0	27.8	5.56	5.0	76.0	1.83	78.80	12.063	4.61	5.97E-05
7.0	42.8	8.56	5.0	76.0	1.83	78.80	15.063	5.68	7.36E-05
10.0	75.8	15.16	5.0	76.0	1.83	78.80	18.063	8.39	1.09E-04
7.0	40.5	8.10	5.0	76.0	1.83	78.80	15.063	5.38	6.96E-05
4.0	31.0	6.20	5.0	76.0	1.83	78.80	12.063	5.14	6.65E-05
2.0	18.0	3.60	5.0	76.0	1.83	78.80	10.063	3.58	4.63E-05

AVERAGE  
k-VALUE: COEFFICIENT OF PERMEABILITY

5.19 6.72E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 145-150

HOLE NO. JD-102

GAUGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GAUGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	19.0	3.80	5.0	76.0	2.83	77.40	10.023	3.79	4.91E-05
4.0	25.2	5.04	5.0	76.0	2.83	77.40	12.023	4.19	5.43E-05
7.0	54.6	10.92	5.0	76.0	2.83	77.40	15.023	7.27	9.41E-05
10.0	68.6	13.72	5.0	76.0	2.83	77.40	18.023	7.61	9.85E-05
7.0	57.5	11.50	5.0	76.0	2.83	77.40	15.023	7.65	9.91E-05
4.0	46.0	9.20	5.0	76.0	2.83	77.40	12.023	7.65	9.90E-05
2.0	24.5	4.90	5.0	76.0	2.83	77.40	10.023	4.89	6.33E-05

AVERAGE  
k-VALUE: COEFFICIENT OF PERMEABILITY

6.15 7.96E-05

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 75-80

HOLE NO. JD-103

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	57.7	11.54	5.0	76.0	0.83	72.88	9.371	1.59E-04
4.0	71.4	14.28	5.0	76.0	0.83	72.88	11.371	1.63E-04
7.0	84.2	16.84	5.0	76.0	0.83	72.88	14.371	1.52E-04
10.0	96.2	19.24	5.0	76.0	0.83	72.88	17.371	1.43E-04
7.0	79.0	15.80	5.0	76.0	0.83	72.88	14.371	1.42E-04
4.0	64.2	12.84	5.0	76.0	0.83	72.88	11.371	1.46E-04
2.0	54.0	10.80	5.0	76.0	0.83	72.88	9.371	1.49E-04

AVERAGE 11.64 1.51E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 80-85

HOLE NO. JD-103

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	57.0	11.40	5.0	76.0	1.83	64.10	8.593	1.72E-04
4.0	69.0	13.80	5.0	76.0	1.83	64.10	10.593	1.69E-04
7.0	40.0	8.00	5.0	76.0	1.83	64.10	13.593	7.62E-05
10.0								
7.0								
4.0	68.0	13.60	5.0	76.0	1.83	64.10	10.593	1.66E-04
2.0	53.0	10.60	5.0	76.0	1.83	64.10	8.593	1.60E-04

AVERAGE 8.19 1.06E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 85-90

HOLE NO. JD-103

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	55.2	11.04	5.0	76.0	2.83	69.28	9.211	1.55E-04
4.0	66.8	13.36	5.0	76.0	2.83	69.28	11.211	1.54E-04
7.0	78.6	15.72	5.0	76.0	2.83	69.28	14.211	1.43E-04
10.0	89.6	17.92	5.0	76.0	2.83	69.28	17.211	1.35E-04
7.0	75.6	15.12	5.0	76.0	2.83	69.28	14.211	1.38E-04
4.0	66.0	13.20	5.0	76.0	2.83	69.28	11.211	1.52E-04
2.0	54.4	10.88	5.0	76.0	2.83	69.28	9.211	1.53E-04

AVERAGE 11.37 1.47E-04  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 90-95

HOLE NO. JD-103

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	42.6	8.52	5.0	76.0	0.83	91.05	11.188	9.86E-05
4.0	53.2	10.64	5.0	76.0	0.83	91.05	13.188	1.04E-04
7.0	63.3	12.66	5.0	76.0	0.83	91.05	16.188	1.01E-04
10.0	76.4	15.28	5.0	76.0	0.83	91.05	19.188	1.03E-04
7.0	62.8	12.56	5.0	76.0	0.83	91.05	16.188	1.00E-04
4.0	52.4	10.48	5.0	76.0	0.83	91.05	13.188	1.03E-04
2.0	41.8	8.36	5.0	76.0	0.83	91.05	11.188	9.67E-05
AVERAGE							7.81	1.01E-04
k-VALUE: COEFFICIENT OF PERMEABILITY								

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 95-100

HOLE NO. JD-103

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	43.8	8.76	5.0	76.0	1.83	89.19	11.102	1.02E-04
4.0	54.2	10.84	5.0	76.0	1.83	89.19	13.102	1.07E-04
7.0	64.4	12.88	5.0	76.0	1.83	89.19	16.102	1.04E-04
10.0	77.8	15.56	5.0	76.0	1.83	89.19	19.102	1.05E-04
7.0	63.8	12.76	5.0	76.0	1.83	89.19	16.102	1.03E-04
4.0	53.2	10.64	5.0	76.0	1.83	89.19	13.102	1.05E-04
2.0	43.2	8.64	5.0	76.0	1.83	89.19	11.102	1.01E-04
AVERAGE							8.02	1.04E-04
k-VALUE: COEFFICIENT OF PERMEABILITY								

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 100-105

HOLE NO. JD-103

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	53.0	10.60	5.0	76.0	2.83	90.88	11.371	1.21E-04
4.0	66.0	13.20	5.0	76.0	2.83	90.88	13.371	1.28E-04
7.0	79.0	15.80	5.0	76.0	2.83	90.88	16.371	1.25E-04
10.0	89.0	17.80	5.0	76.0	2.83	90.88	19.371	1.19E-04
7.0	77.0	15.40	5.0	76.0	2.83	90.88	16.371	1.22E-04
4.0	64.0	12.80	5.0	76.0	2.83	90.88	13.371	1.24E-04
2.0	54.0	10.80	5.0	76.0	2.83	90.88	11.371	1.23E-04
AVERAGE							9.50	1.23E-04
k-VALUE: COEFFICIENT OF PERMEABILITY								

RECORD OF WATER PRESSURE TEST  
 DEPTH(m): 105-110

HOLE NO. JD-103

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec	
2.0	54.2	10.84	5.0	76.0	0.83	90.19	11.102	9.76	1.26E-04
4.0	67.0	13.40	5.0	76.0	0.83	90.19	13.102	10.23	1.32E-04
7.0	81.4	16.28	5.0	76.0	0.83	90.19	16.102	10.11	1.31E-04
10.0	90.8	18.16	5.0	76.0	0.83	90.19	19.102	9.51	1.23E-04
7.0	78.4	15.68	5.0	76.0	0.83	90.19	16.102	9.74	1.26E-04
4.0	65.4	13.08	5.0	76.0	0.83	90.19	13.102	9.98	1.29E-04
2.0	53.6	10.72	5.0	76.0	0.83	90.19	11.102	9.66	1.25E-04
AVERAGE							9.86	1.28E-04	

k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
 DEPTH(m): 110-115

HOLE NO. JD-103

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec	
2.0	51.6	10.32	5.0	76.0	1.83	89.91	11.174	9.24	1.20E-04
4.0	64.2	12.84	5.0	76.0	1.83	89.91	13.174	9.75	1.26E-04
7.0	78.8	15.76	5.0	76.0	1.83	89.91	16.174	9.74	1.26E-04
10.0	87.8	17.56	5.0	76.0	1.83	89.91	19.174	9.16	1.19E-04
7.0	77.8	15.56	5.0	76.0	1.83	89.91	16.174	9.62	1.25E-04
4.0	62.8	12.56	5.0	76.0	1.83	89.91	13.174	9.53	1.23E-04
2.0	51.0	10.20	5.0	76.0	1.83	89.91	11.174	9.13	1.18E-04
AVERAGE							9.45	1.22E-04	

k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
 DEPTH(m): 115-120

HOLE NO. JD-103

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec	
2.0	54.5	10.90	5.0	76.0	1.33	93.10	11.443	9.53	1.23E-04
4.0	60.4	12.08	5.0	76.0	1.33	93.10	13.443	8.99	1.16E-04
7.0	68.6	13.72	5.0	76.0	1.33	93.10	16.443	8.34	1.08E-04
10.0	77.0	15.40	5.0	76.0	1.33	93.10	19.443	7.92	1.03E-04
7.0	68.0	13.60	5.0	76.0	1.33	93.10	16.443	8.27	1.07E-04
4.0	61.2	12.24	5.0	76.0	1.33	93.10	13.443	9.11	1.18E-04
2.0	55.2	11.04	5.0	76.0	1.33	93.10	11.443	9.65	1.25E-04
AVERAGE							8.83	1.14E-04	

k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 120-125

HOLE NO. JD-103

GAUGE INJECTION			TEST HOLE	GAUGE	WATER	TEST	LUGEON	k-VALUE	
PRESS.	Q'ty		LENGTH	DIA.	LEVEL	PRESS.	VALUE		
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec	
2.0	53.4	10.68	5.0	76.0	0.83	93.05	11.388	9.38	1.21E-04
4.0	58.6	11.72	5.0	76.0	0.83	93.05	13.388	8.75	1.13E-04
7.0	67.6	13.52	5.0	76.0	0.83	93.05	16.388	8.25	1.07E-04
10.0	75.4	15.08	5.0	76.0	0.83	93.05	19.388	7.78	1.01E-04
7.0	67.2	13.44	5.0	76.0	0.83	93.05	16.388	8.20	1.06E-04
4.0	58.8	11.76	5.0	76.0	0.83	93.05	13.388	8.78	1.14E-04
2.0	53.8	10.76	5.0	76.0	0.83	93.05	11.388	9.45	1.22E-04
AVERAGE								8.66	1.12E-04
k-VALUE: COEFFICIENT OF PERMEABILITY									

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 125-130

HOLE NO. JD-103

GAUGE INJECTION			TEST HOLE	GAUGE	WATER	TEST	LUGEON	k-VALUE	
PRESS.	Q'ty		LENGTH	DIA.	LEVEL	PRESS.	VALUE		
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec	
2.0	50.4	10.08	5.0	76.0	1.83	95.85	11.768	8.57	1.11E-04
4.0	56.4	11.28	5.0	76.0	1.83	95.85	13.768	8.19	1.06E-04
7.0	65.0	13.00	5.0	76.0	1.83	95.85	16.768	7.75	1.00E-04
10.0	71.6	14.32	5.0	76.0	1.83	95.85	19.768	7.24	9.38E-05
7.0	64.8	12.96	5.0	76.0	1.83	95.85	16.768	7.73	1.00E-04
4.0	56.8	11.36	5.0	76.0	1.83	95.85	13.768	8.25	1.07E-04
2.0	50.0	10.00	5.0	76.0	1.83	95.85	11.768	8.50	1.10E-04
AVERAGE								8.03	1.04E-04
k-VALUE: COEFFICIENT OF PERMEABILITY									

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 130-135

HOLE NO. JD-103

GAUGE INJECTION			TEST HOLE	GAUGE	WATER	TEST	LUGEON	k-VALUE	
PRESS.	Q'ty		LENGTH	DIA.	LEVEL	PRESS.	VALUE		
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec	
2.0	52.4	10.48	5.0	76.0	2.83	98.65	12.148	8.63	1.12E-04
4.0	58.6	11.72	5.0	76.0	2.83	98.65	14.148	8.28	1.07E-04
7.0	67.4	13.48	5.0	76.0	2.83	98.65	17.148	7.86	1.02E-04
10.0	74.0	14.80	5.0	76.0	2.83	98.65	20.148	7.35	9.51E-05
7.0	67.0	13.40	5.0	76.0	2.83	98.65	17.148	7.81	1.01E-04
4.0	58.6	11.72	5.0	76.0	2.83	98.65	14.148	8.28	1.07E-04
2.0	52.2	10.44	5.0	76.0	2.83	98.65	12.148	8.59	1.11E-04
AVERAGE								8.12	1.05E-04
k-VALUE: COEFFICIENT OF PERMEABILITY									

RECORD OF WATER PRESSURE TEST  
 DEPTH(m): 135-140

HOLE NO. JD-103

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	58.0	11.60	5.0	76.0	0.83	102.25	12.308	1.22E-04
4.0	74.6	14.92	5.0	76.0	0.83	102.25	14.308	1.35E-04
7.0	85.8	17.16	5.0	76.0	0.83	102.25	17.308	1.28E-04
10.0	97.4	19.48	5.0	76.0	0.83	102.25	20.308	1.24E-04
7.0	85.2	17.04	5.0	76.0	0.83	102.25	17.308	1.27E-04
4.0	73.4	14.68	5.0	76.0	0.83	102.25	14.308	1.33E-04
2.0	57.4	11.48	5.0	76.0	0.83	102.25	12.308	1.21E-04

AVERAGE 9.83 1.27E-04  
 k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
 DEPTH(m): 140-145

HOLE NO. JD-103

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	54.2	10.84	5.0	76.0	1.83	101.10	12.293	1.14E-04
4.0	60.6	12.12	5.0	76.0	1.83	101.10	14.293	1.10E-04
7.0	69.6	13.92	5.0	76.0	1.83	101.10	17.293	1.04E-04
10.0	78.0	15.60	5.0	76.0	1.83	101.10	20.293	9.95E-05
7.0	69.0	13.80	5.0	76.0	1.83	101.10	17.293	1.03E-04
4.0	59.6	11.92	5.0	76.0	1.83	101.10	14.293	1.08E-04
2.0	53.8	10.76	5.0	76.0	1.83	101.10	12.293	1.13E-04

AVERAGE 8.30 1.07E-04  
 k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
 DEPTH(m): 145-150

HOLE NO. JD-103

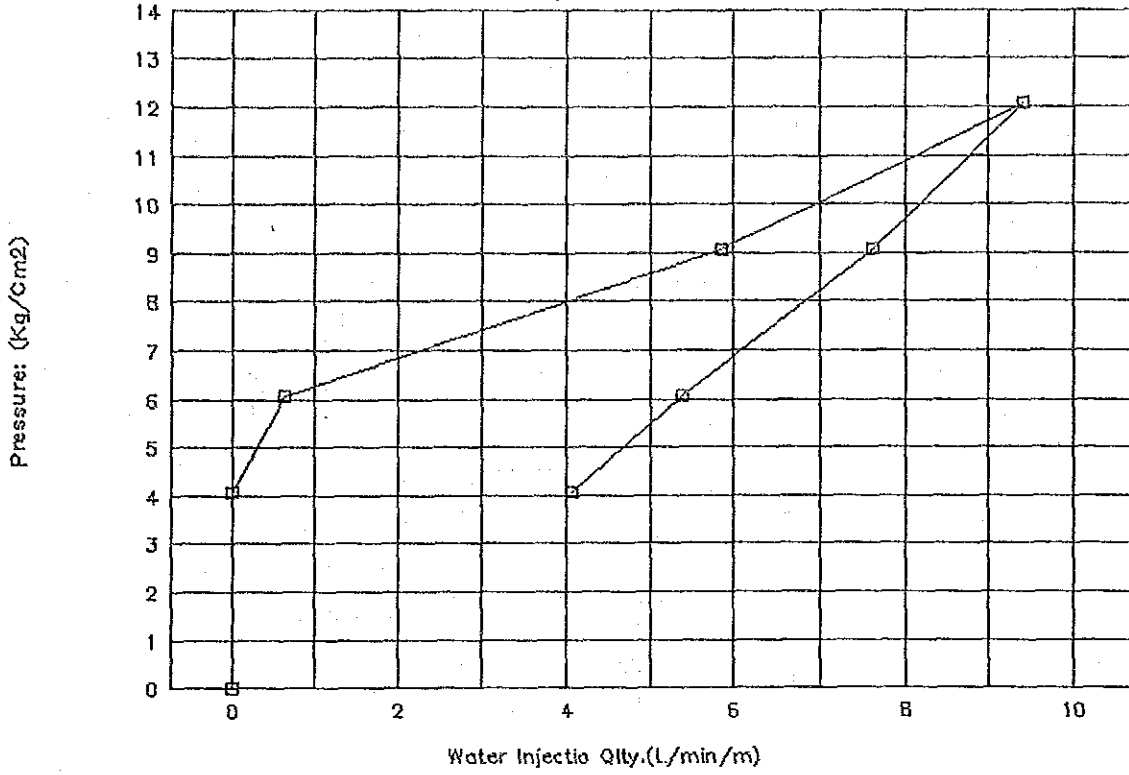
GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	57.2	11.44	5.0	76.0	2.83	103.52	12.635	1.17E-04
4.0	78.2	15.64	5.0	76.0	2.83	103.52	14.635	1.38E-04
7.0	86.4	17.28	5.0	76.0	2.83	103.52	17.635	1.27E-04
10.0	92.4	18.48	5.0	76.0	2.83	103.52	20.635	1.16E-04
7.0	83.6	16.72	5.0	76.0	2.83	103.52	17.635	1.23E-04
4.0	75.2	15.04	5.0	76.0	2.83	103.52	14.635	1.33E-04
2.0	55.6	11.12	5.0	76.0	2.83	103.52	12.635	1.14E-04

AVERAGE 9.58 1.24E-04  
 k-VALUE: COEFFICIENT OF PERMEABILITY



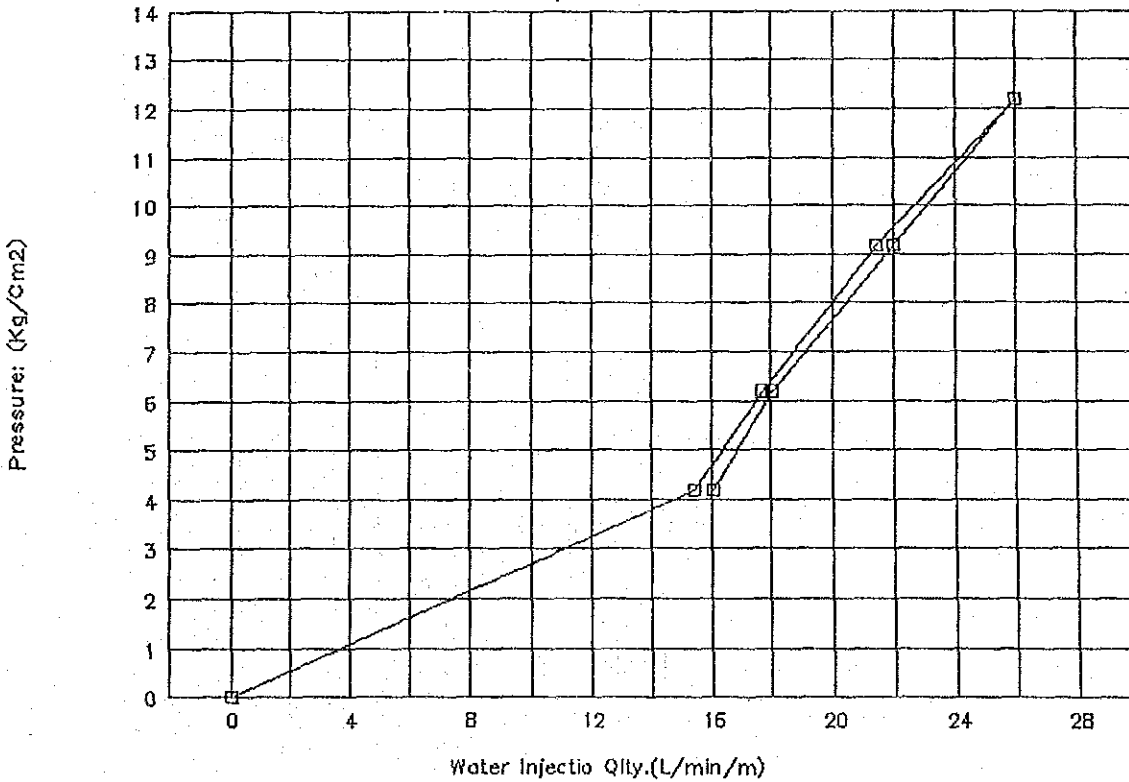
### P/Q.Curve: Hole No.JD-1

Depth:54-60m



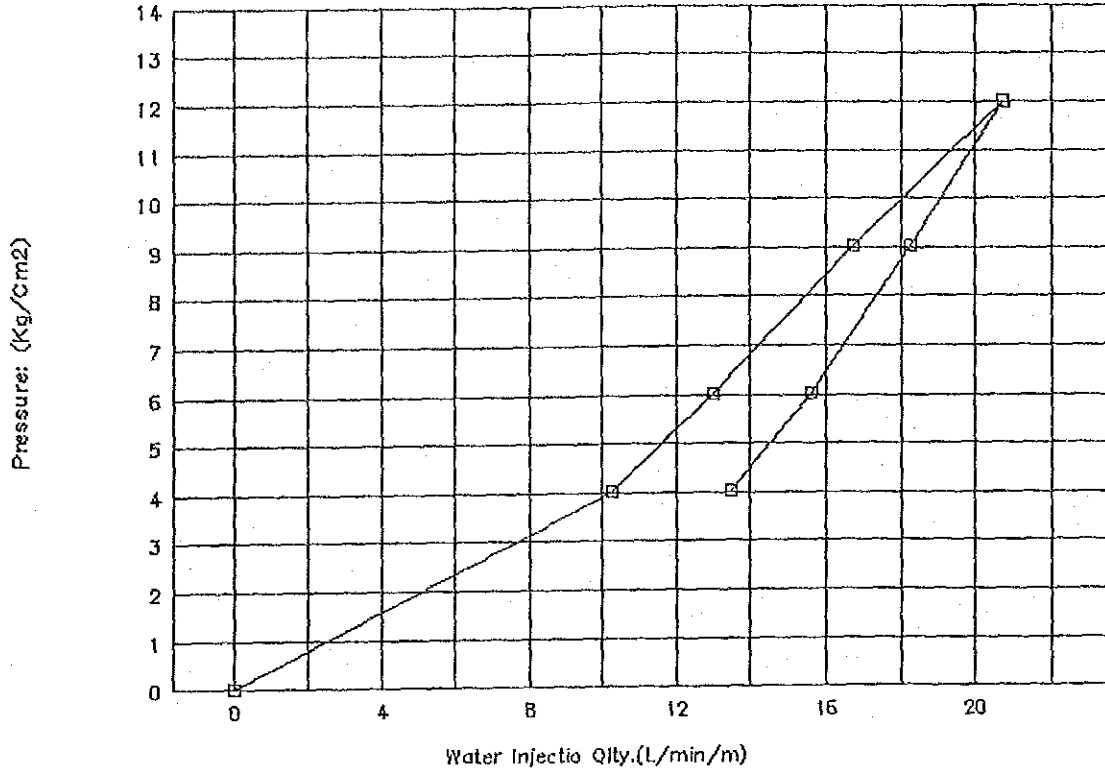
### P/Q.Curve: Hole No.JD-1

Depth:60-65m



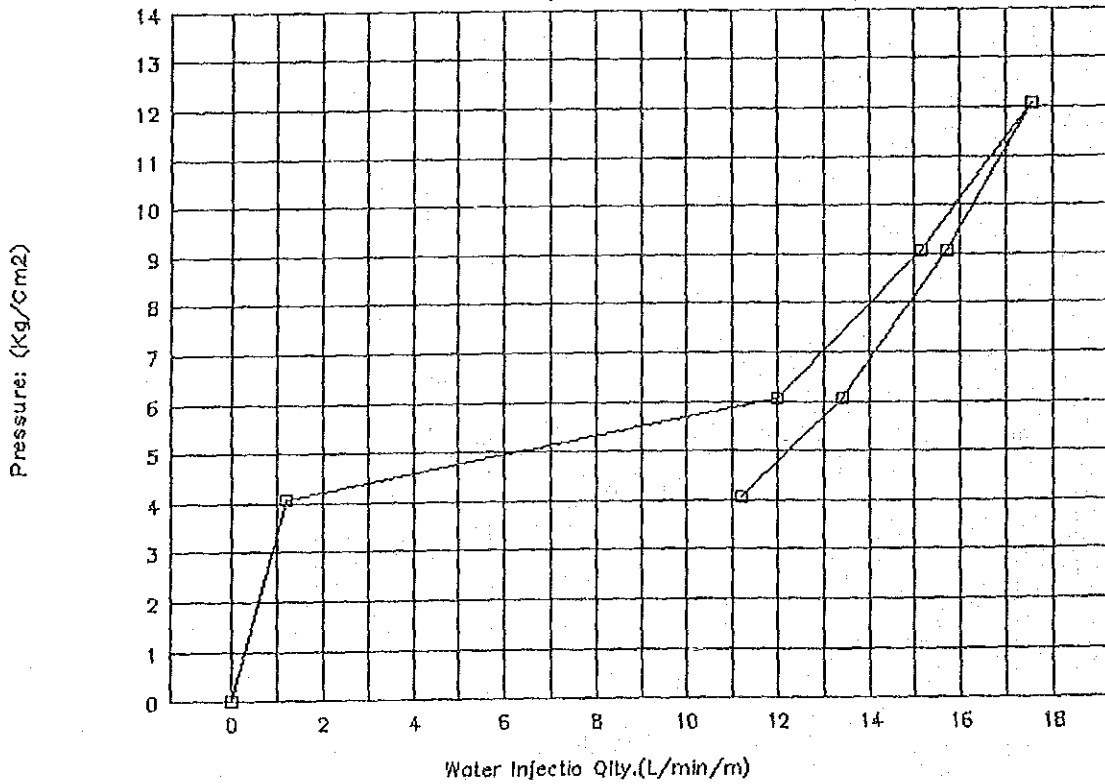
### P/Q.Curve: Hole No.JD-1

Depth:66-70m



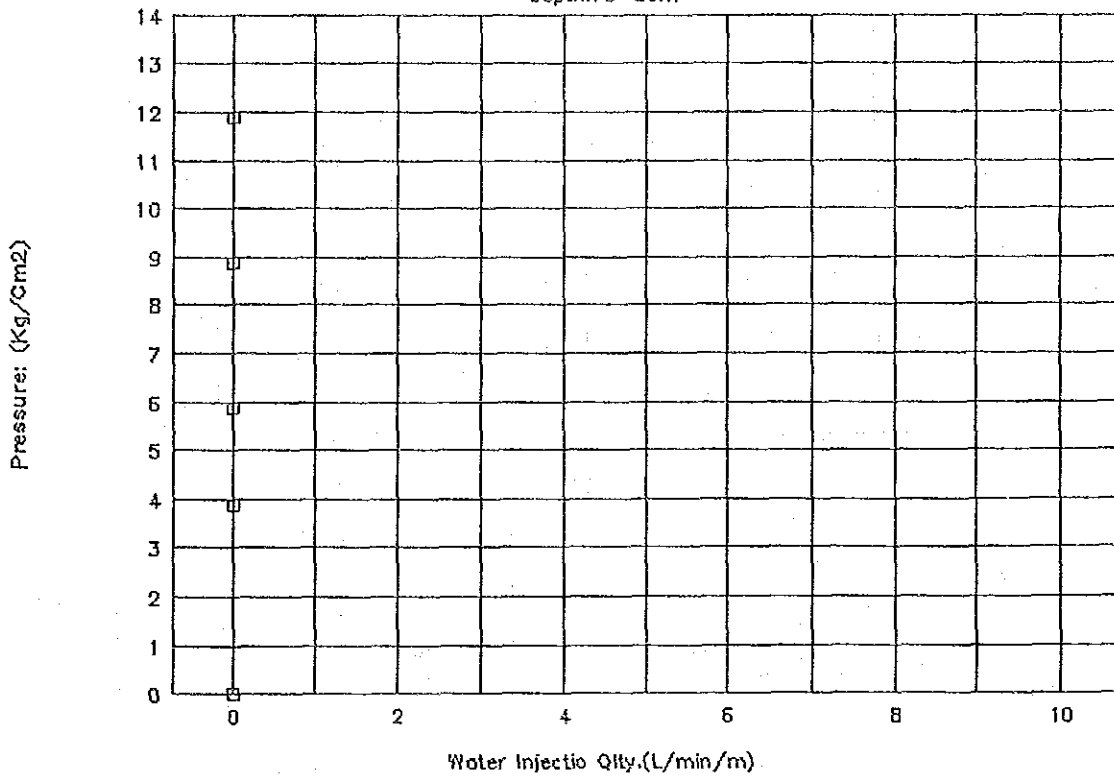
### P/Q.Curve: Hole No.JD-1

Depth:68-75m



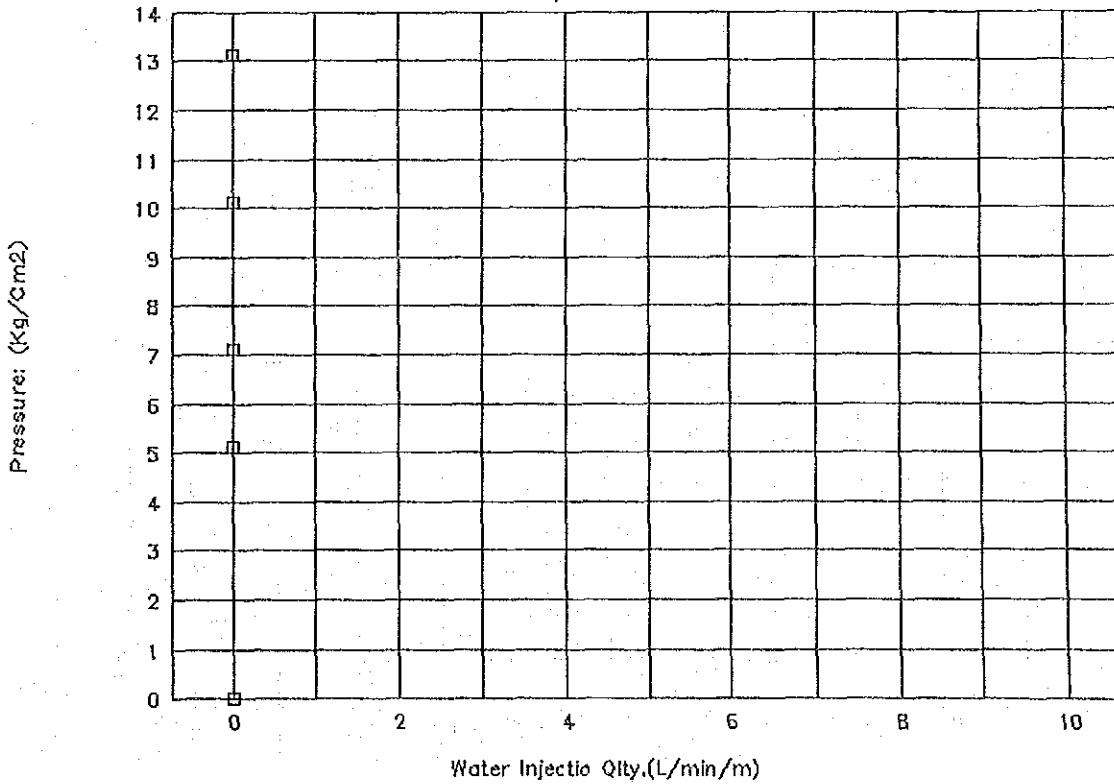
### P/Q.Curve: Hole No.JD-1

Depth:75-80m



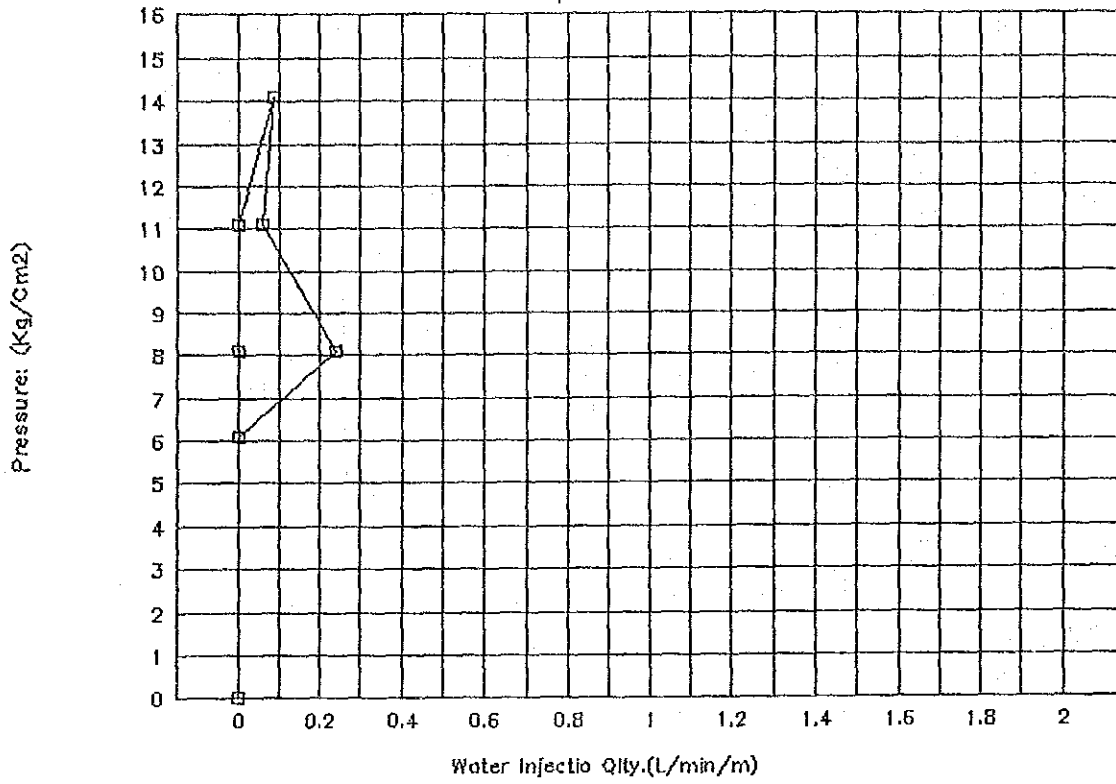
### P/Q.Curve: Hole No.JD-1

Depth:80-85m



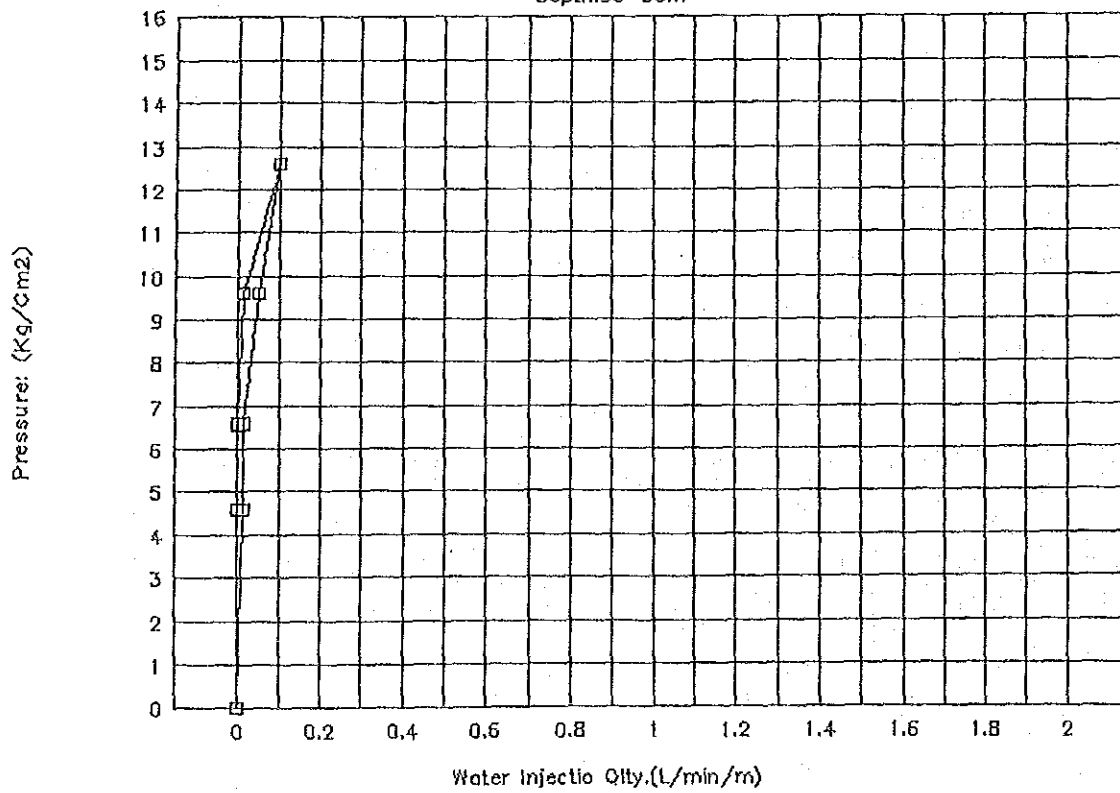
### P/Q.Curve: Hole No.JD-1

Depth:82-90m



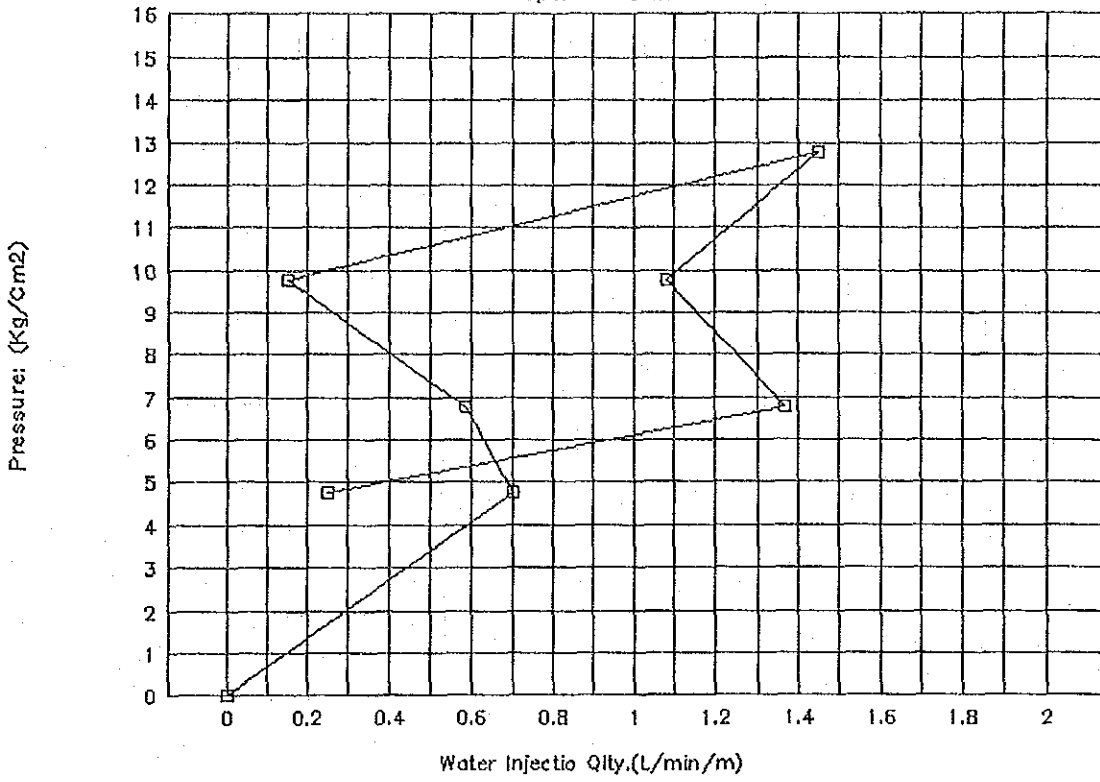
### P/Q.Curve: Hole No.JD-1

Depth:90-95m



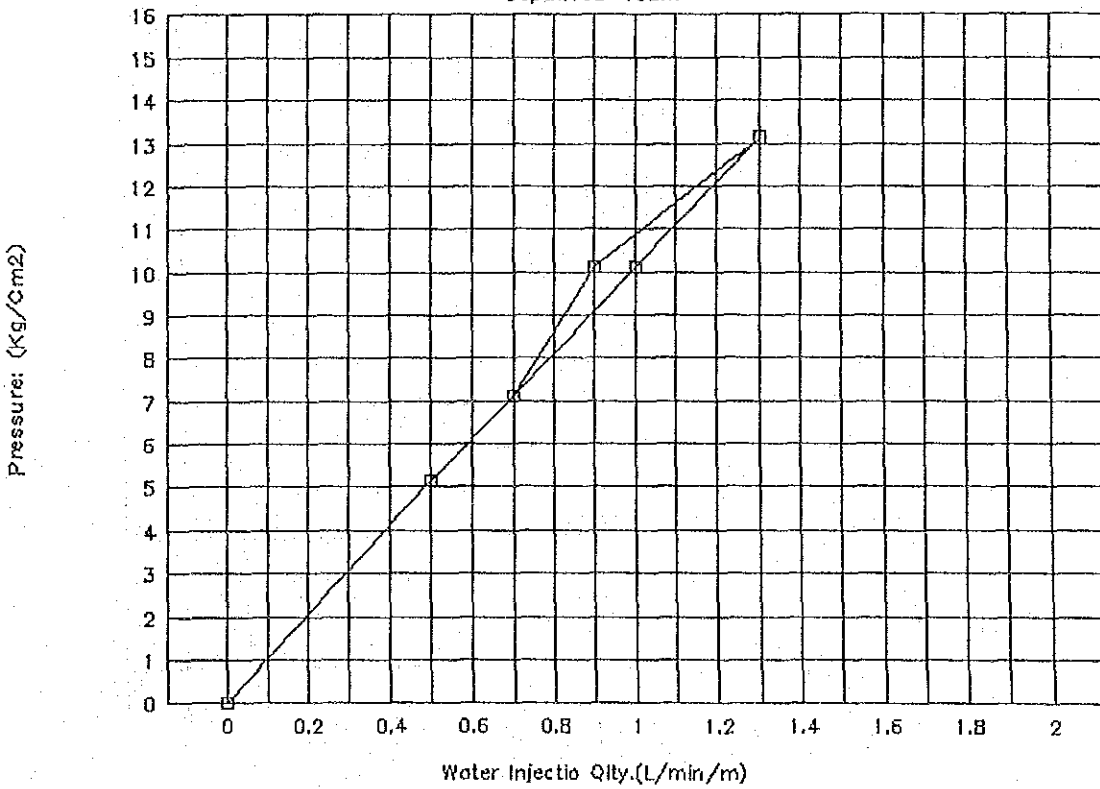
P/Q.Curve: Hole No.JD-1

Depth:90-102m



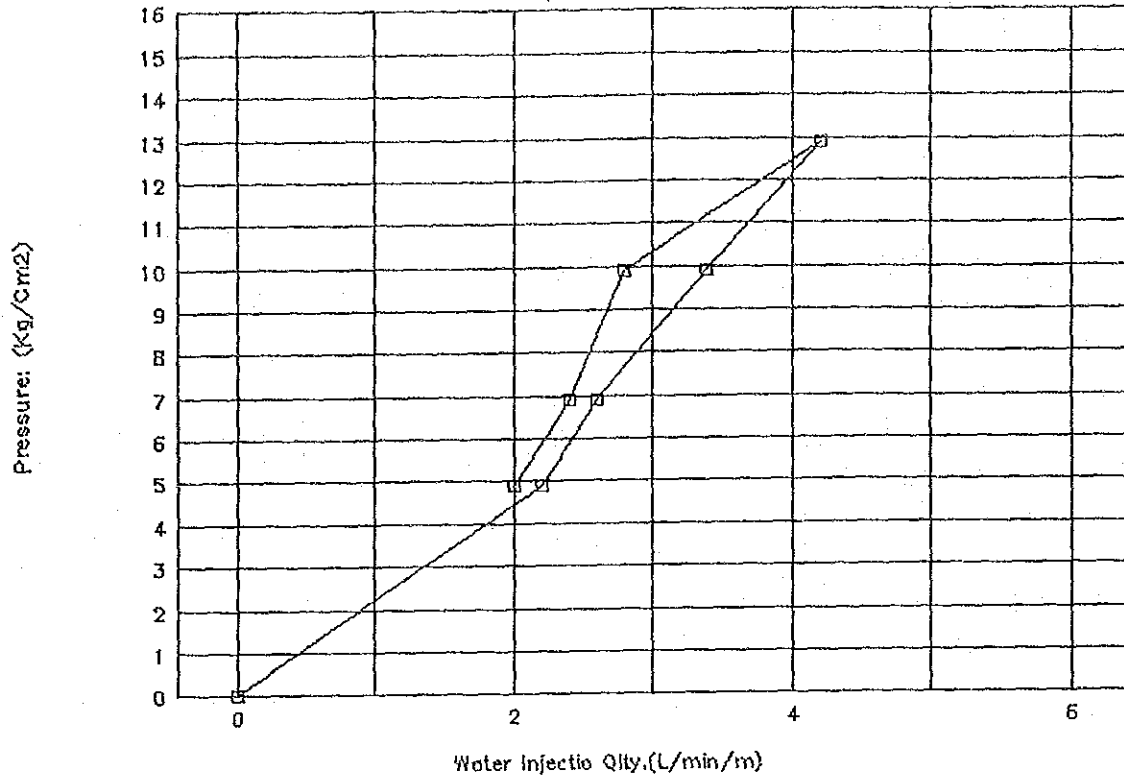
P/Q.Curve: Hole No.JD-1

Depth:102-108m



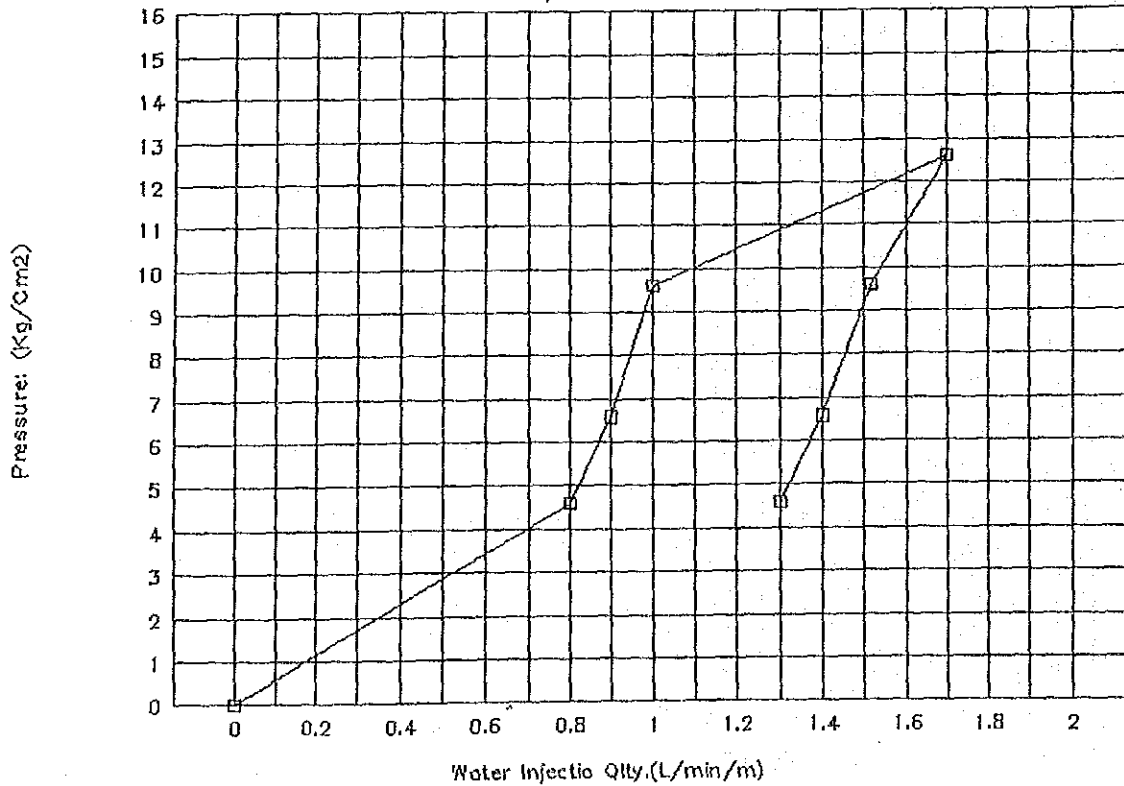
### P/Q.Curve: Hole No.JD-1

Depth:108-114m



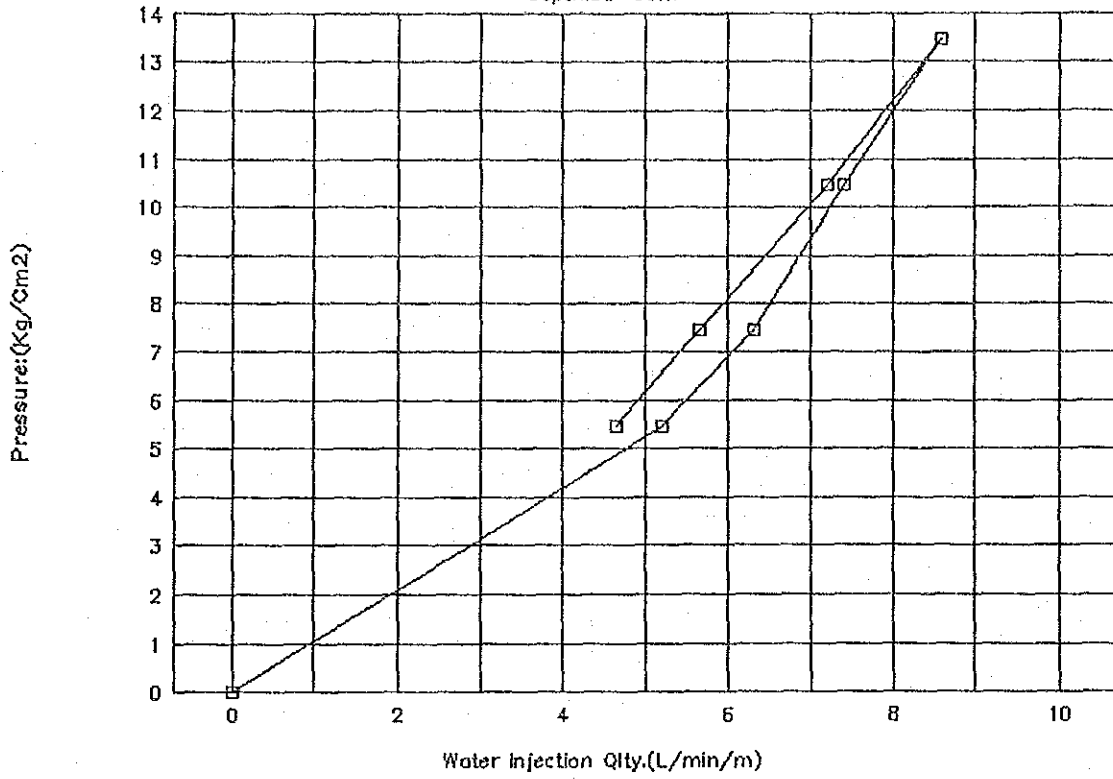
### P/Q.Curve: Hole No.JD-1

Depth:114-120m



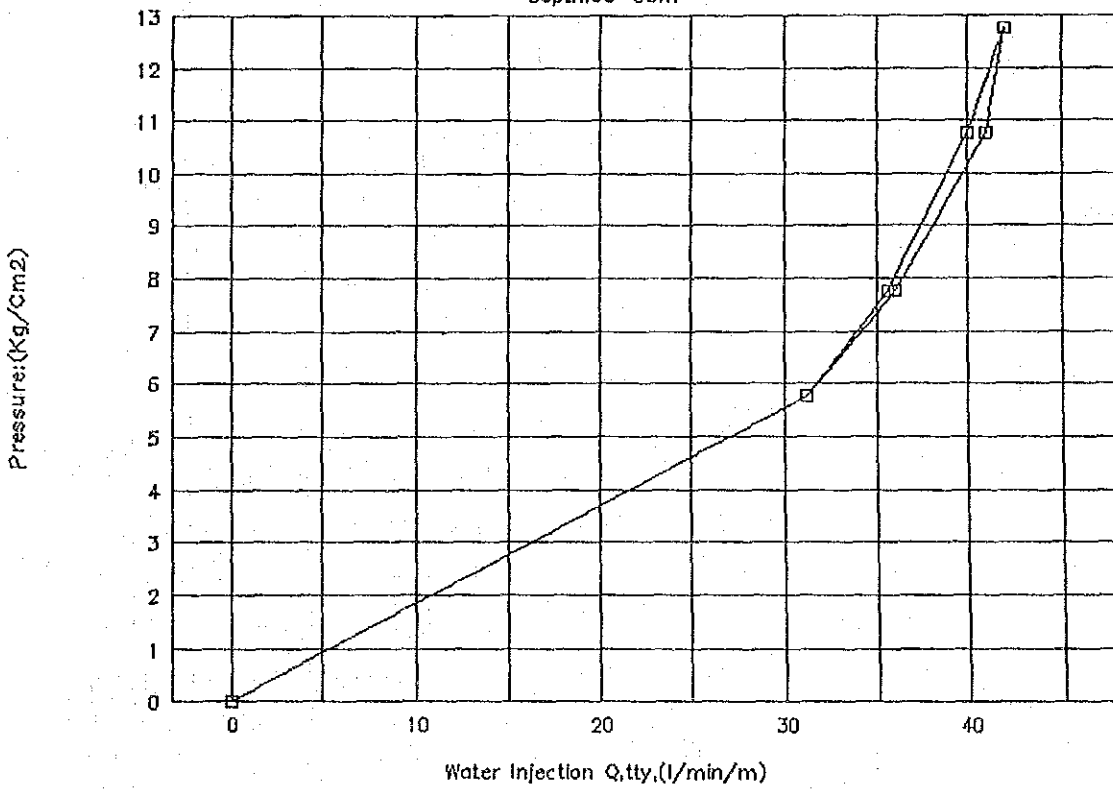
### P/Q.Curve: Hole No.JD-2

Depth:55-60m



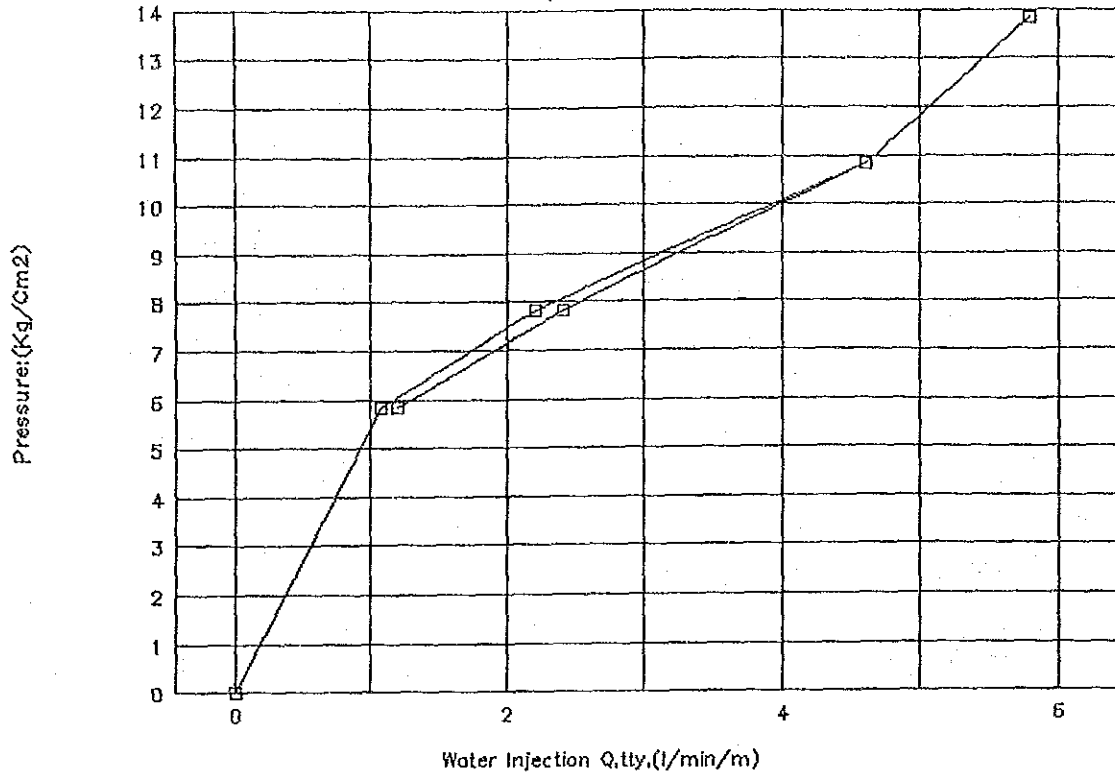
### P/Q.Curve: Hole No.:JD-2

Depth:60-65m



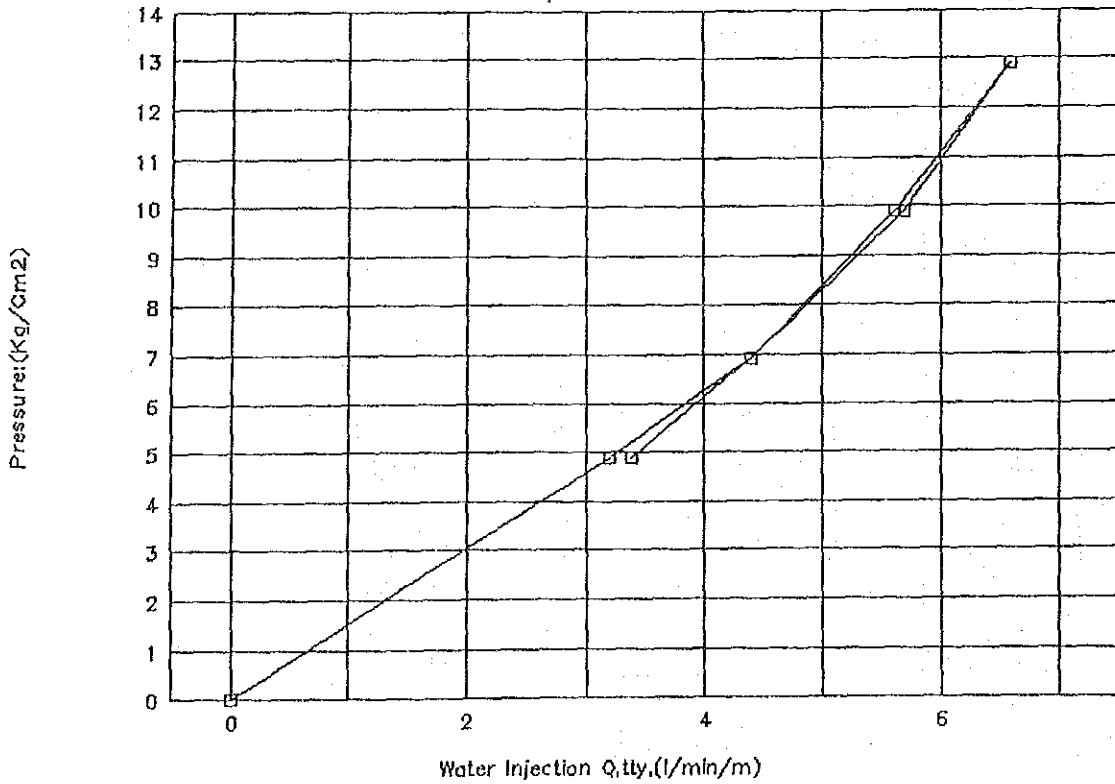
### P/Q.Curve: Hole No:JD-2

Depth: 65-70m



### P/Q.Curve: Hole No:JD-2

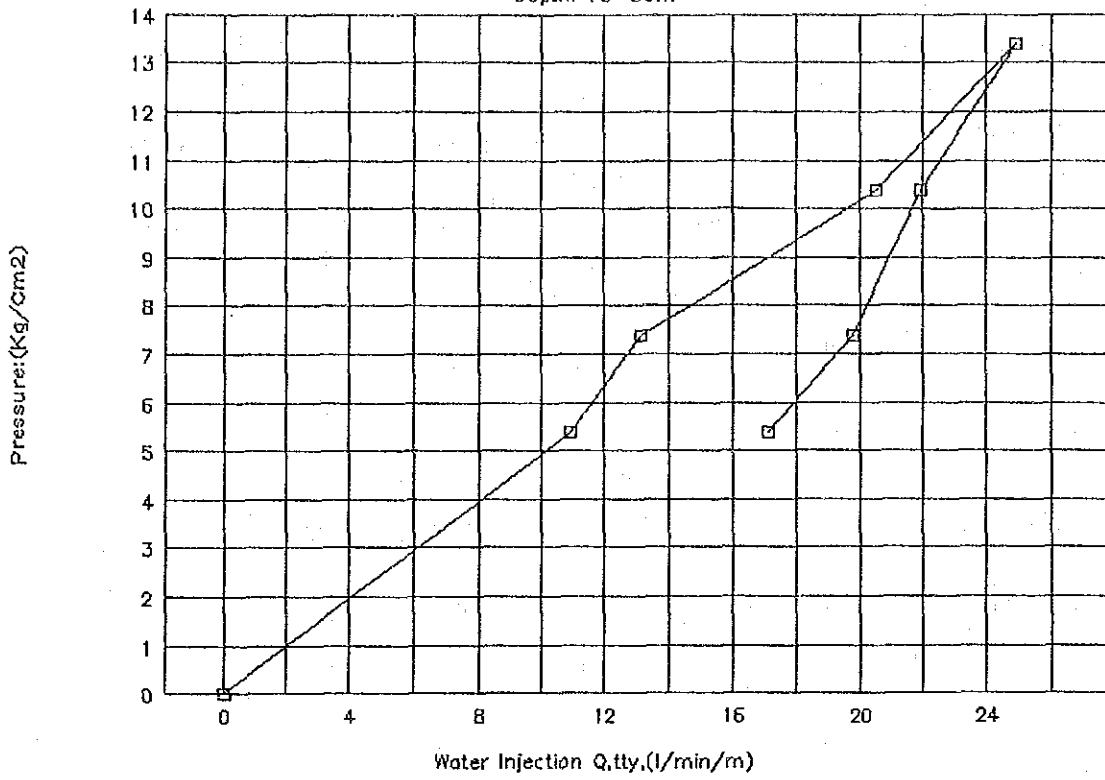
Depth: 70-75m





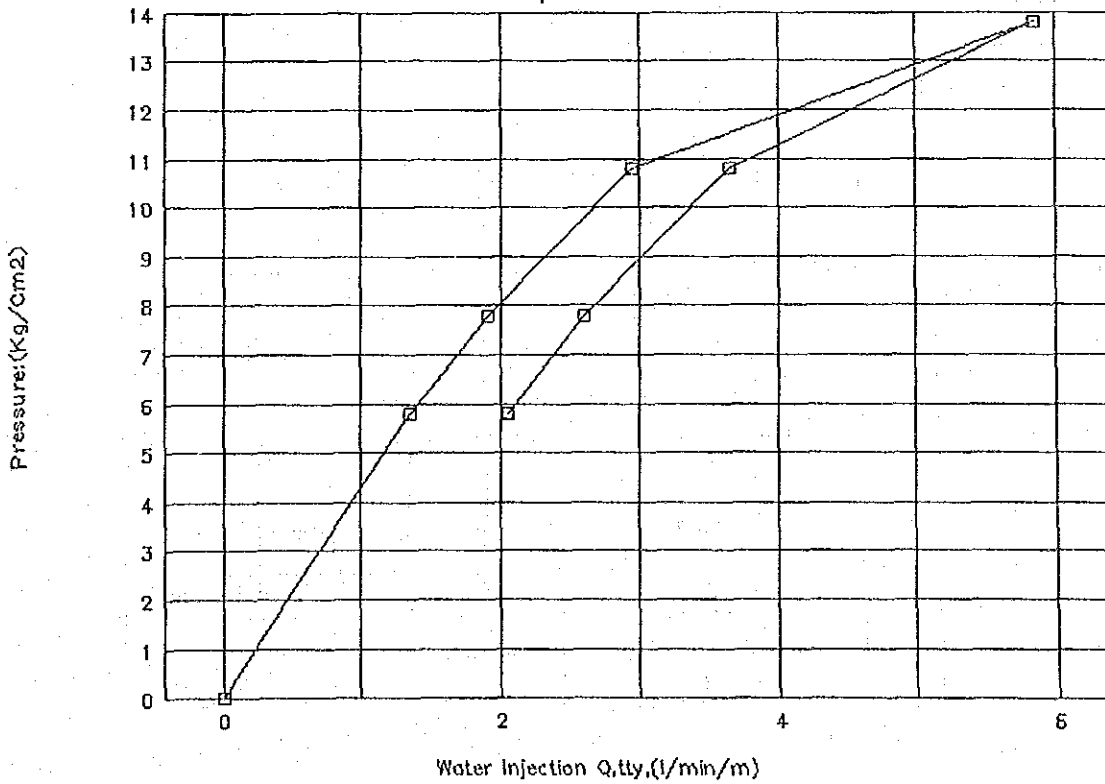
### P/Q.Curve: Hole No:JD-2

Depth: 75-80m



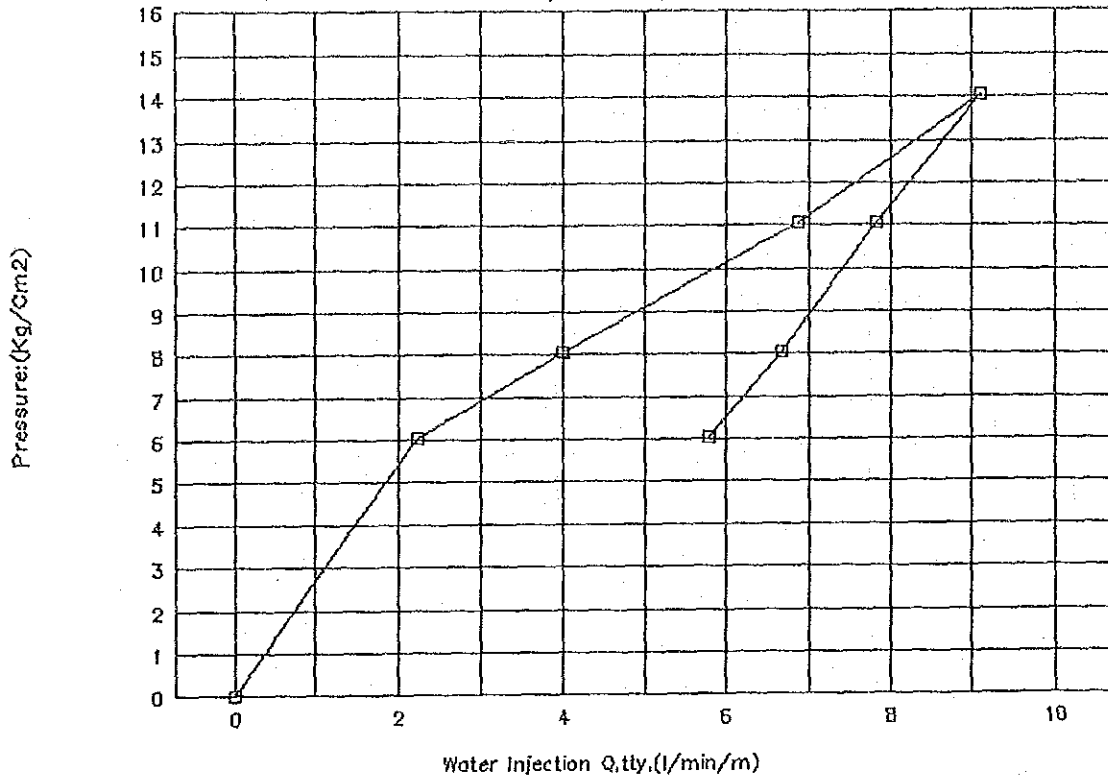
### P/Q.Curve: Hole No:JD-2

Depth: 80-90m



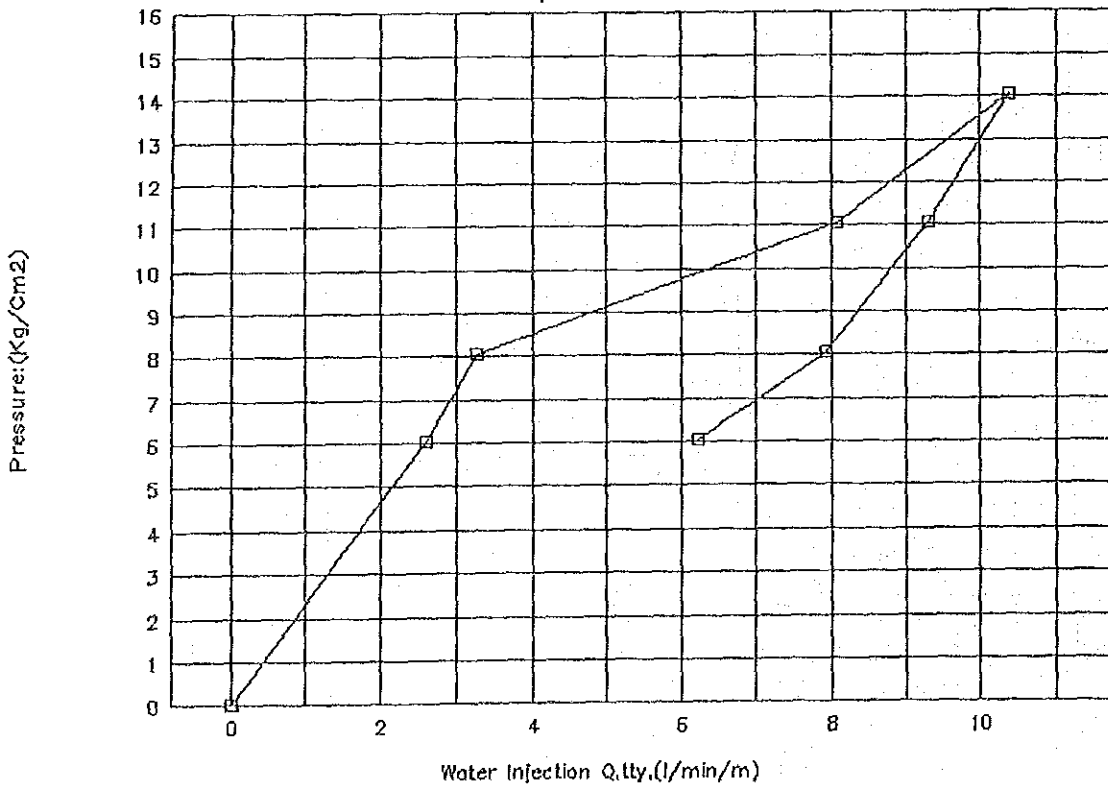
### P/Q.Curve: Hole No:JD-2

Depth: 90-96m



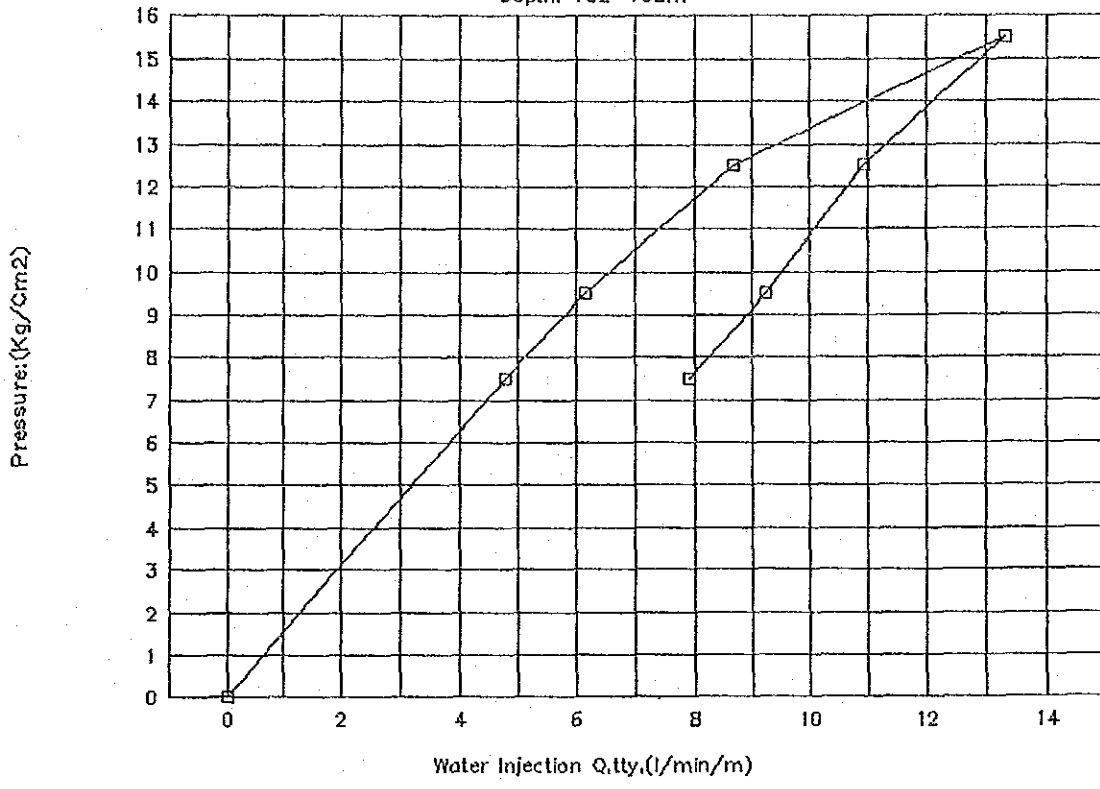
### P/Q.Curve: Hole No:JD-2

Depth: 96-102m



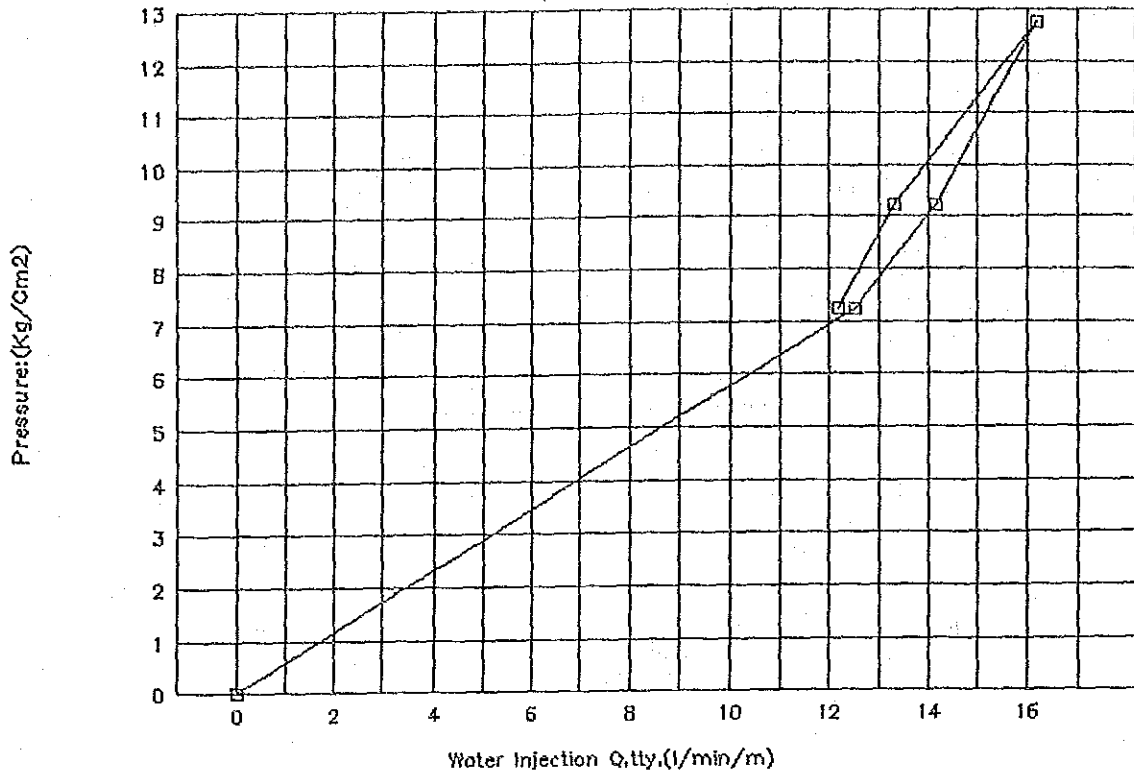
# P/Q Curve: Hole No: JD-2

Depth: 102-108m



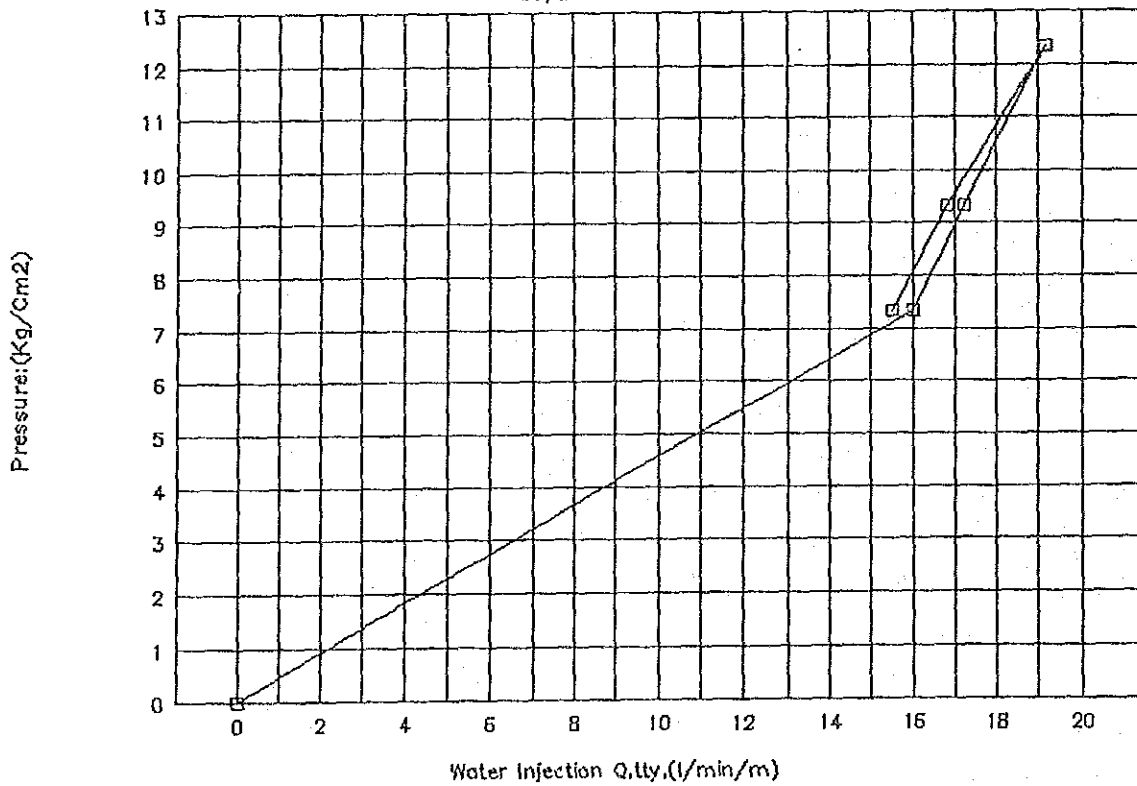
### P/Q.Curve: Hole No:JD-2

Depth: 108-114m



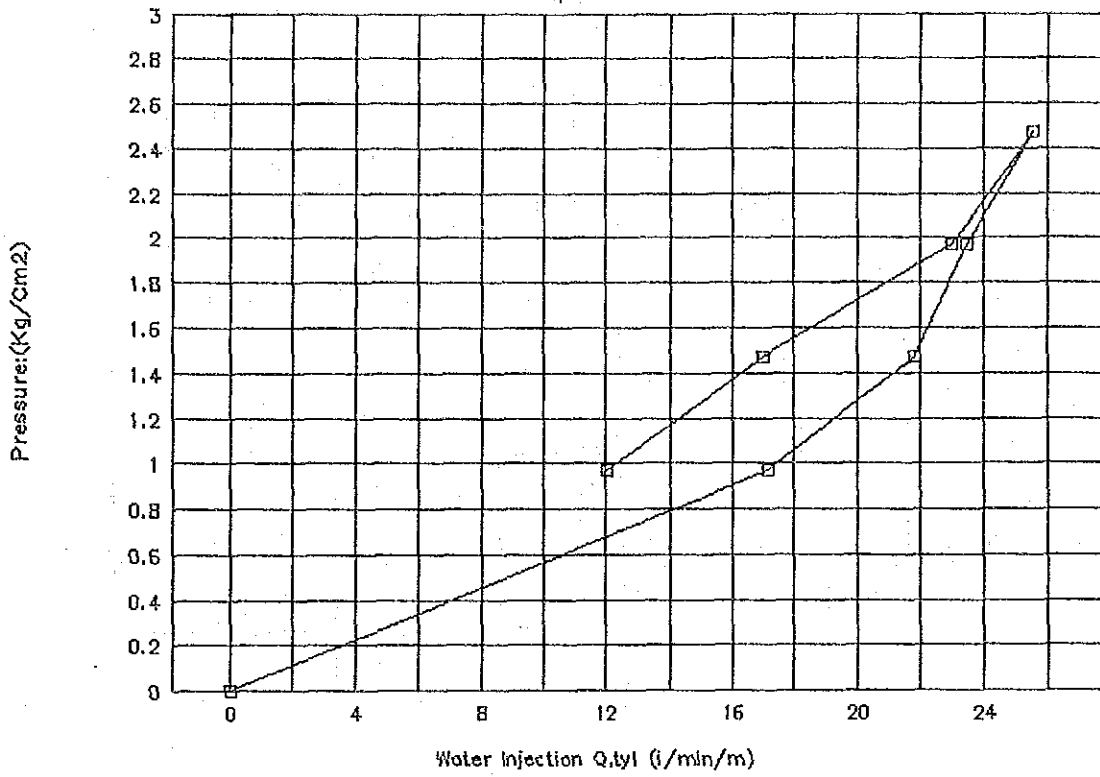
### P/Q.Curve: Hole No:JD-2

Depth: 114-120m



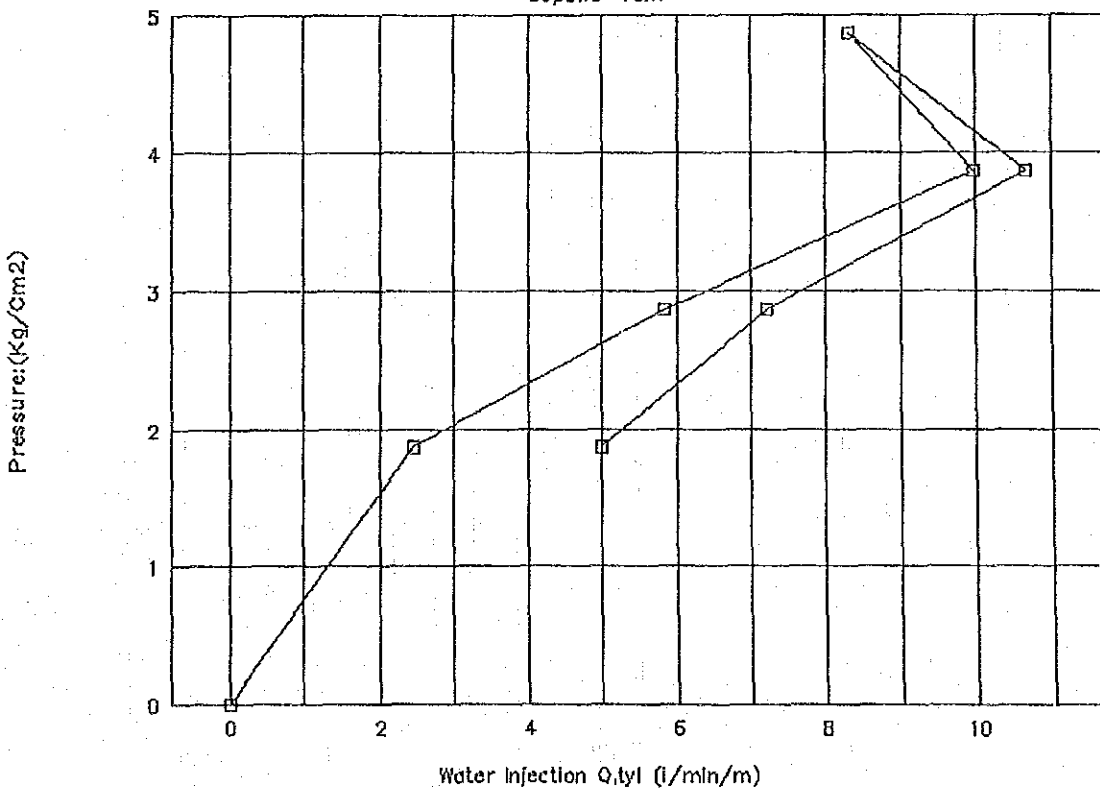
### P/Q.Curve: Hole No.JD-3

Depth:2-5m



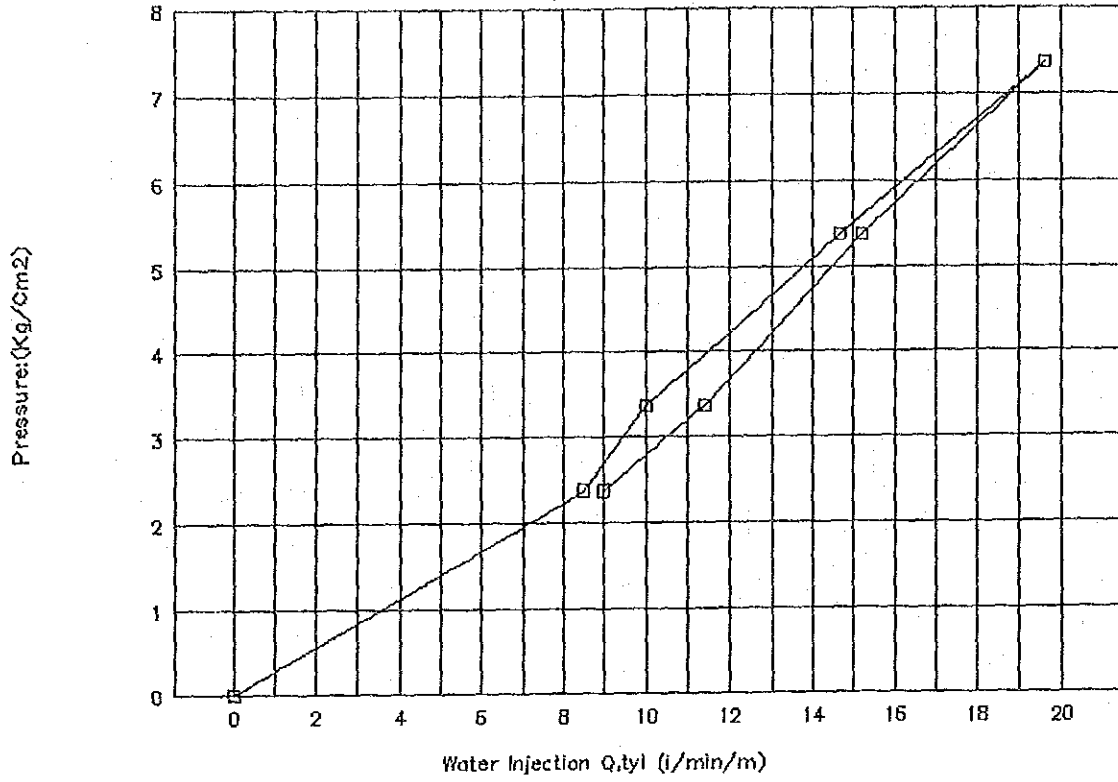
### P/Q.Curve: Hole No.JD-3

Depth:5-10m



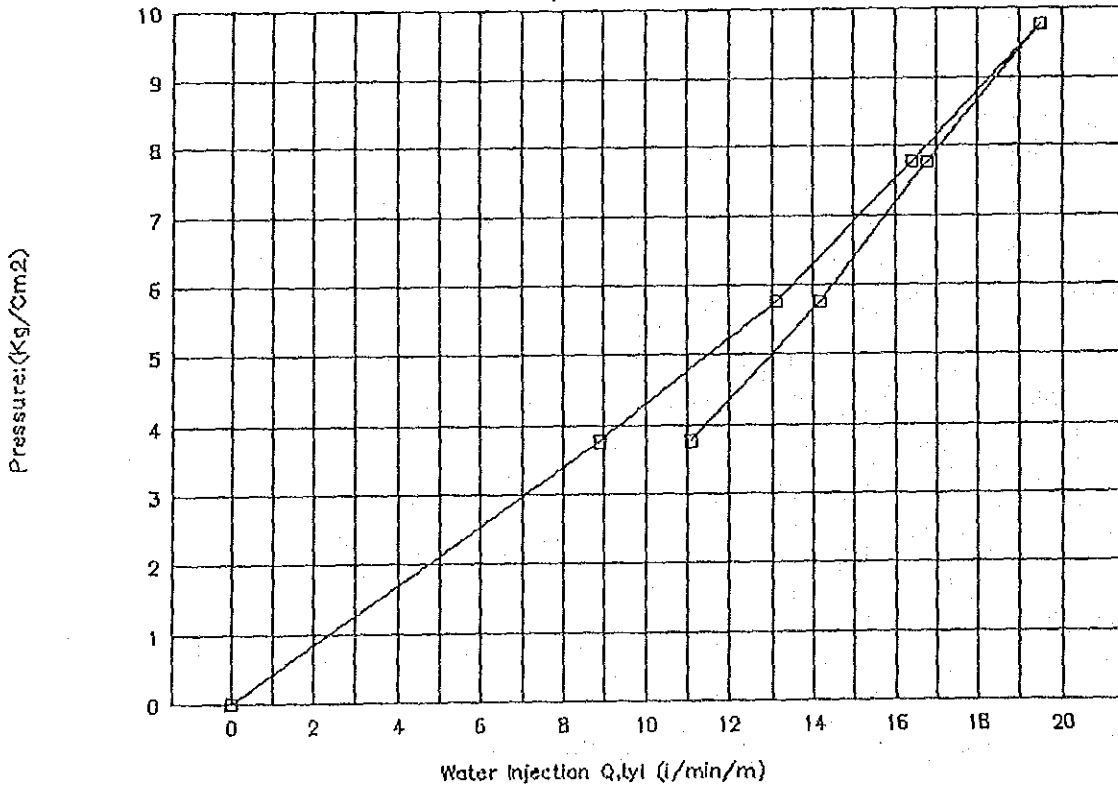
### P/Q.Curve: Hole No.JD-3

Depth:10-15m



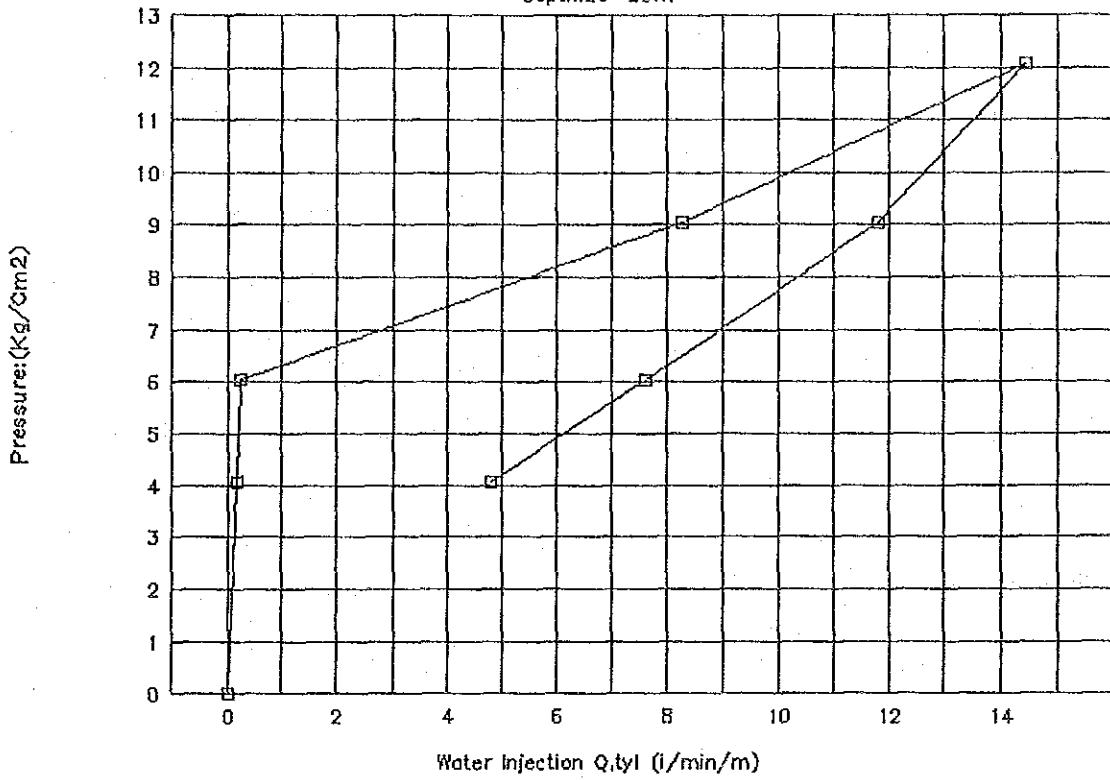
### P/Q.Curve: Hole No.JD-3

Depth:15-20m



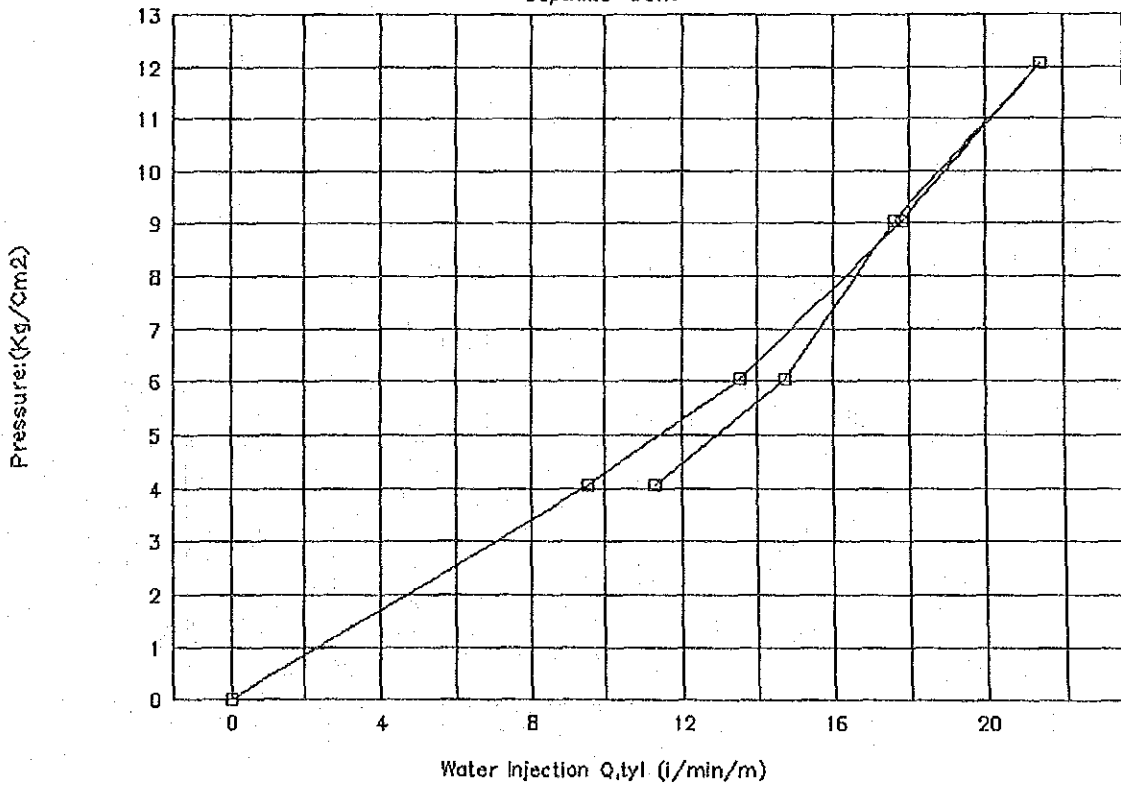
### P/Q.Curve: Hole No.JD-3

Depth:20-25m



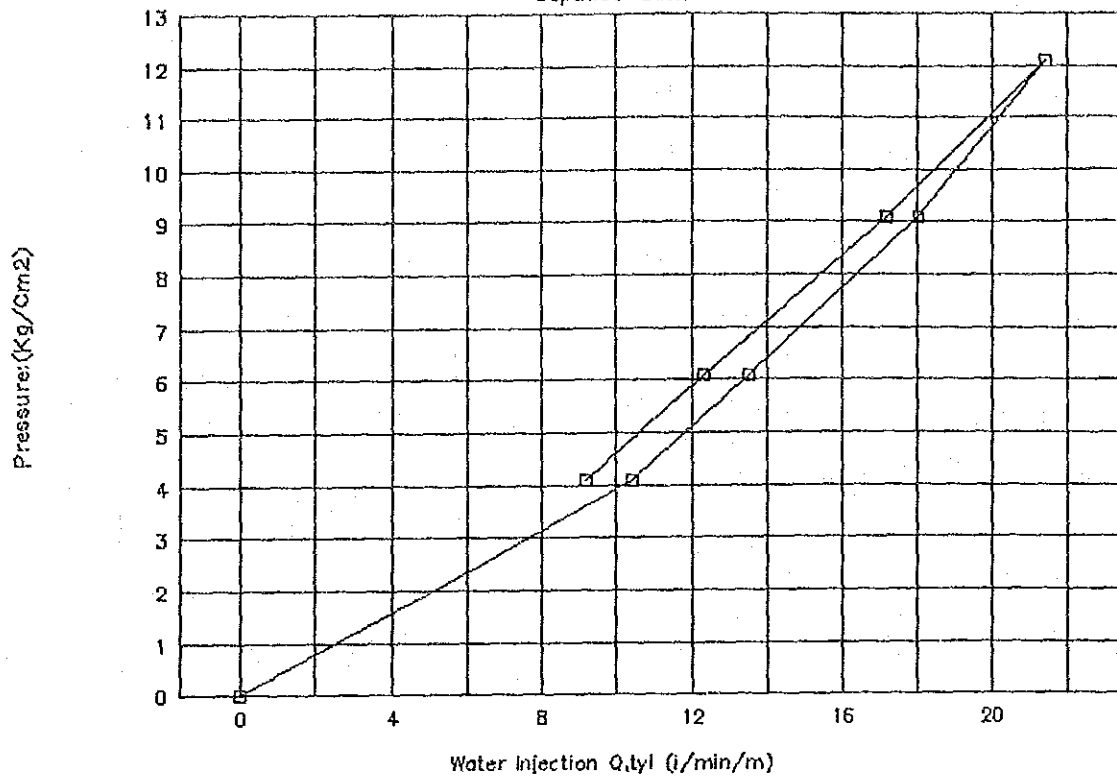
### P/Q.Curve: Hole No.JD-3

Depth:25-30m



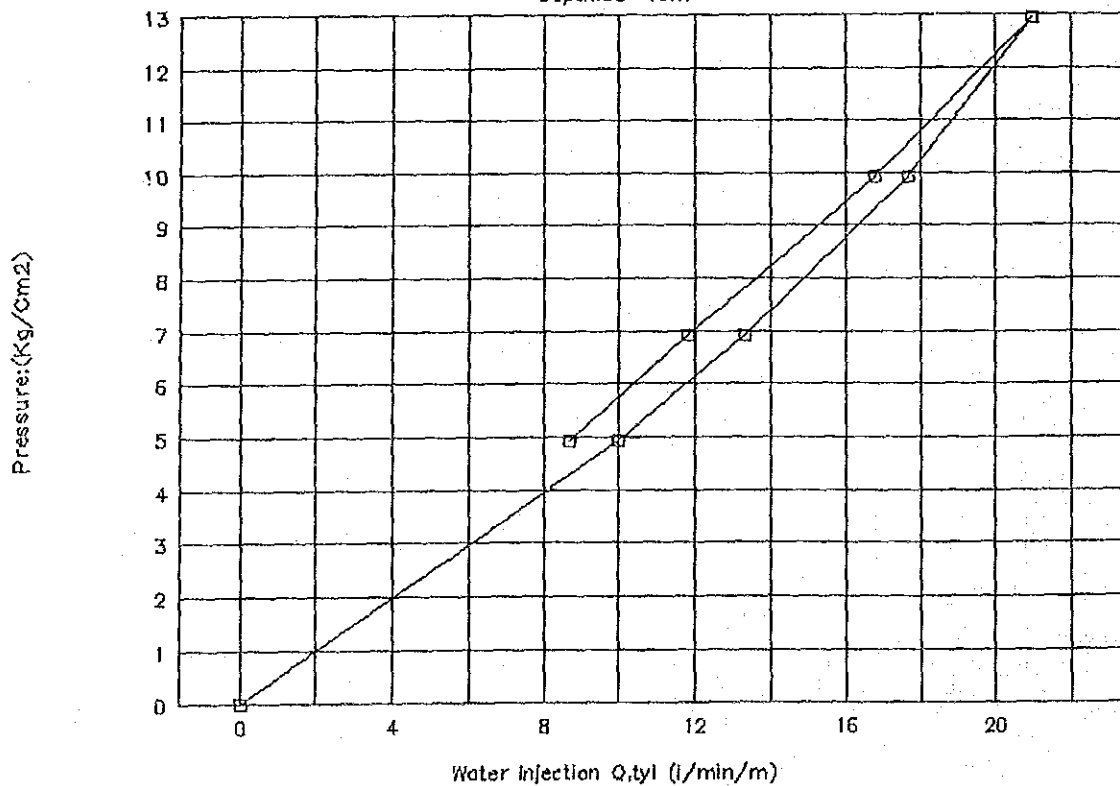
### P/Q.Curve: Hole No.JD-3

Depth:30-35m



### P/Q.Curve: Hole No.JD-3

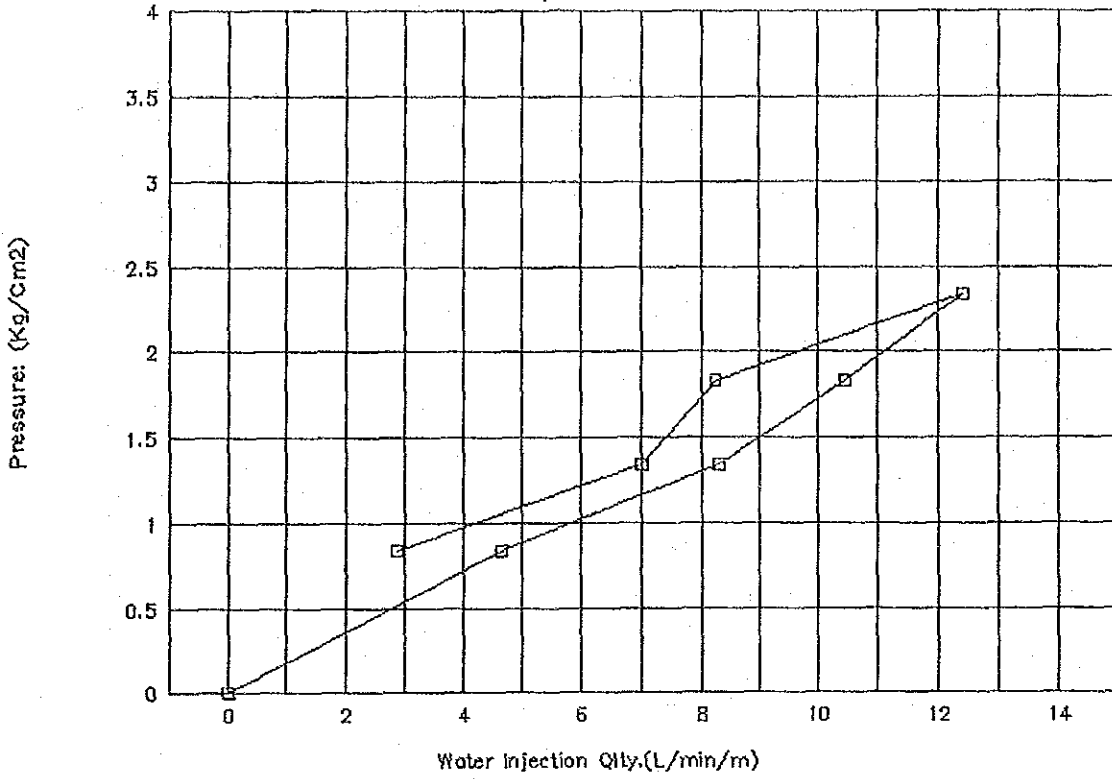
Depth:35-40m





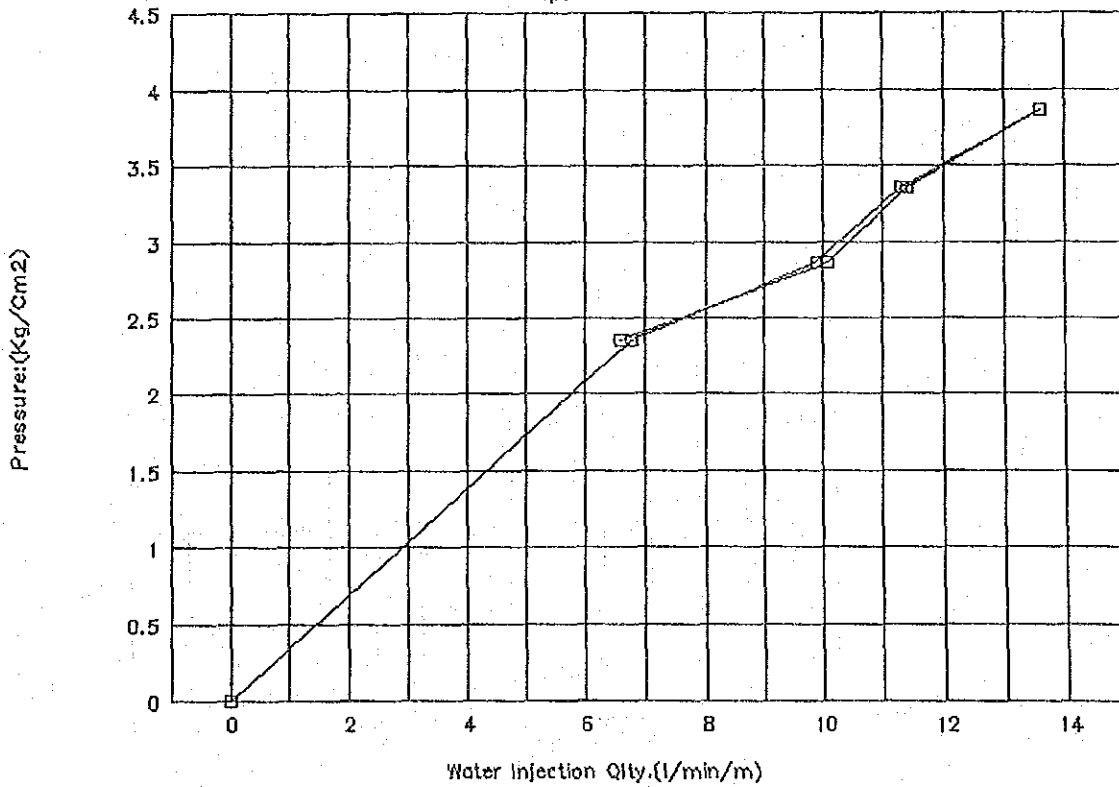
### P/Q.Curve: Hole No.JD-4

Depth : 6-10m



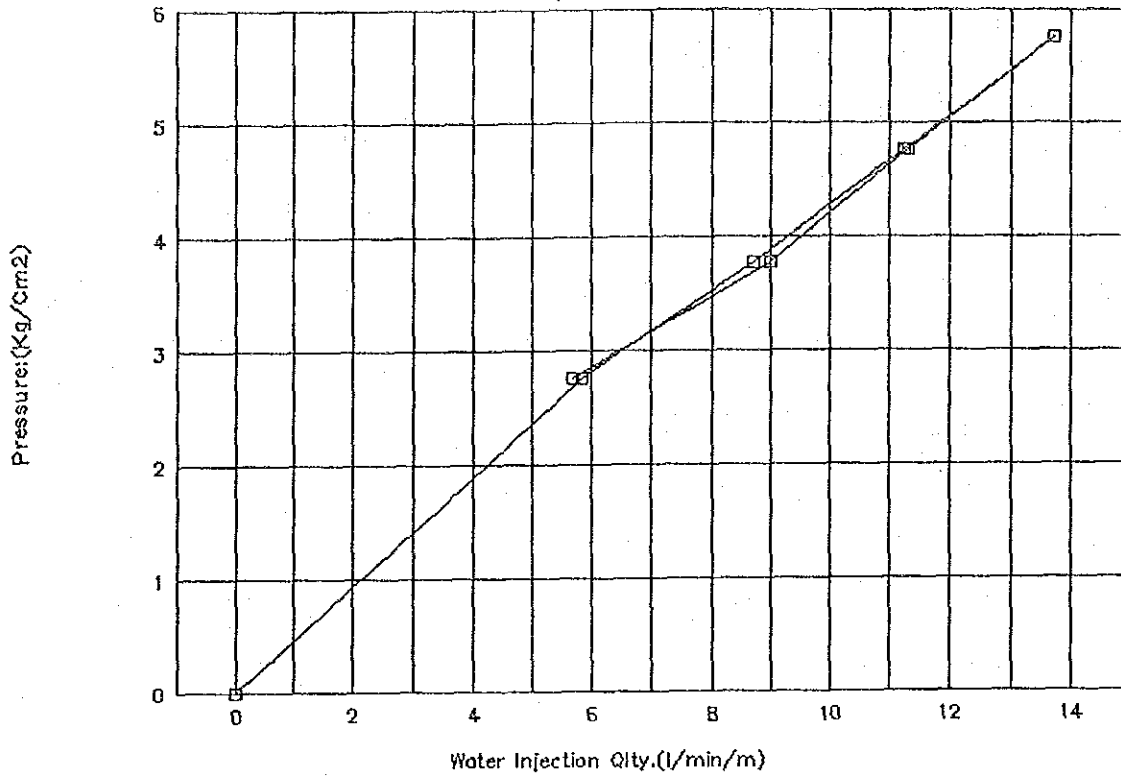
### P/Q.Curve: Hole No.JD-4

Depth:10-15m



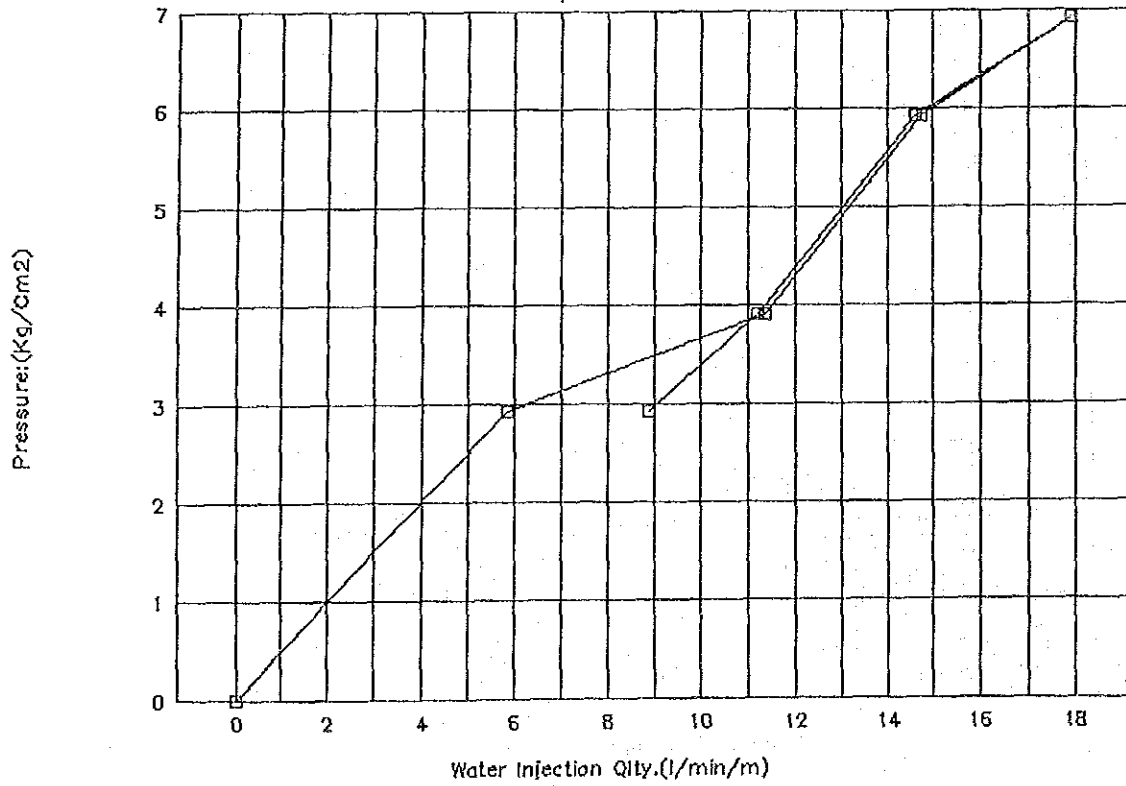
P/Q.Curve: Hole No.JD-4

Depth:15-20m



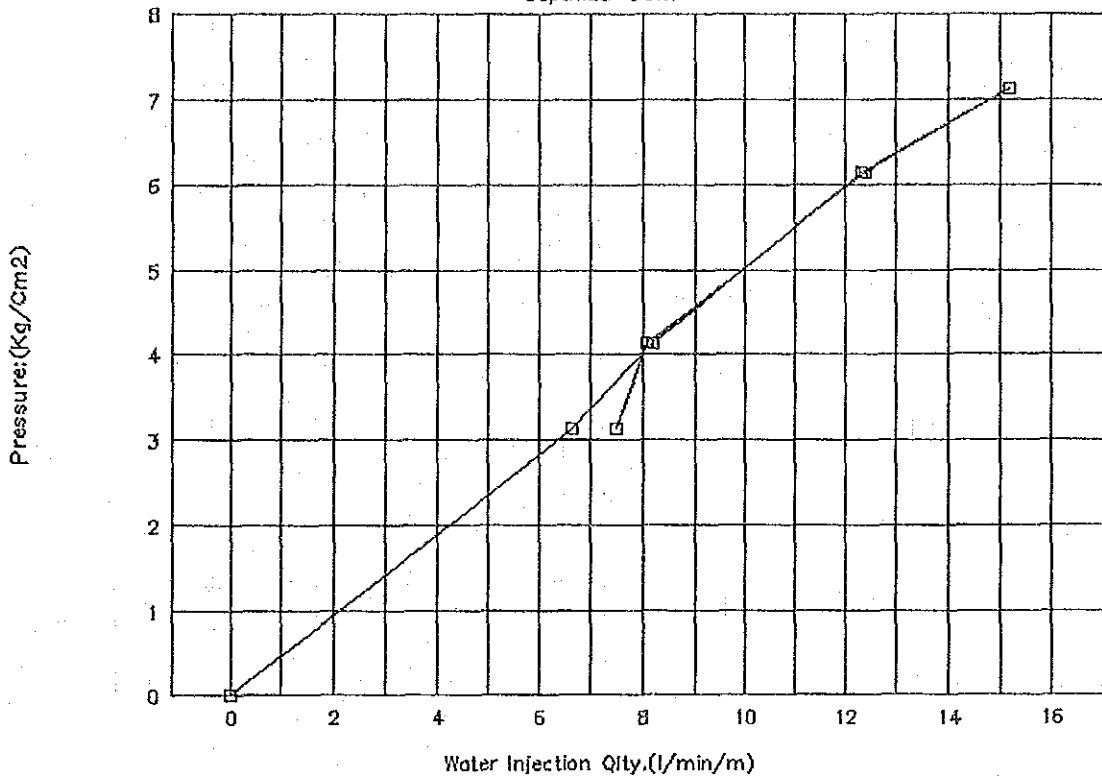
P/Q.Curve: Hole No.JD-4

Depth:20-25m



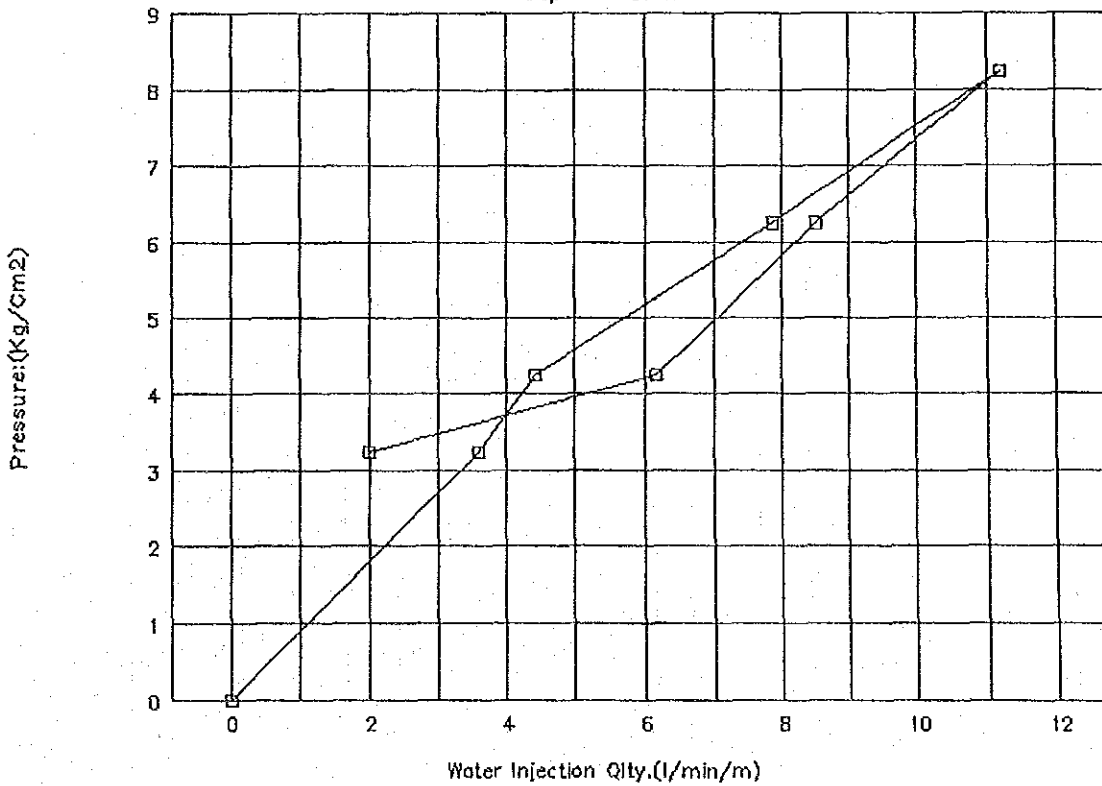
P/Q.Curve: Hole No.JD-4

Depth:25-30m



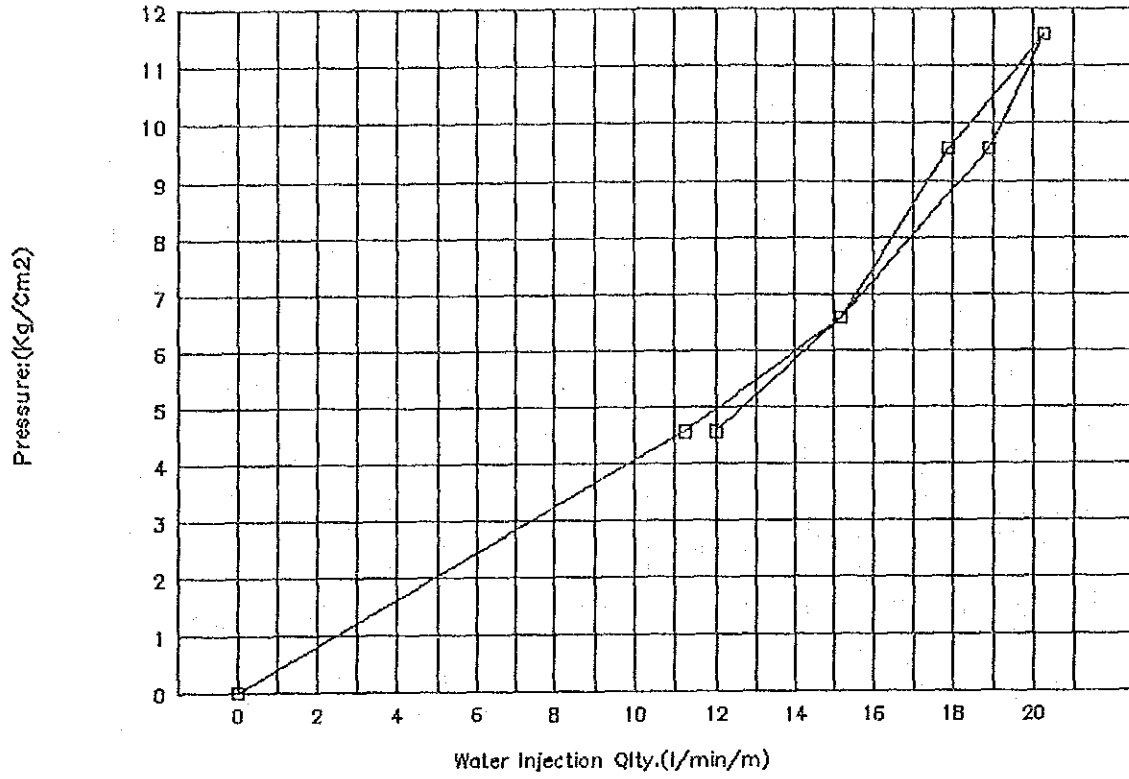
P/Q.Curve: Hole No.JD-4

Depth:29-35m



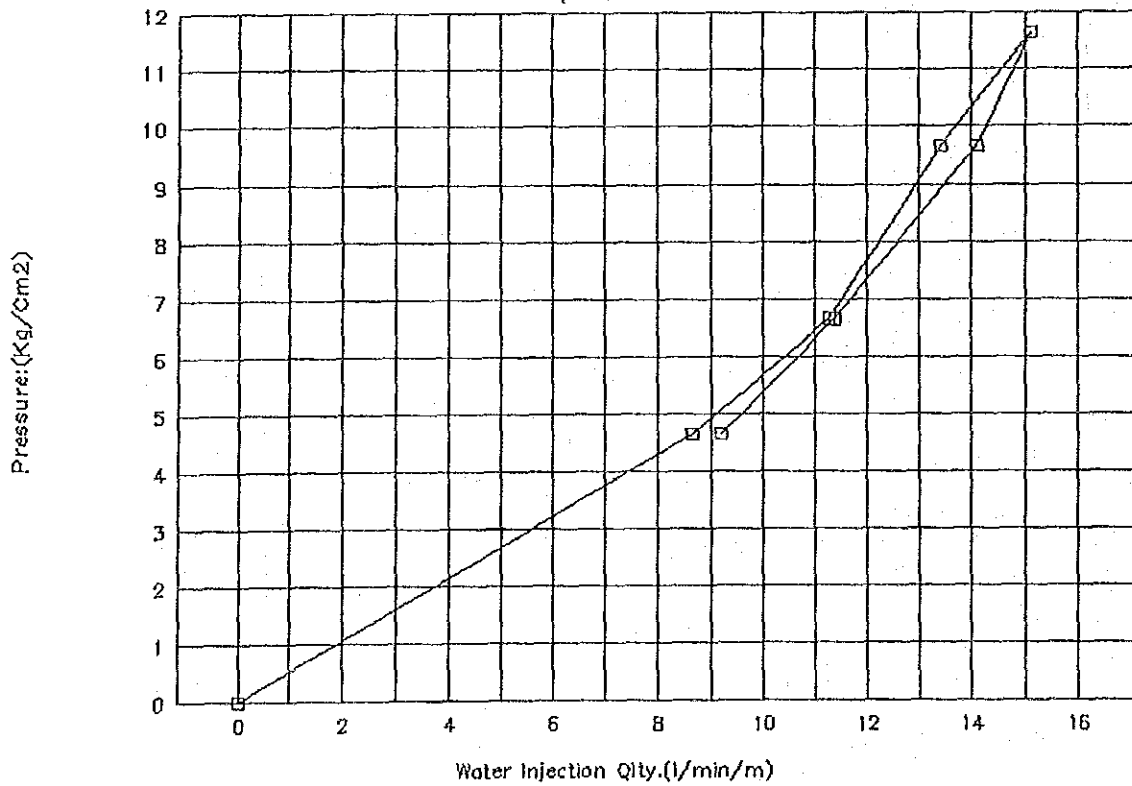
### P/Q.Curve: Hole No.JD-4

Depth:35-40m



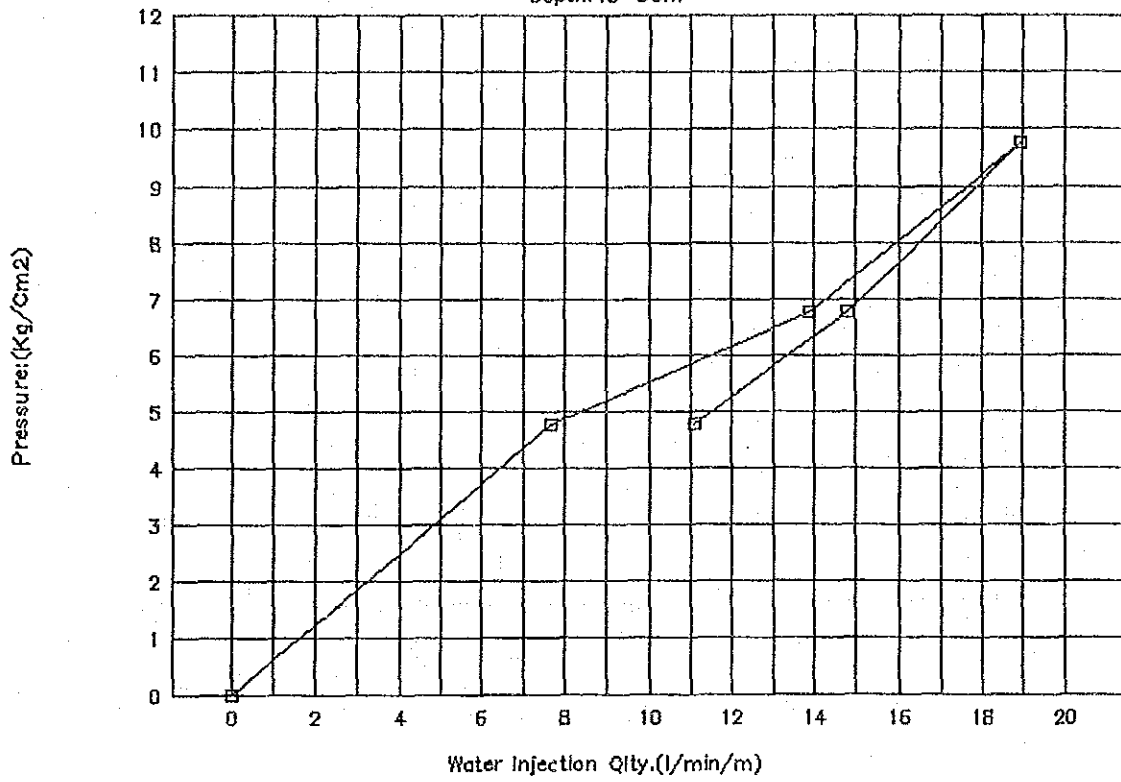
### P/Q.Curve: Hole No.JD-4

Depth:40-45m



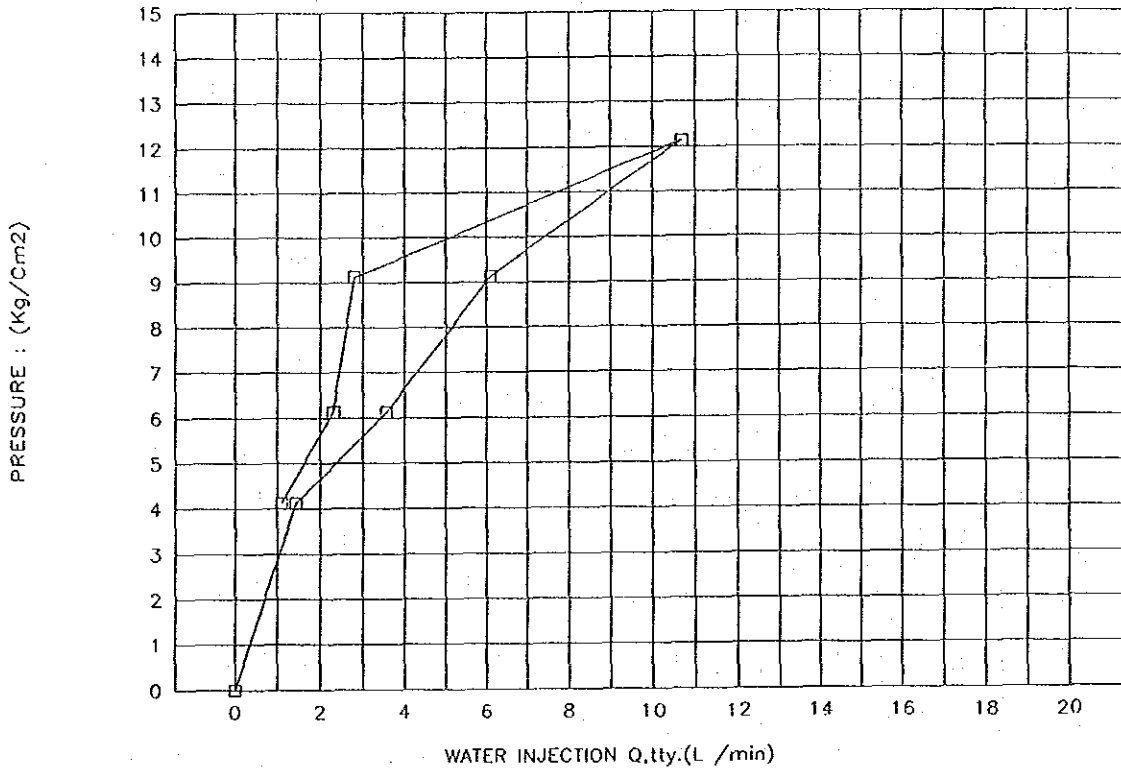
# P/Q.Curve: Hole No.JD-4

Depth:45-50m



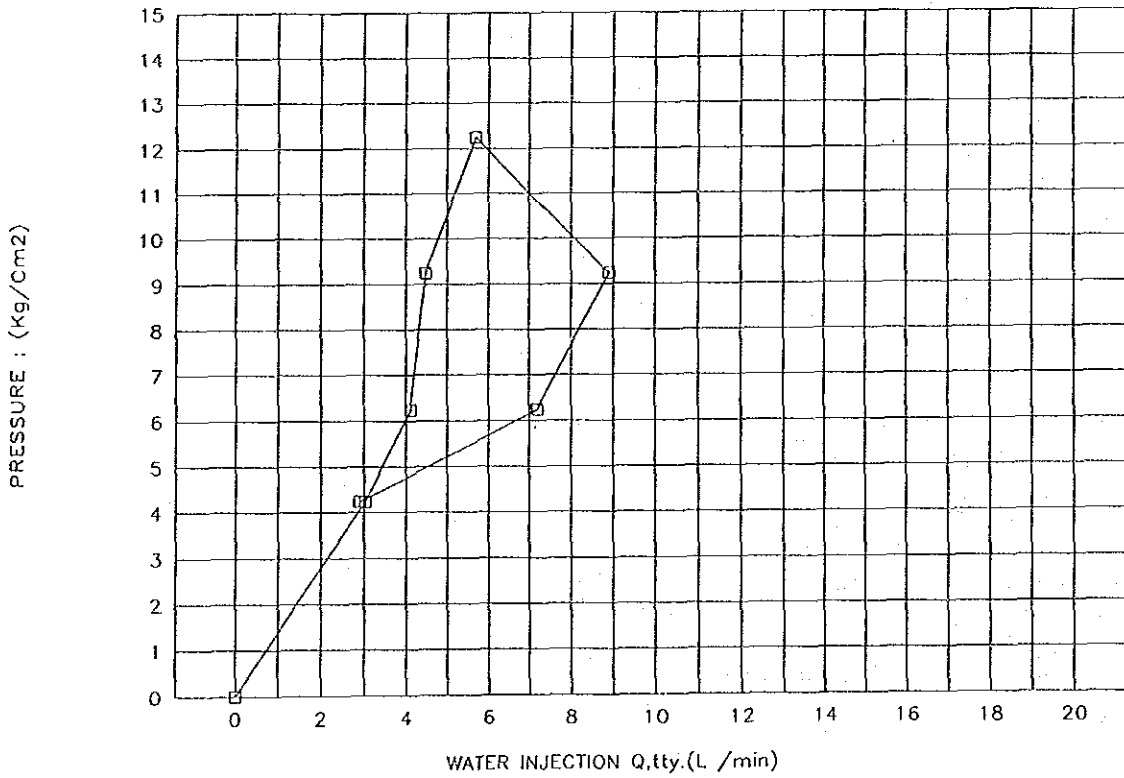
### P.Q-CURVE HOLE No. JD-5

DEPTH : 31-36m



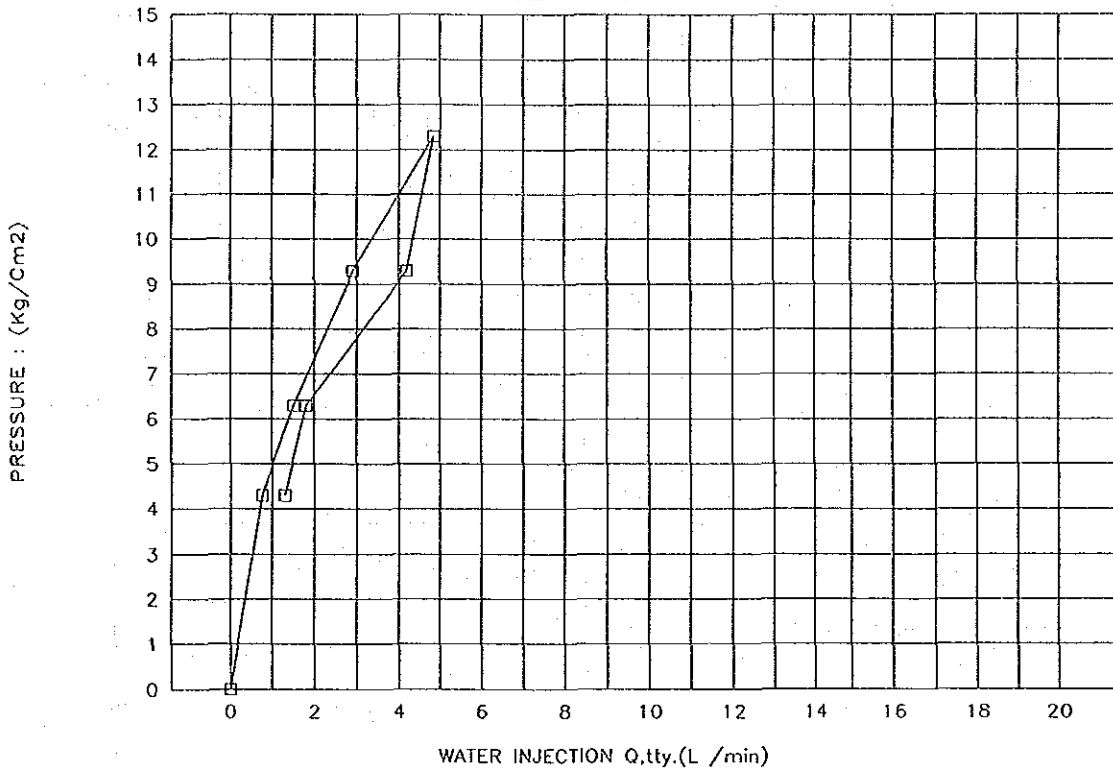
### P.Q-CURVE HOLE No. JD-5

DEPTH : 35-40m



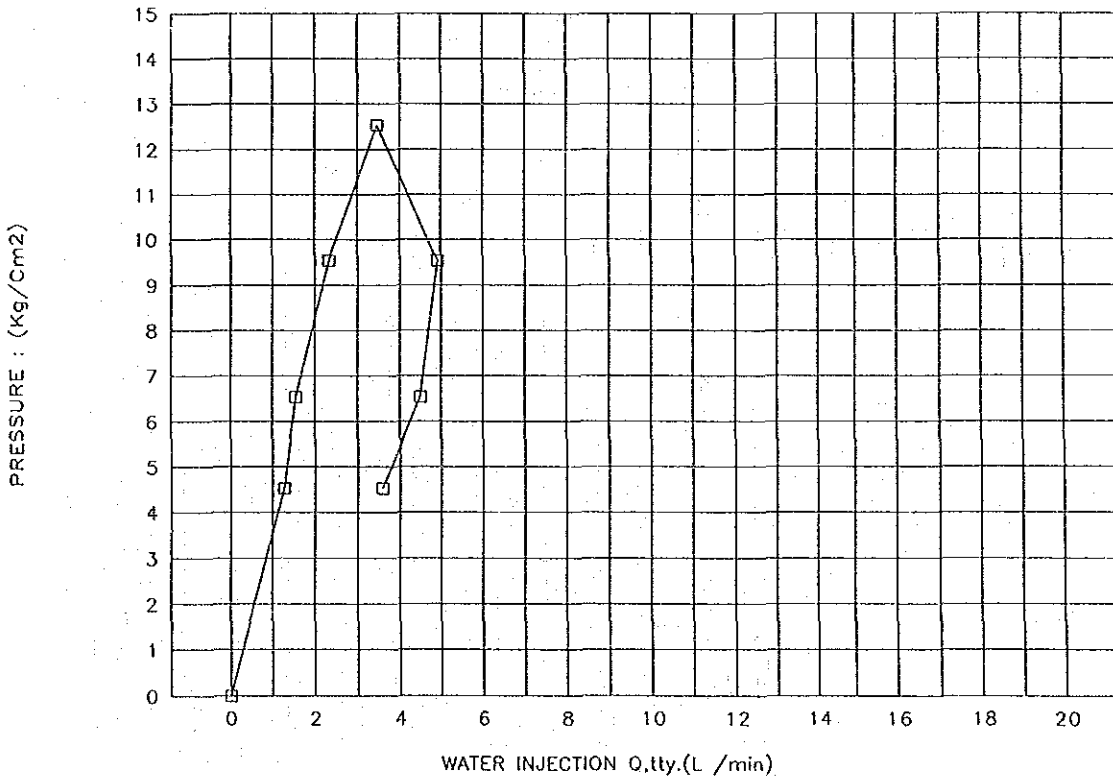
### P.Q-CURVE HOLE No. JD-5

DEPTH : 40-45m



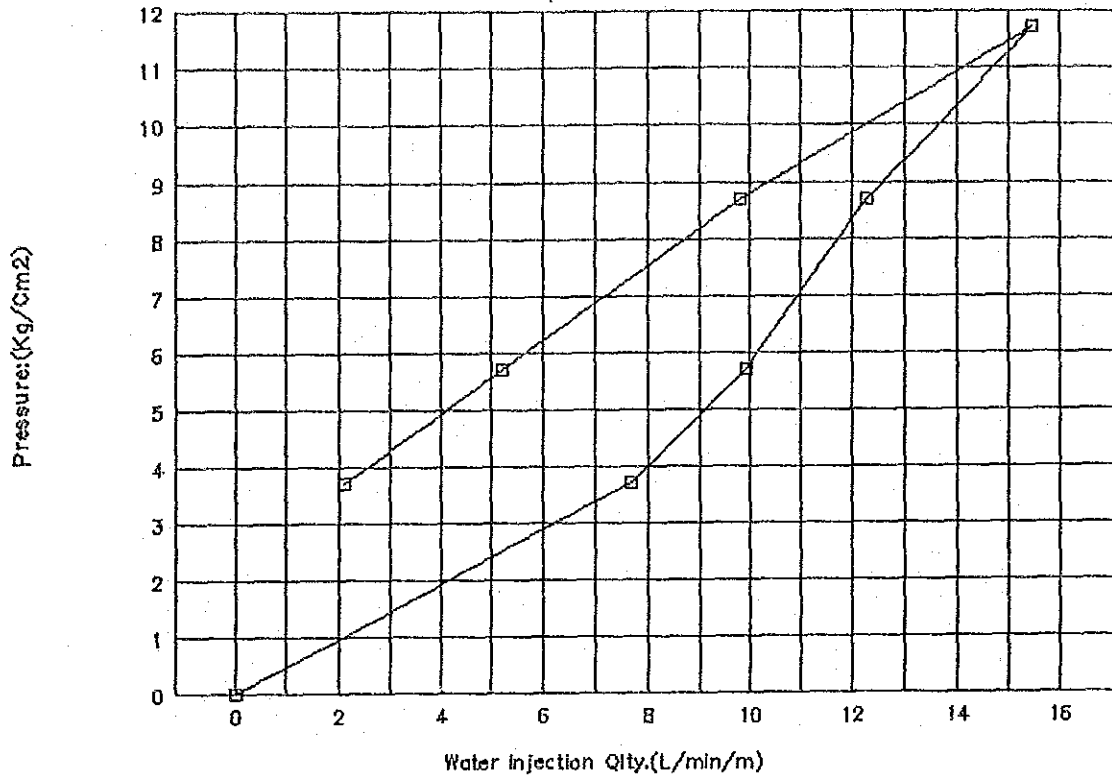
### P.Q-CURVE HOLE No. JD-5

DEPTH : 45-50m



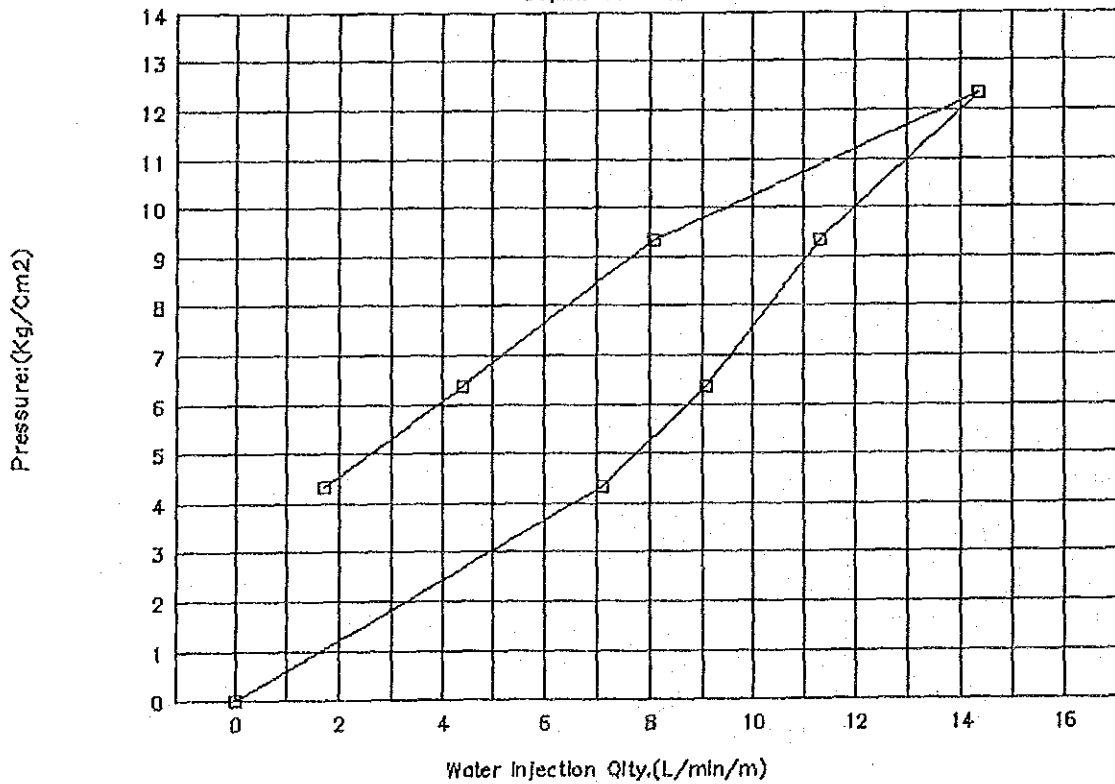
### P/Q.Curve: Hole No.JD-6

Depth: 15-20m



### P/Q.Curve: Hole No.JD-6

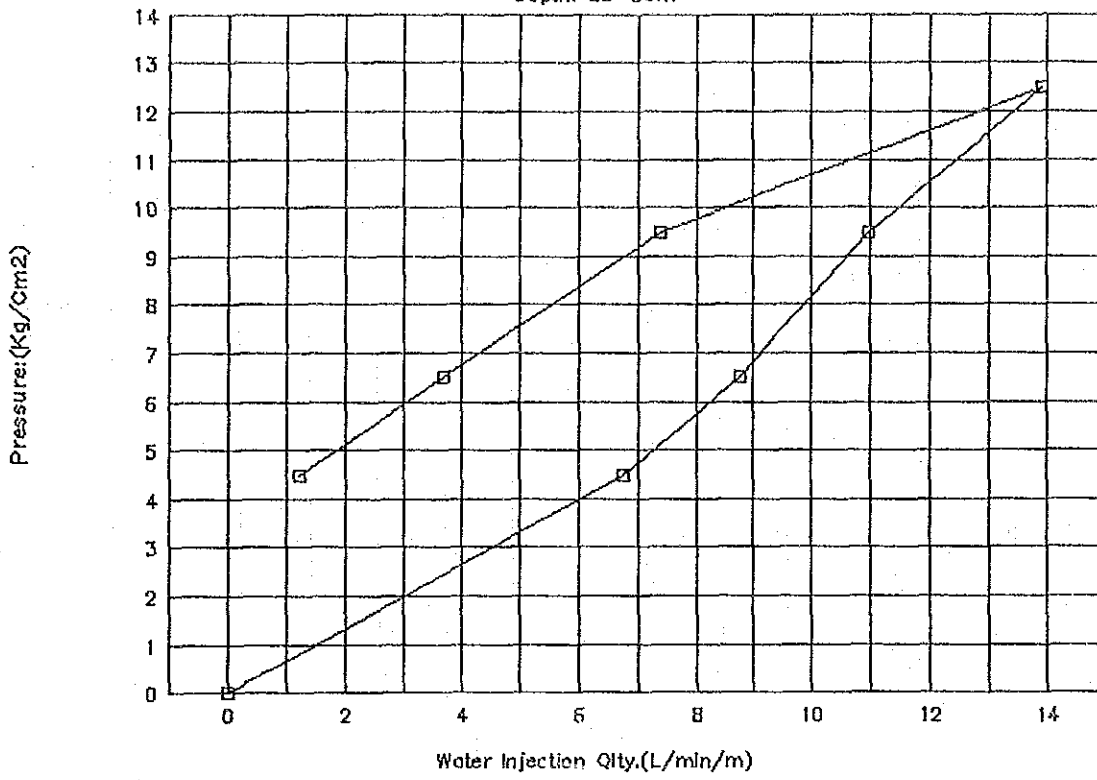
Depth: 20-25m





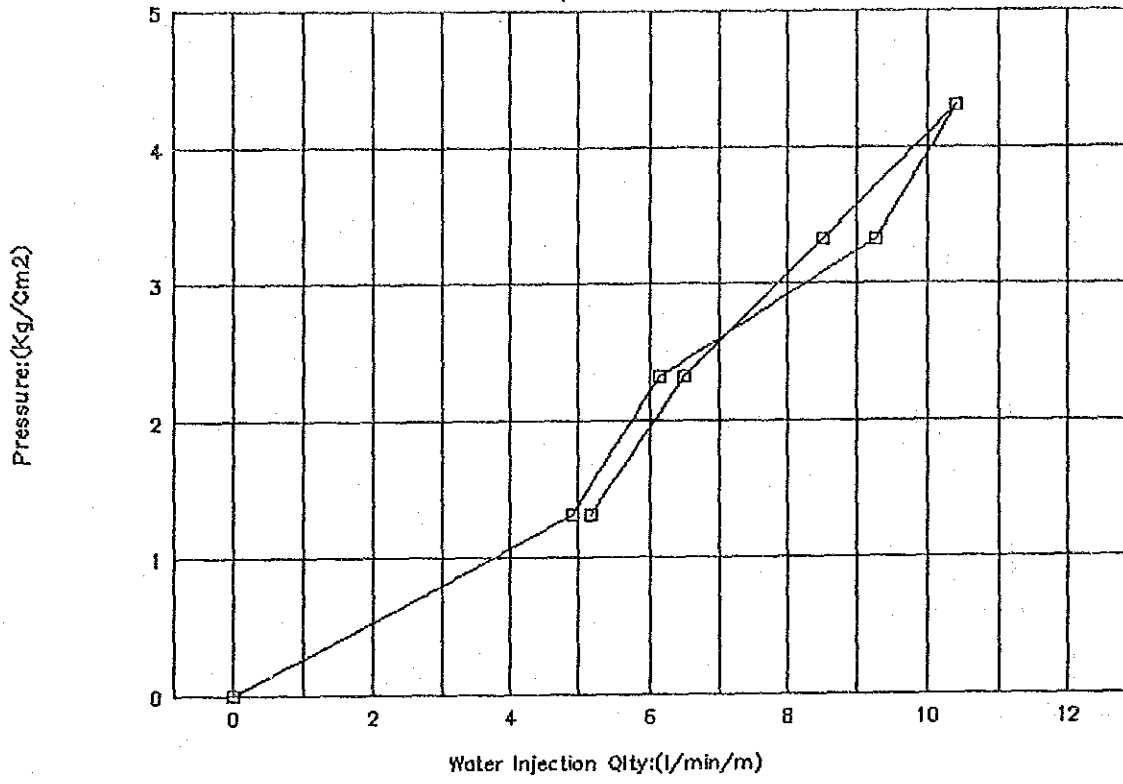
# P/Q.Curve: Hole No.JD-6

Depth: 25-30m



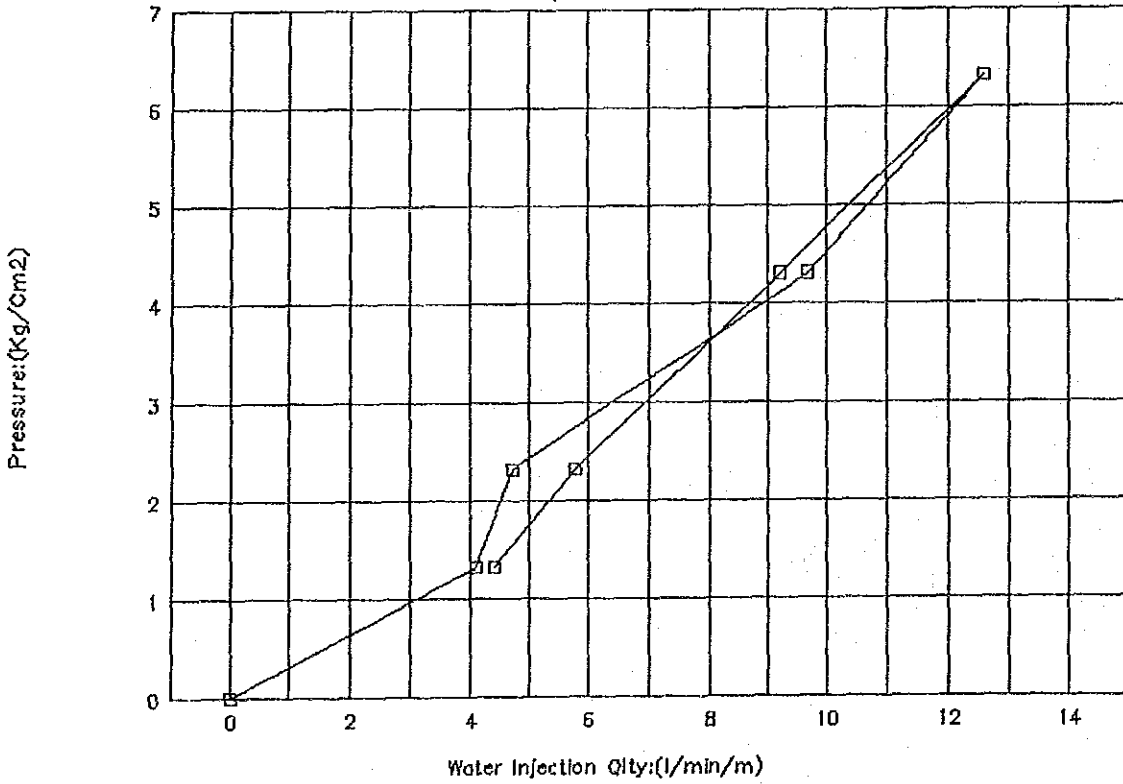
### P/Q.Curve: Hole No.JD-7-1

Depth:4-10m



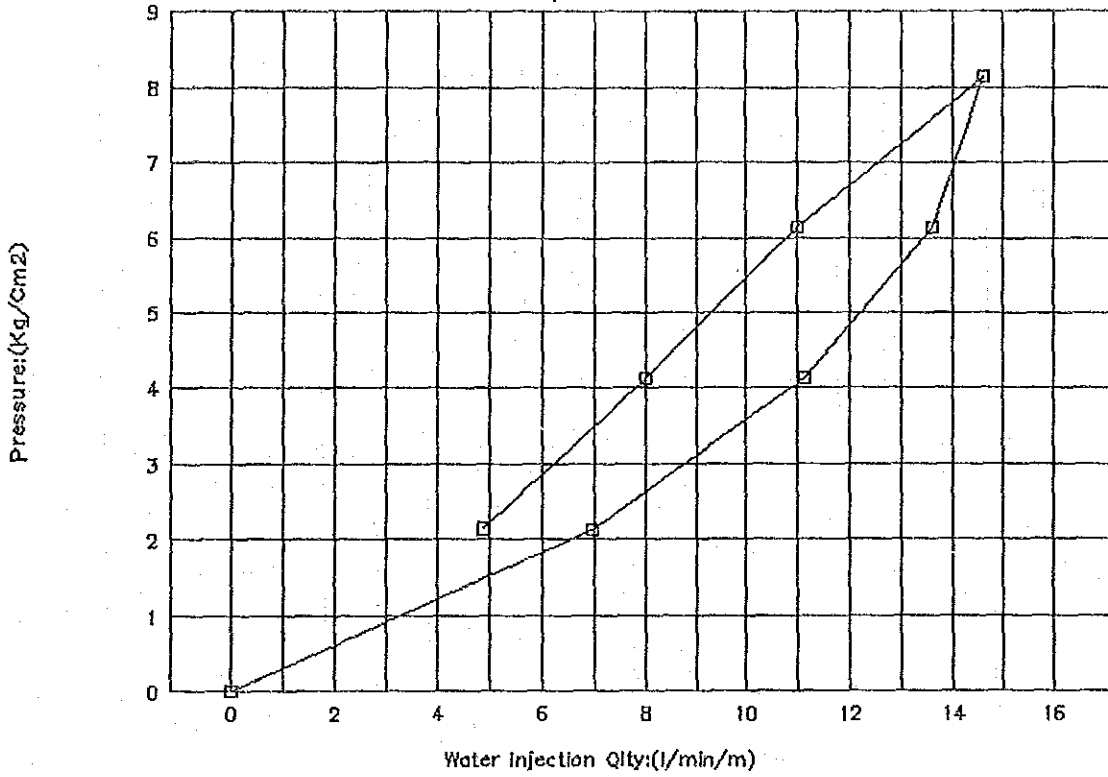
### P/Q.Curve: Hole No.JD-7-1

Depth:10-15m



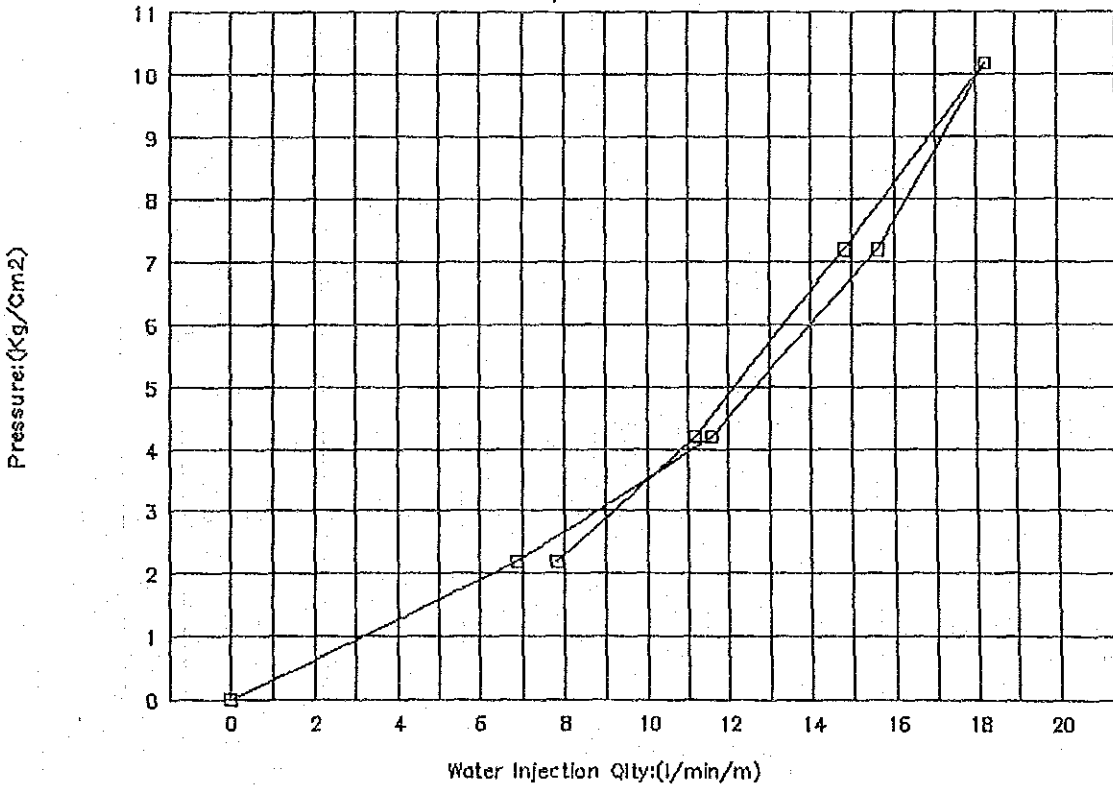
P/Q.Curve: Hole No.JD-7-1

Depth:15-20m



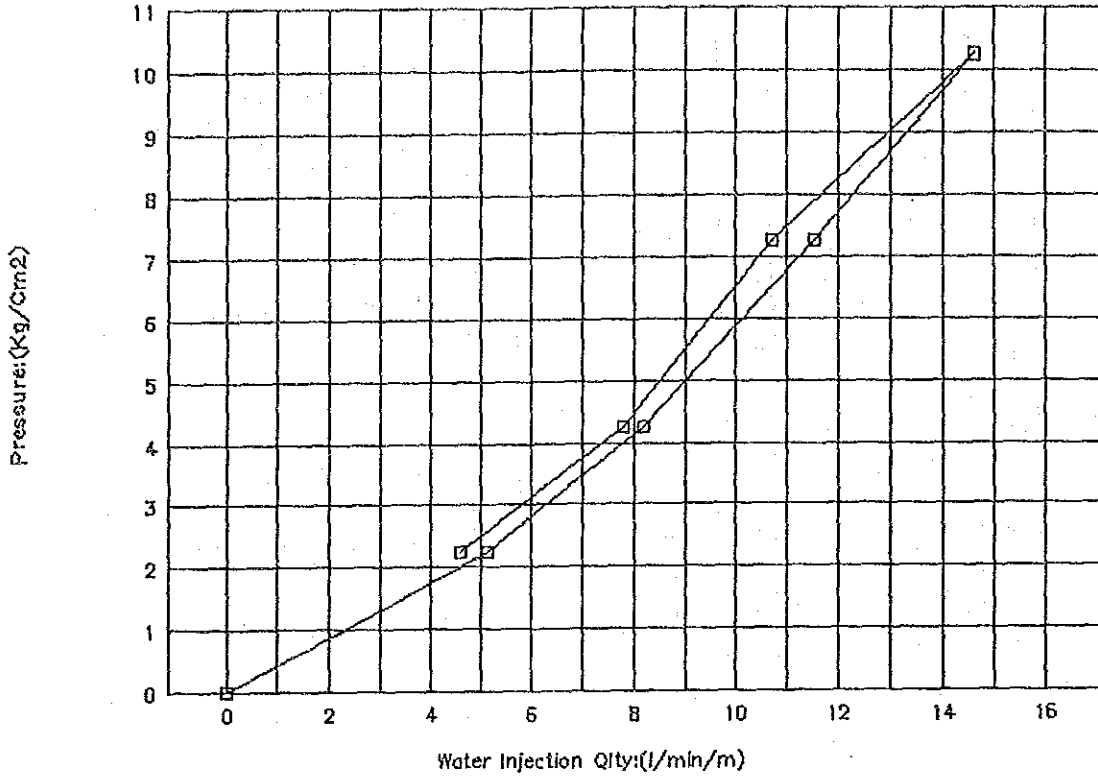
P/Q.Curve: Hole No.JD-7-1

Depth:20-25m



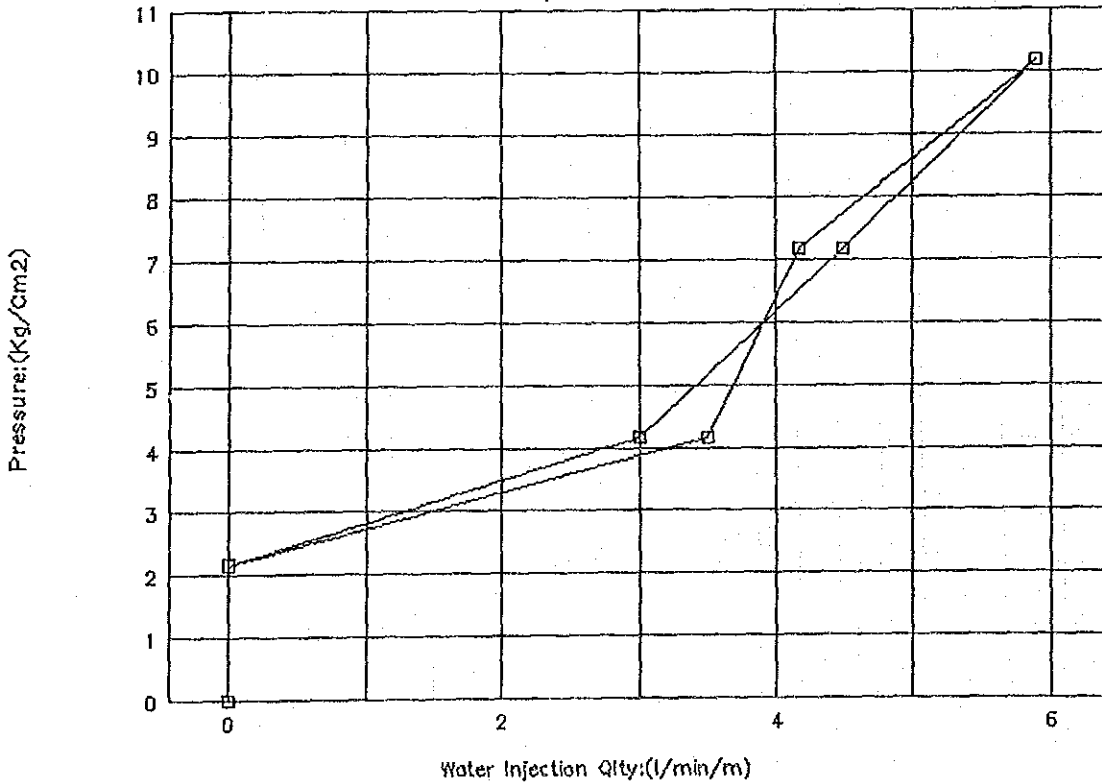
### P/Q.Curve: Hole No.JD-7-1

Depth:25-30m



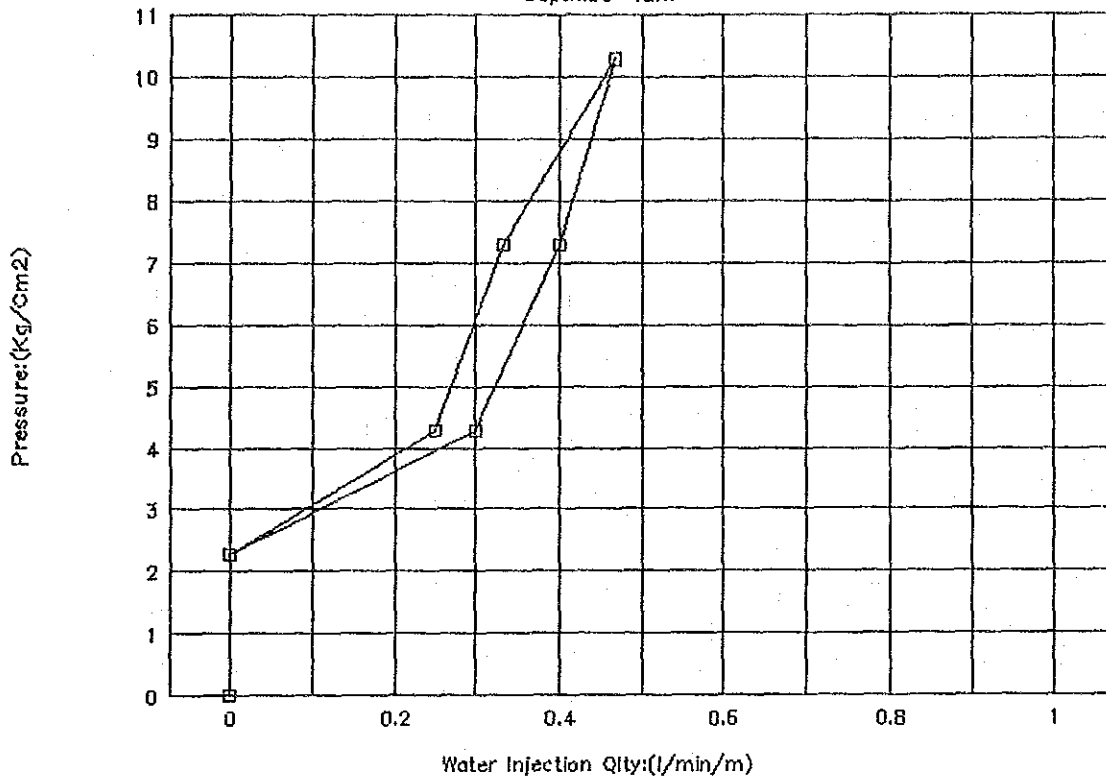
### P/Q.Curve: Hole No.JD-7-1

Depth:30-36m



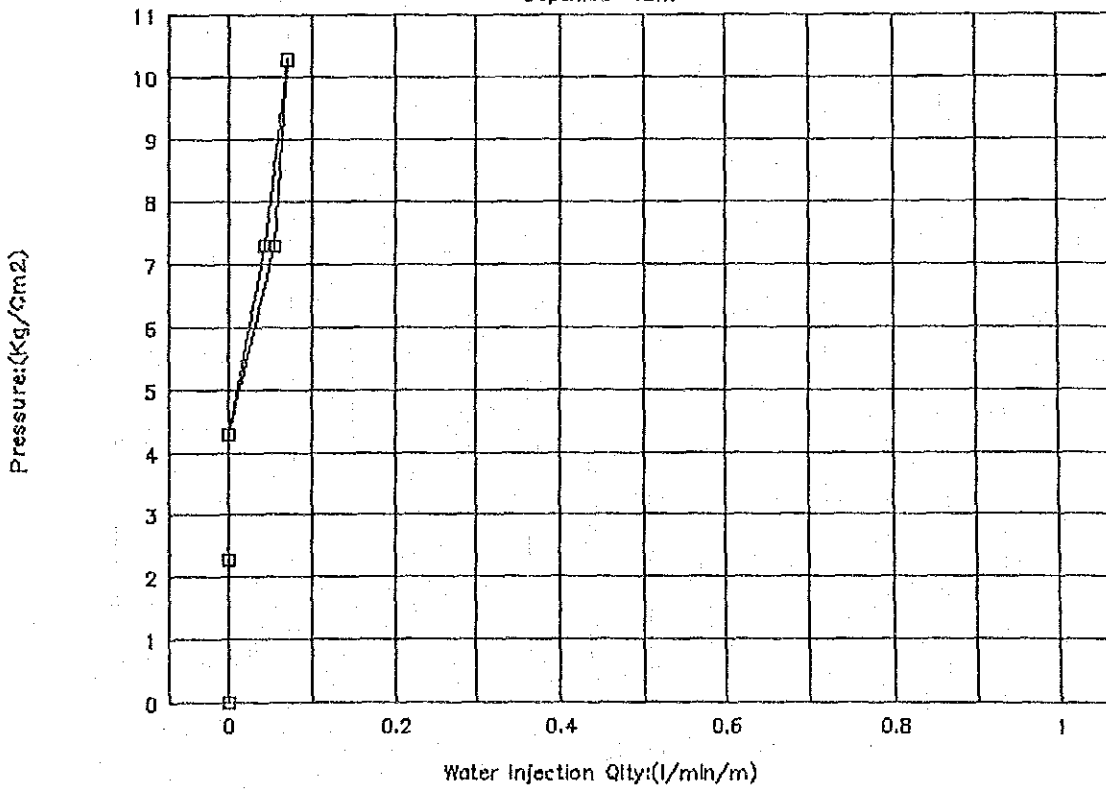
### P/Q.Curve: Hole No.JD-7-1

Depth:36-42m



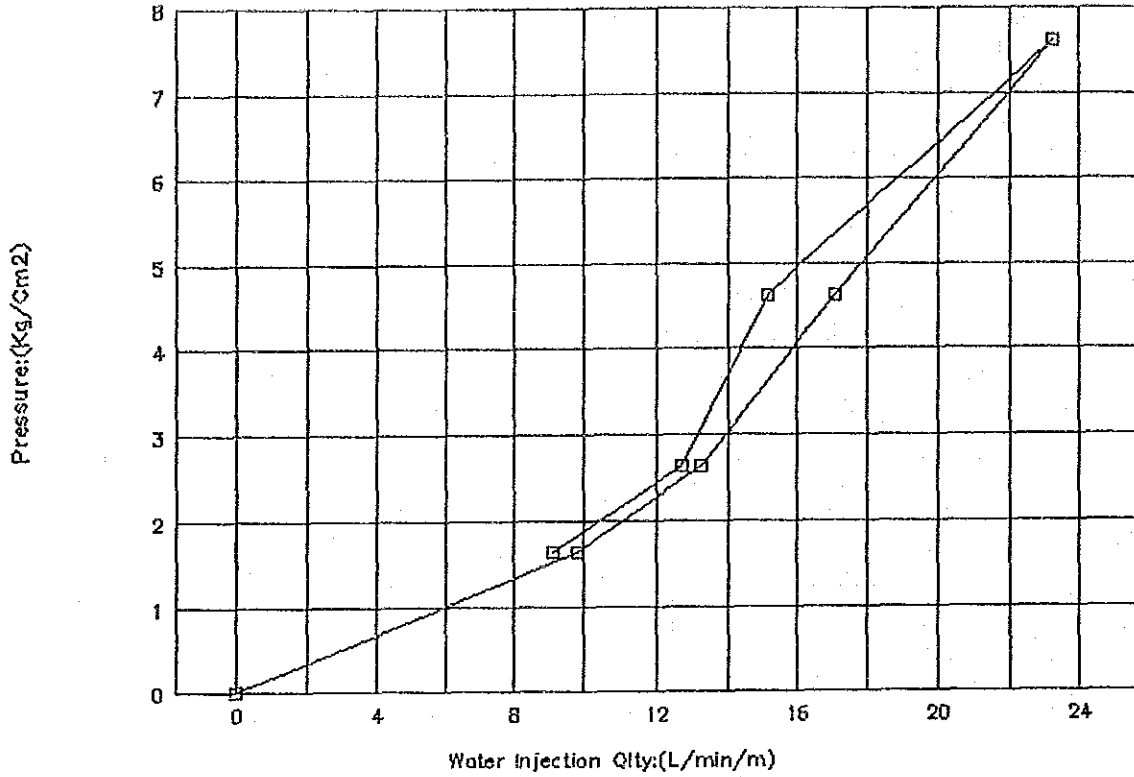
### P/Q.Curve: Hole No.JD-7-1

Depth:39-48m



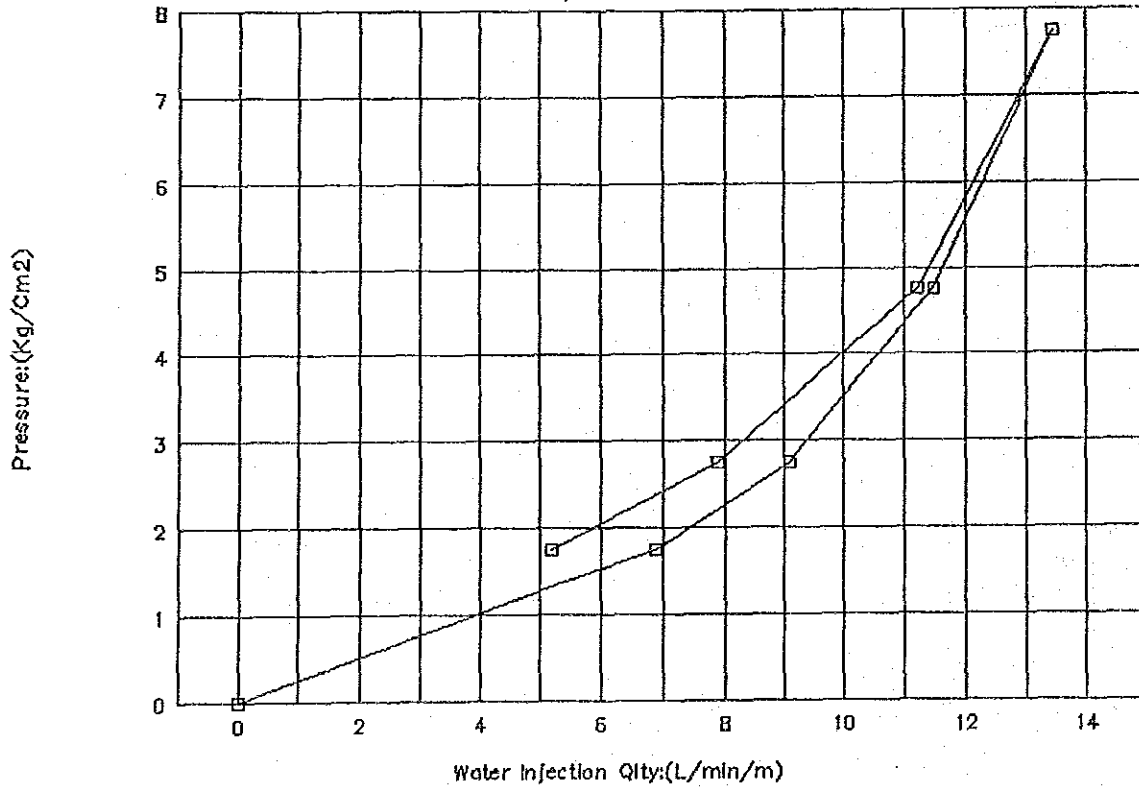
### P/Q.Curve: Hole NO.JD-8

Depth:5-10m



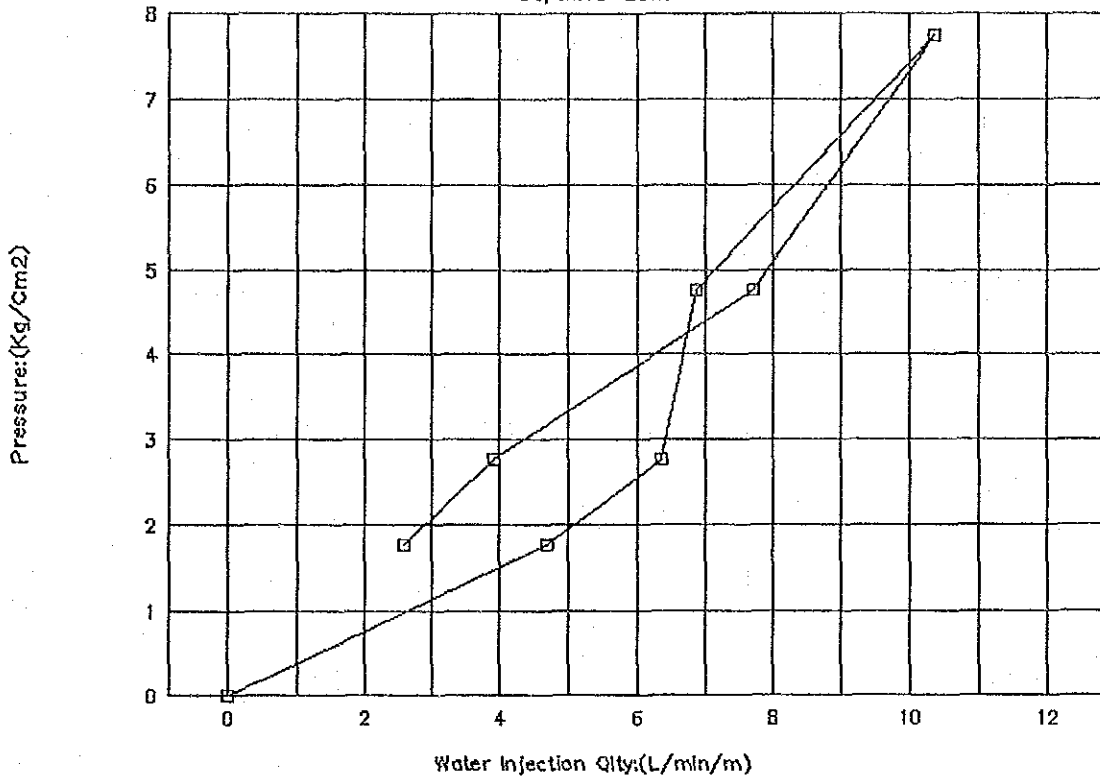
### P/Q.Curve: Hole NO.JD-8

Depth:10-15m



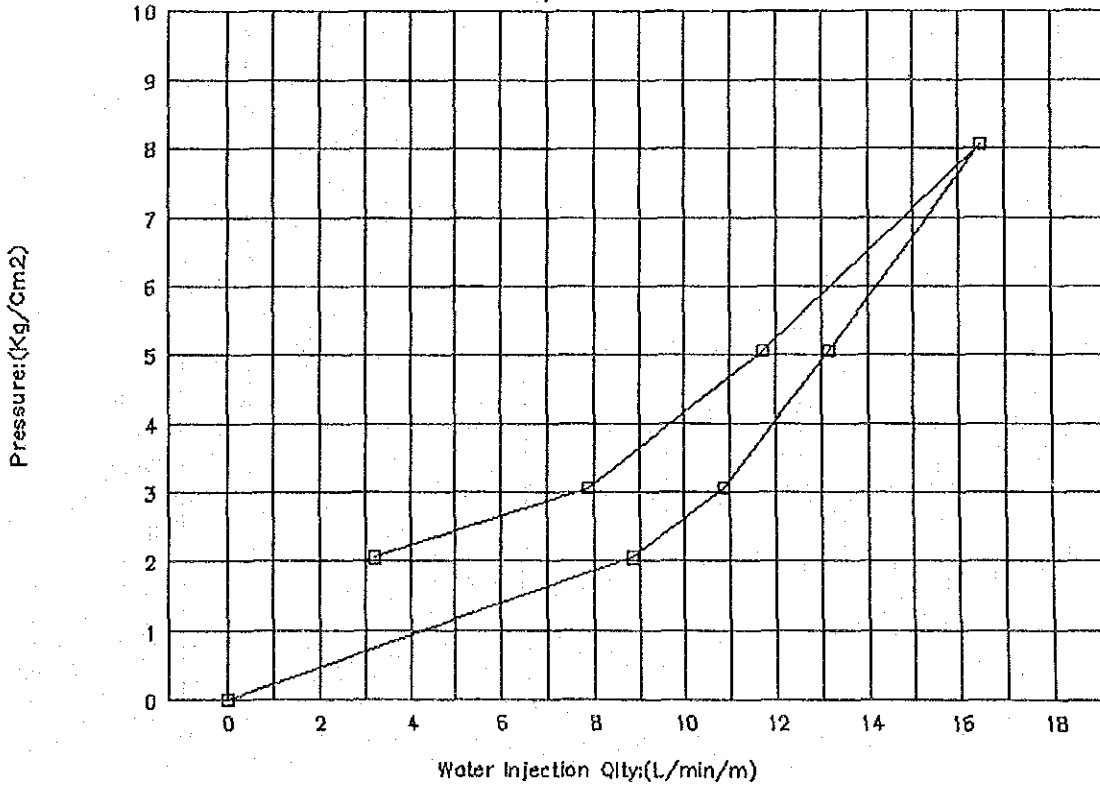
P/Q.Curve: Hole NO.JD-8

Depth:15-20m



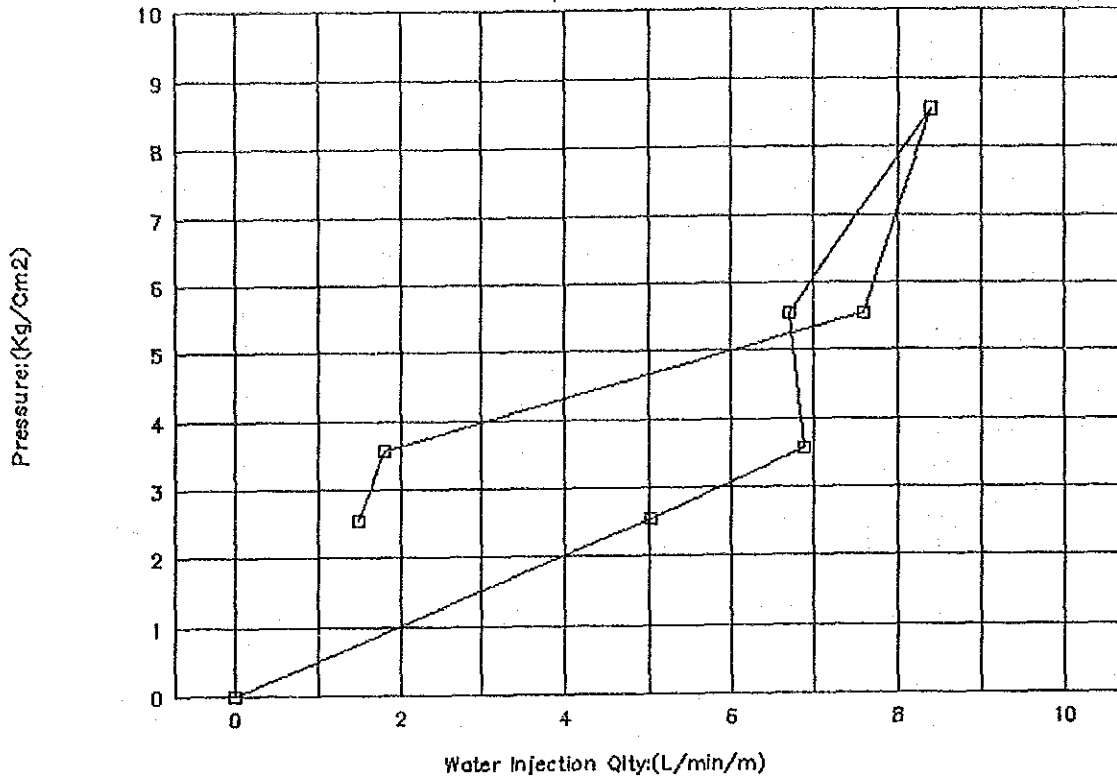
P/Q.Curve: Hole NO.JD-8

Depth:20-25m



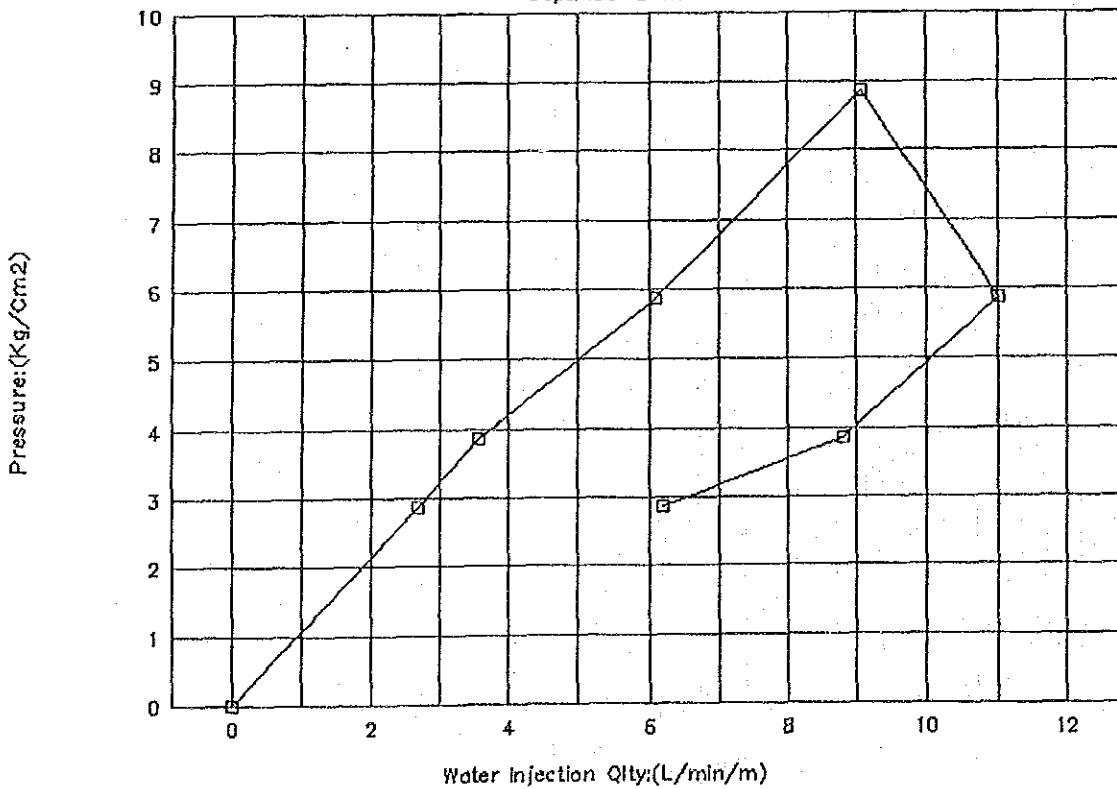
P/Q.Curve: Hole NO.JD-8

Depth:25-30m



P/Q.Curve: Hole NO.JD-8

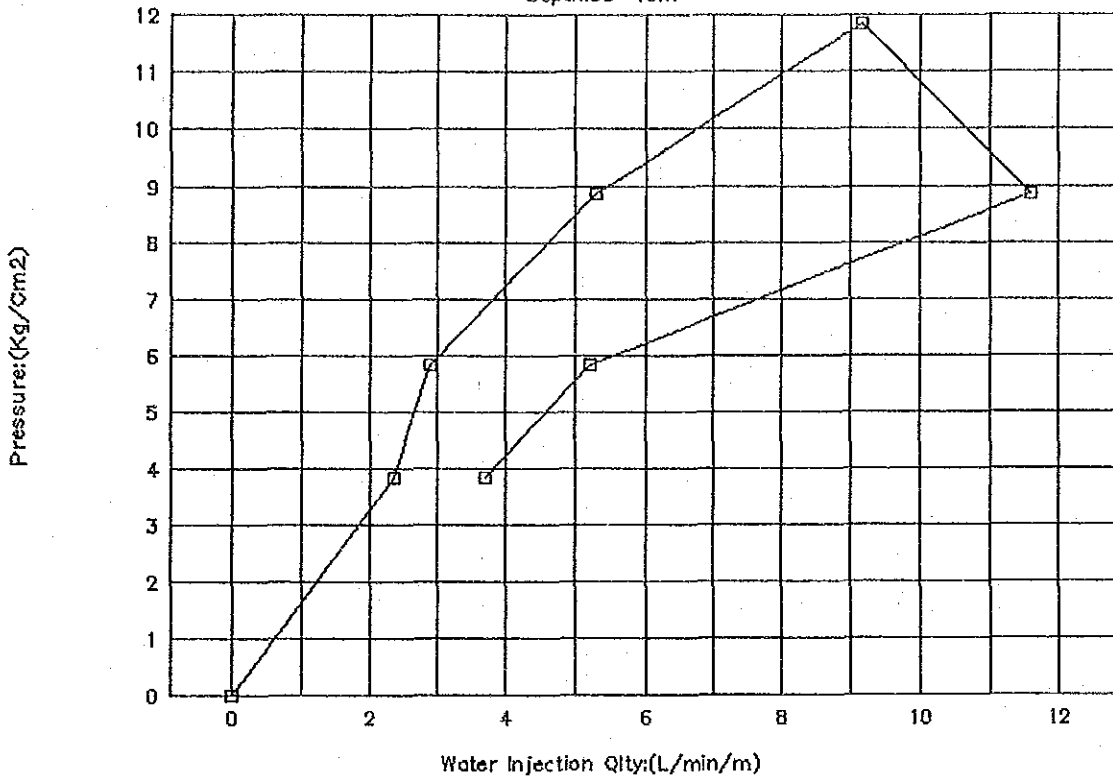
Depth:30-35m





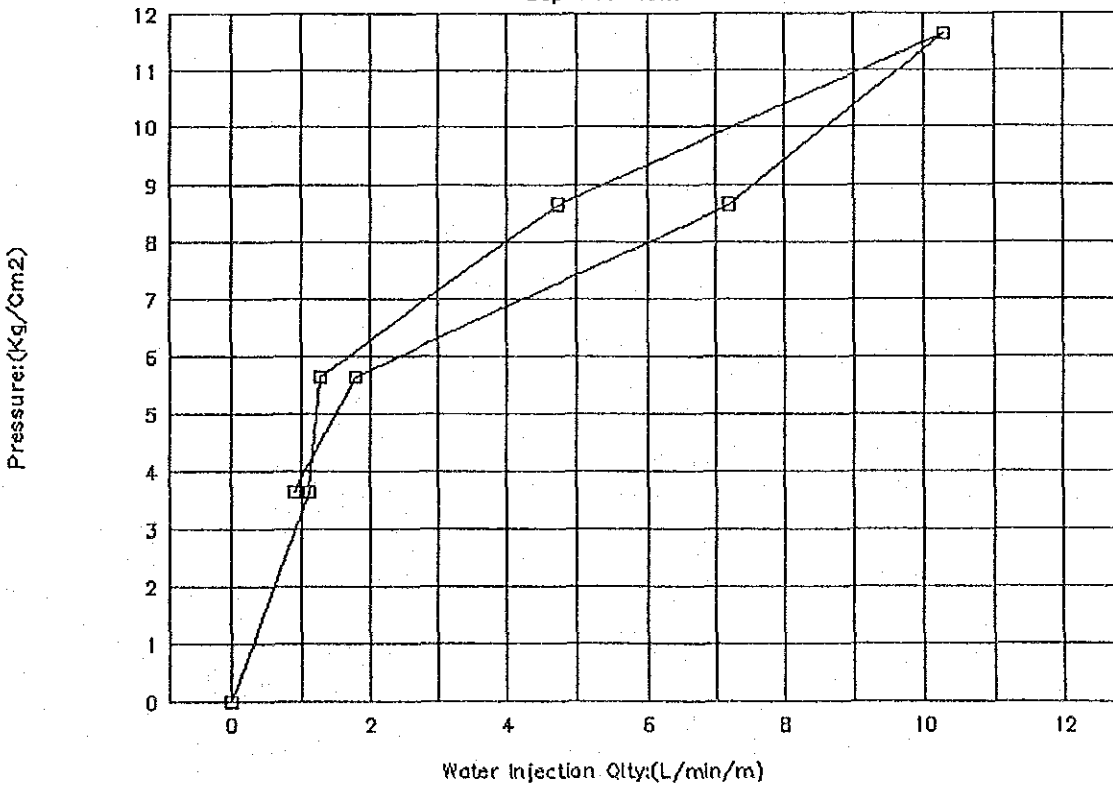
### P/Q.Curve: Hole NO.JD-8

Depth:35-40m



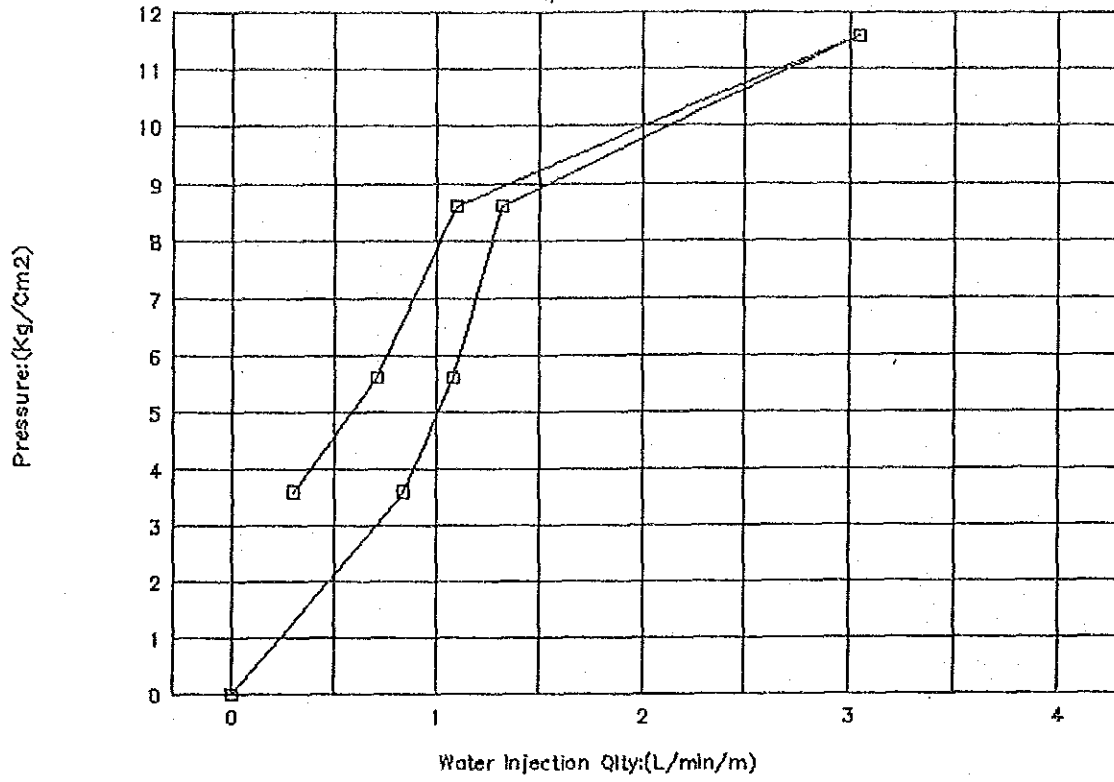
### P/Q.Curve: Hole NO.JD-8

Depth:40-45m



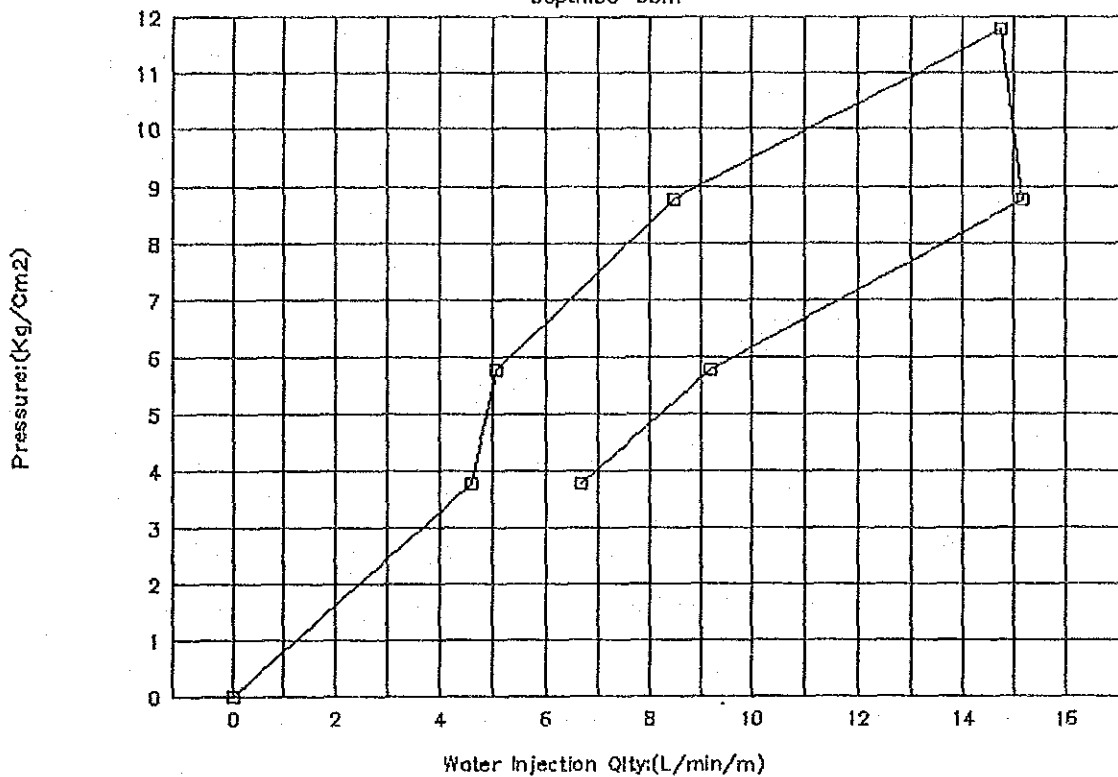
# P/Q Curve: Hole NO. JD-8

Depth: 45-50m



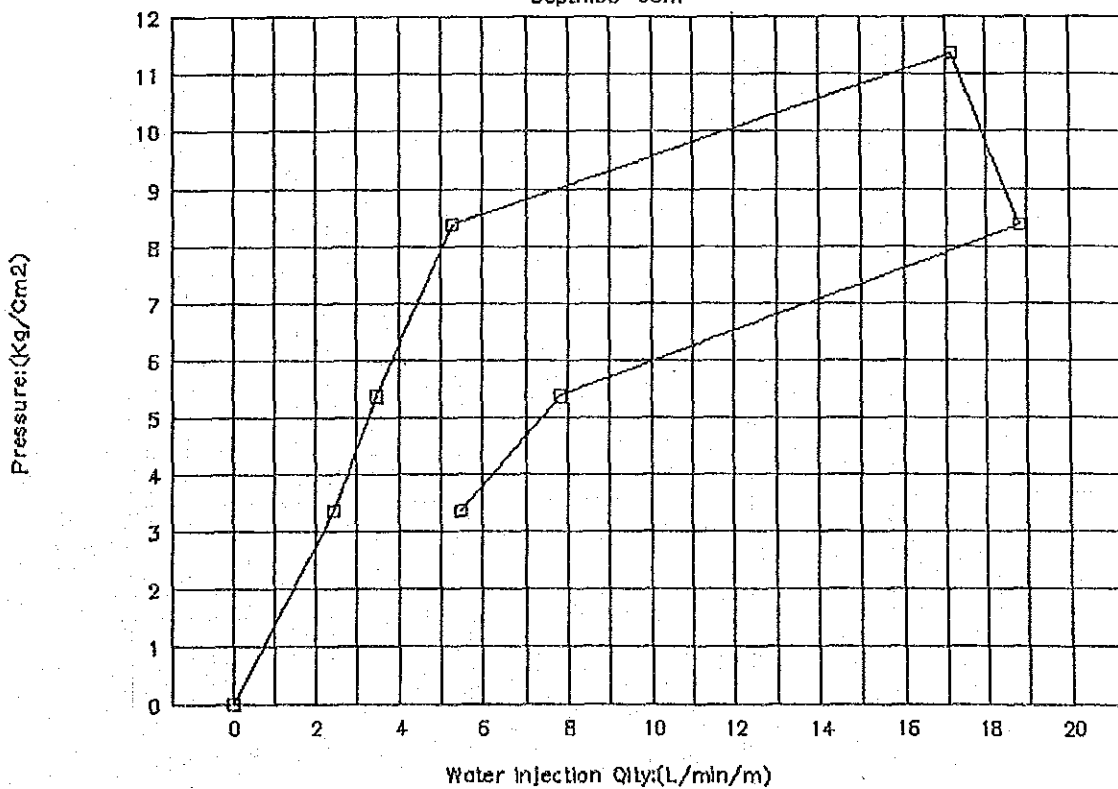
### P/Q.Curve: Hole NO.JD-8

Depth:50-55m



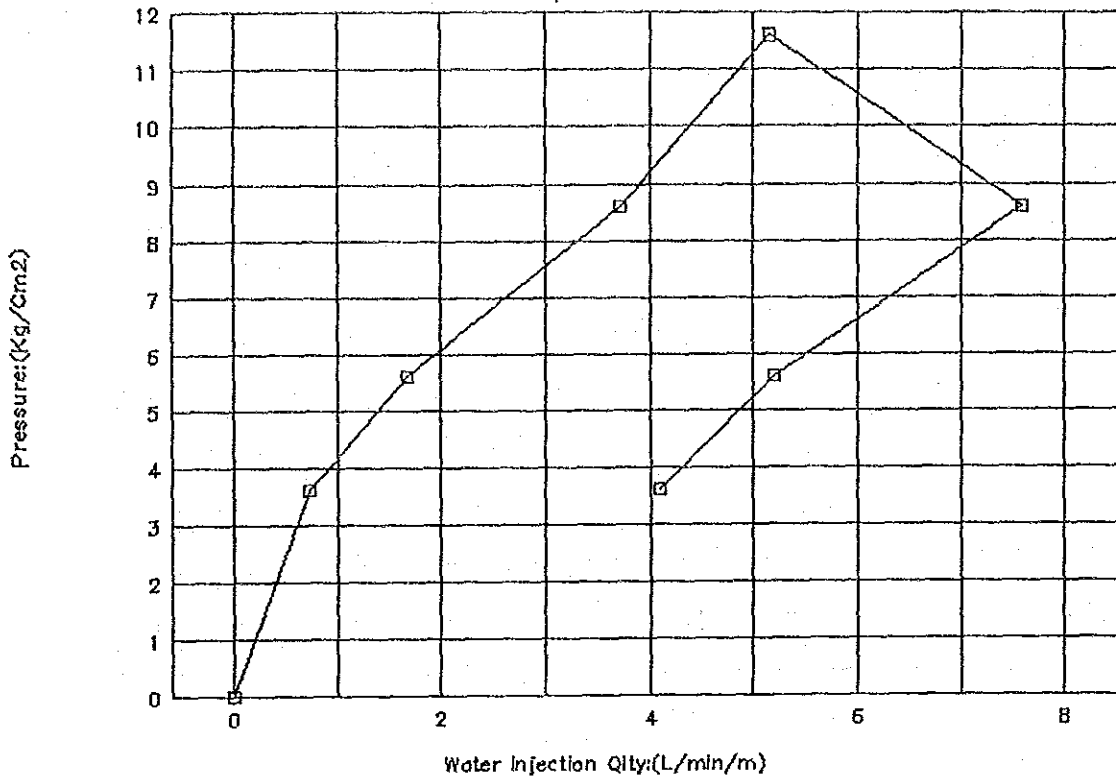
### P/Q.Curve: Hole NO.JD-8

Depth:55-60m



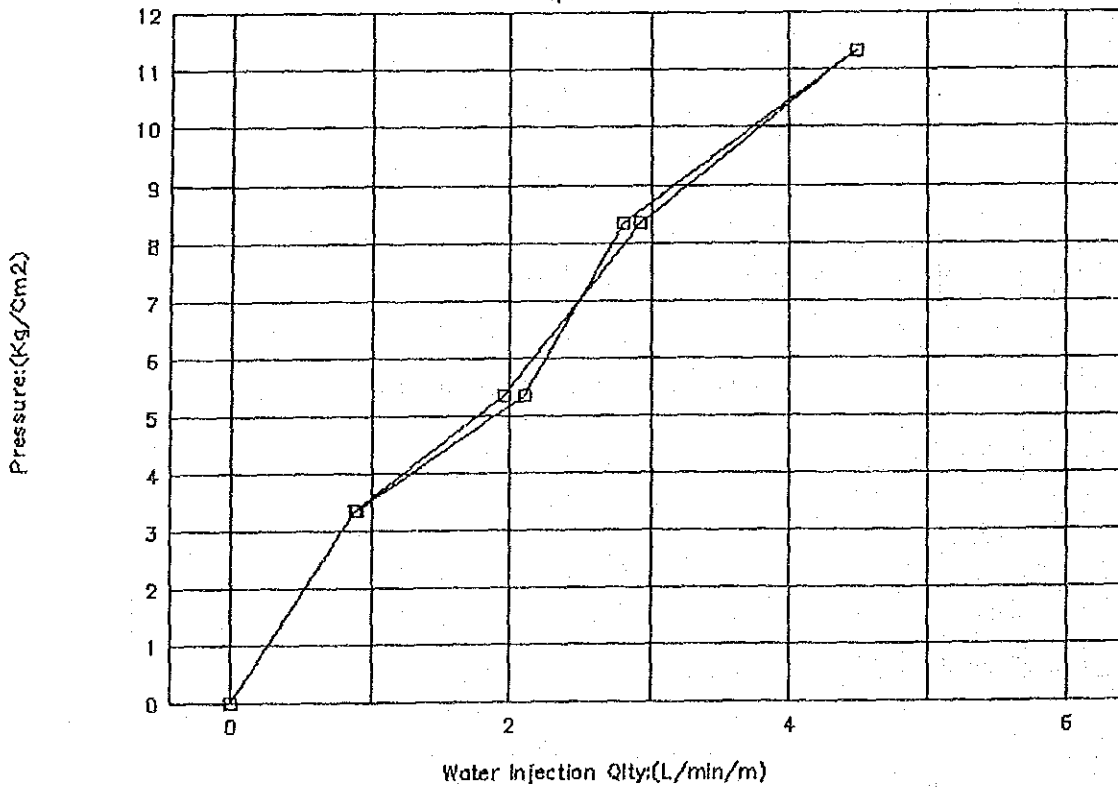
### P/Q.Curve: Hole NO.JD-8

Depth:60-65m



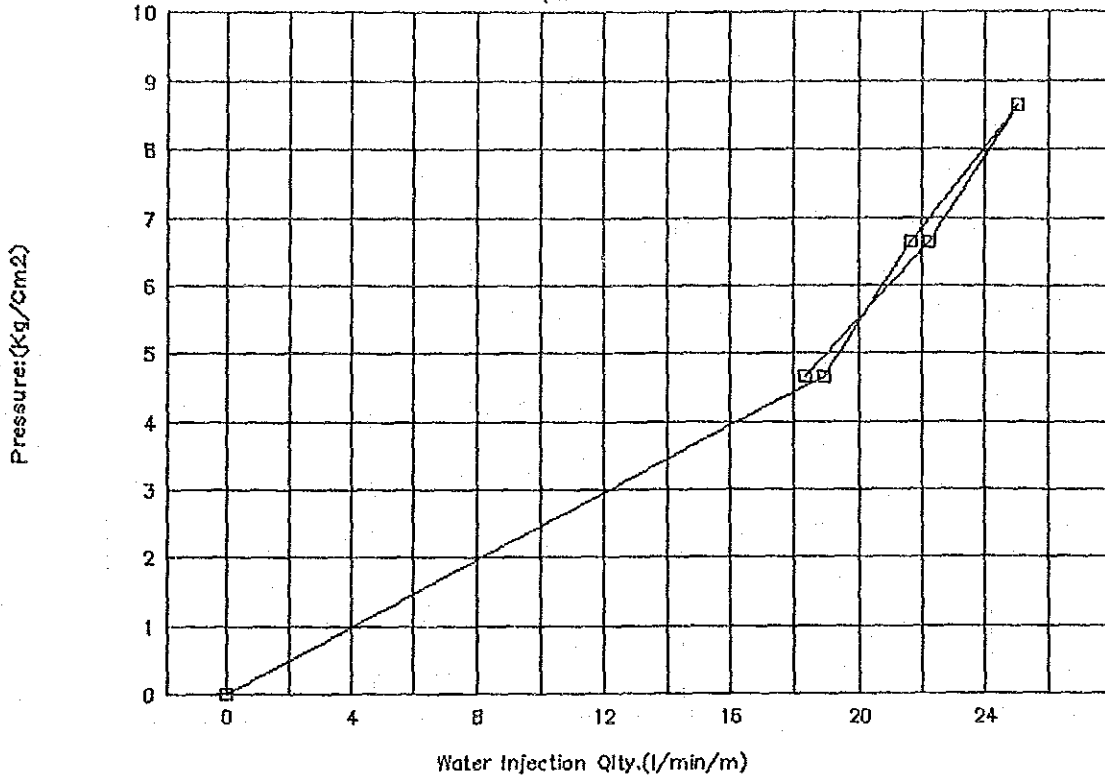
### P/Q.Curve: Hole NO.JD-8

Depth:65-70m



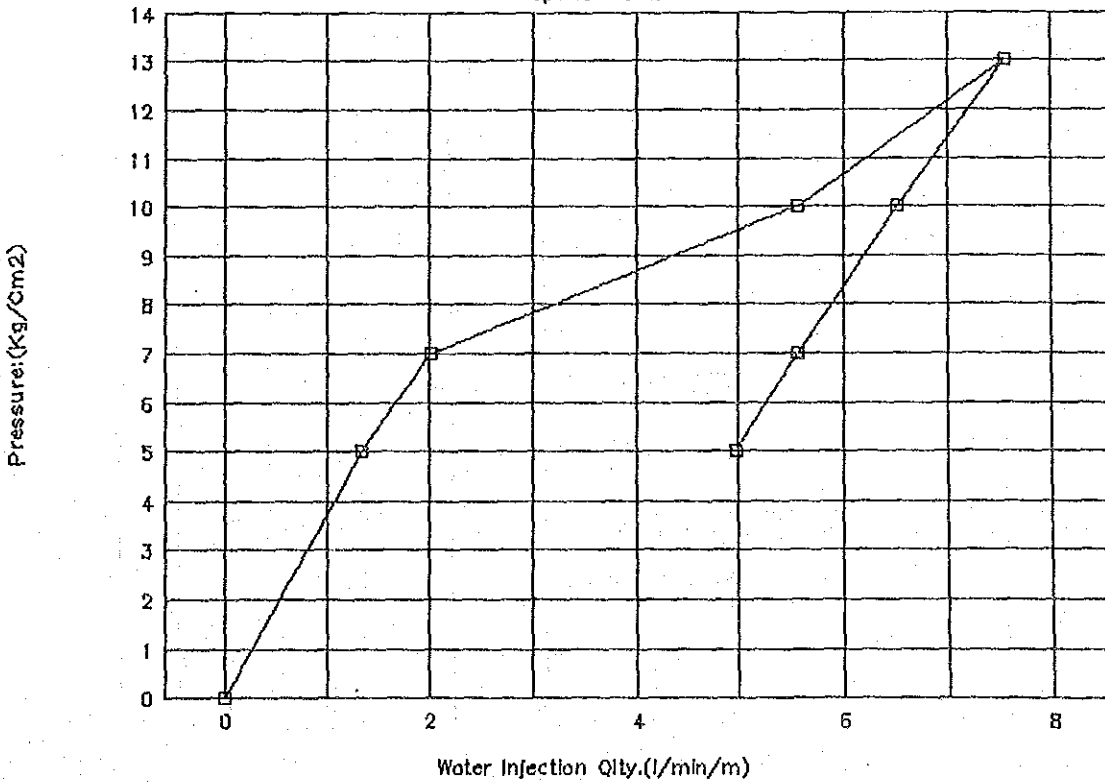
P/Q.Curve: Hole No.JD-9

Depth:54-60m



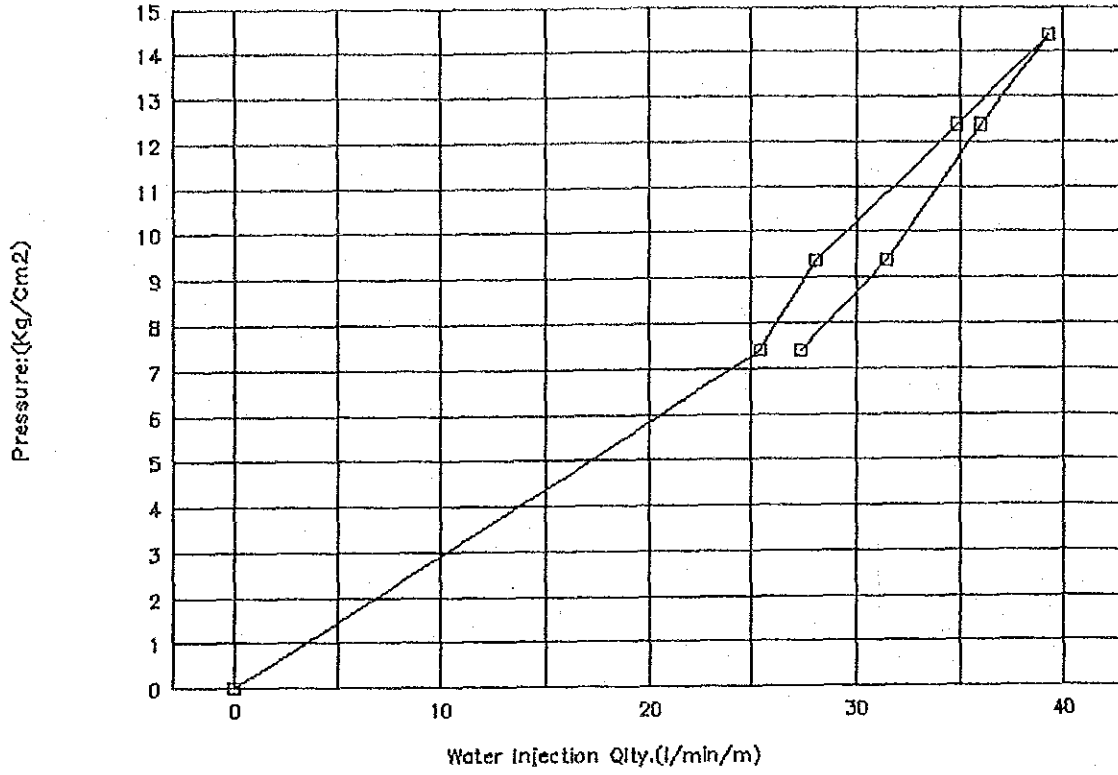
P/Q.Curve: Hole No.JD-9

Depth:60-65m



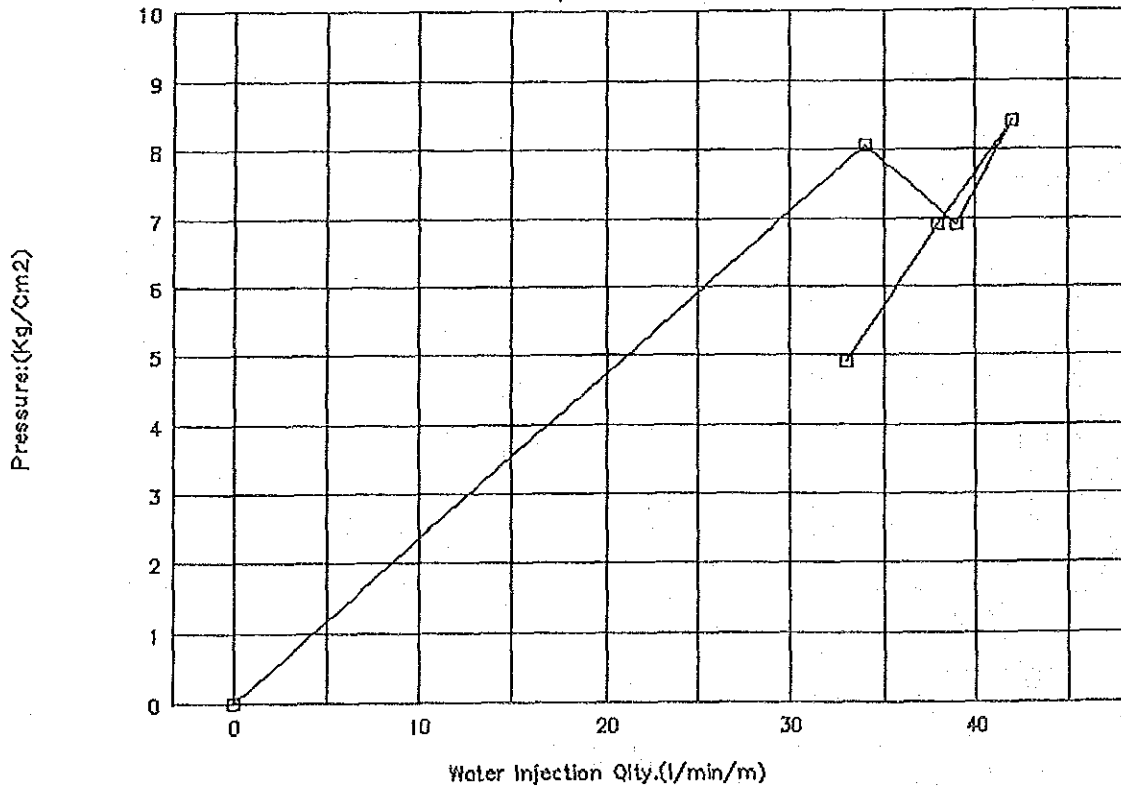
### P/Q.Curve: Hole No.JD-9

Depth:65-70m



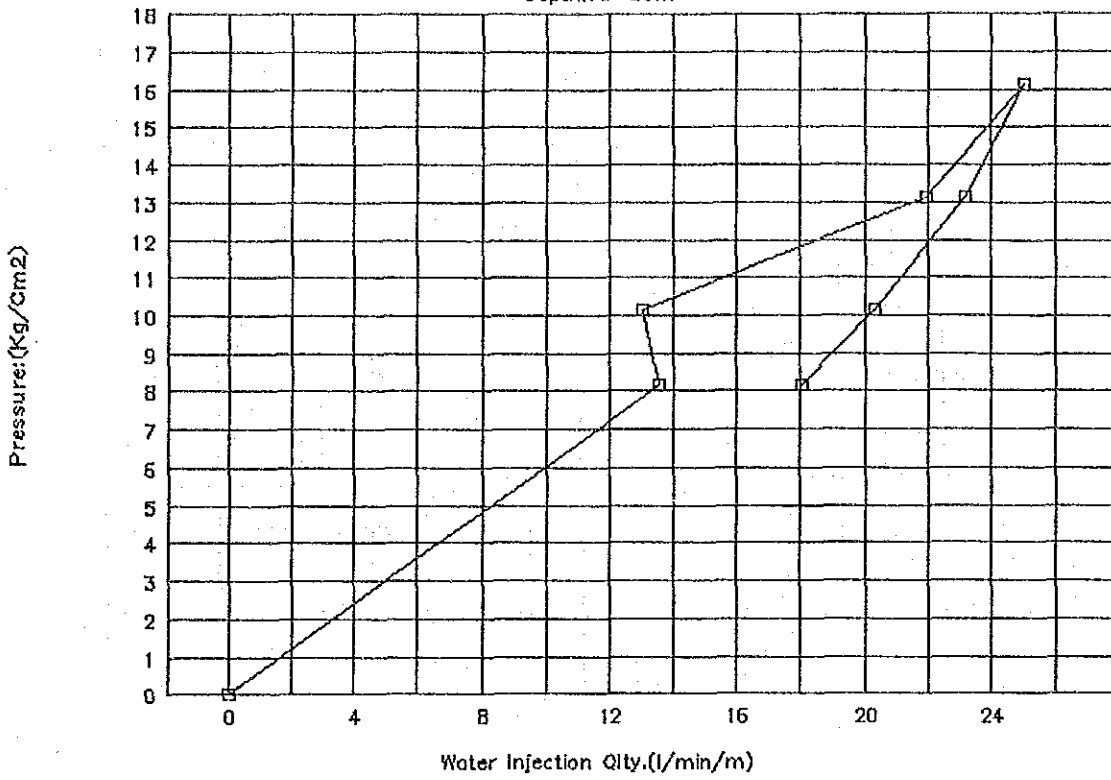
### P/Q.Curve: Hole No.JD-9

Depth:70-75m



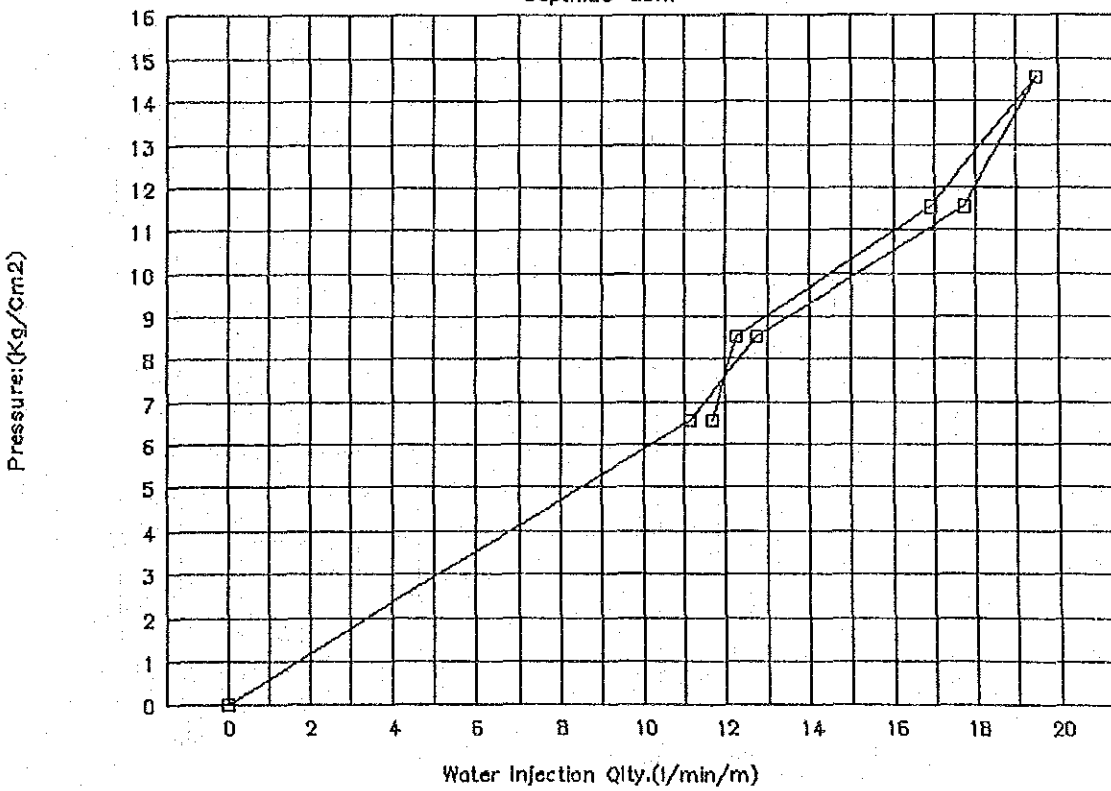
### P/Q.Curve: Hole No.JD-9

Depth:75-80m



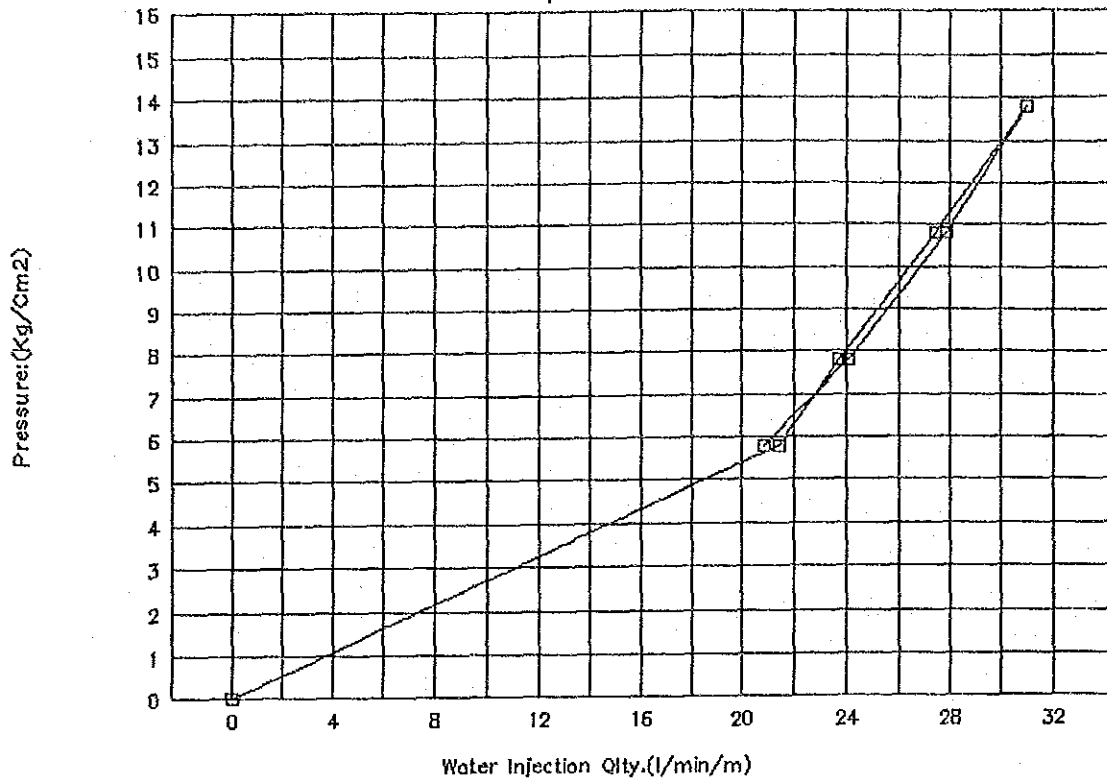
### P/Q.Curve: Hole No.JD-9

Depth:80-85m



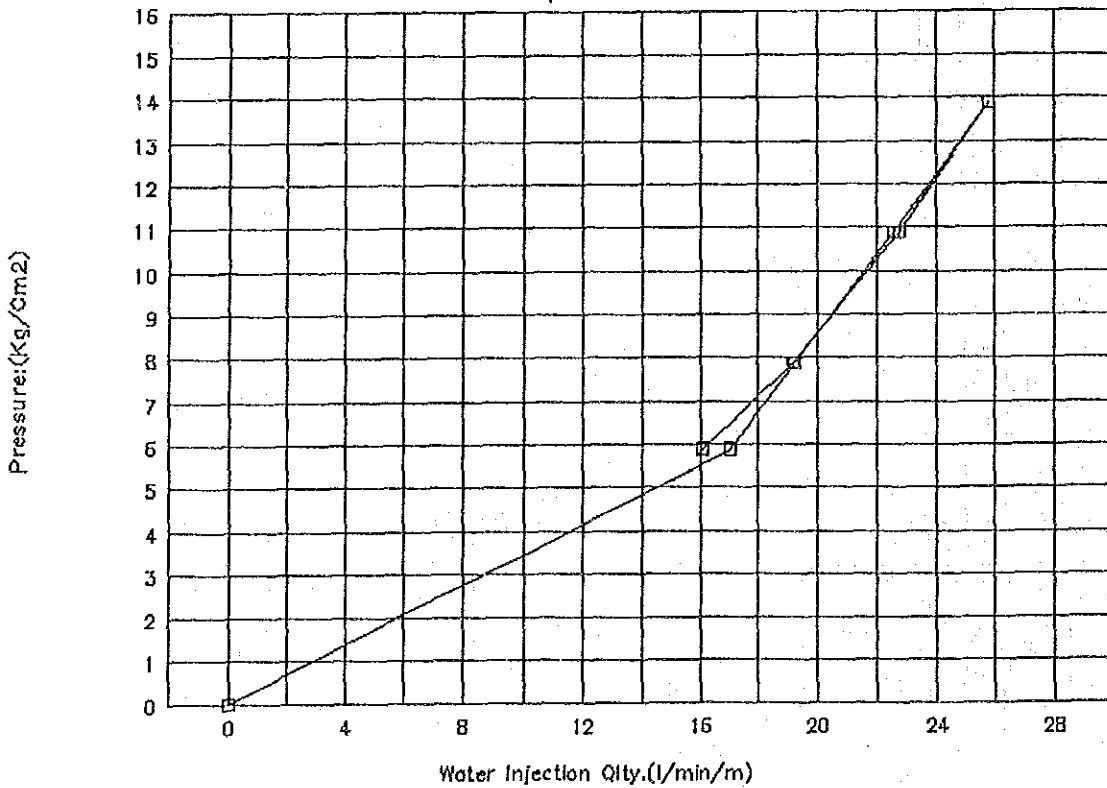
### P/Q.Curve: Hole No.JD-9

Depth:85-90m



### P/Q.Curve: Hole No.JD-9

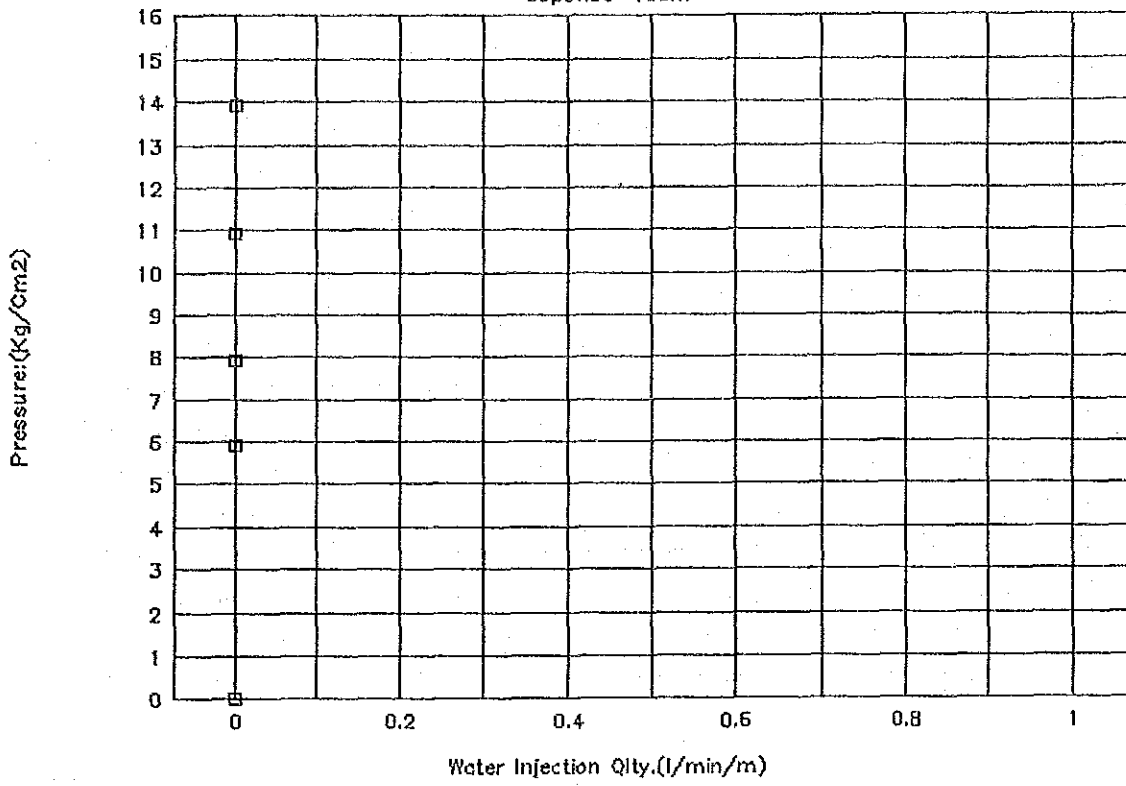
Depth:90-95m





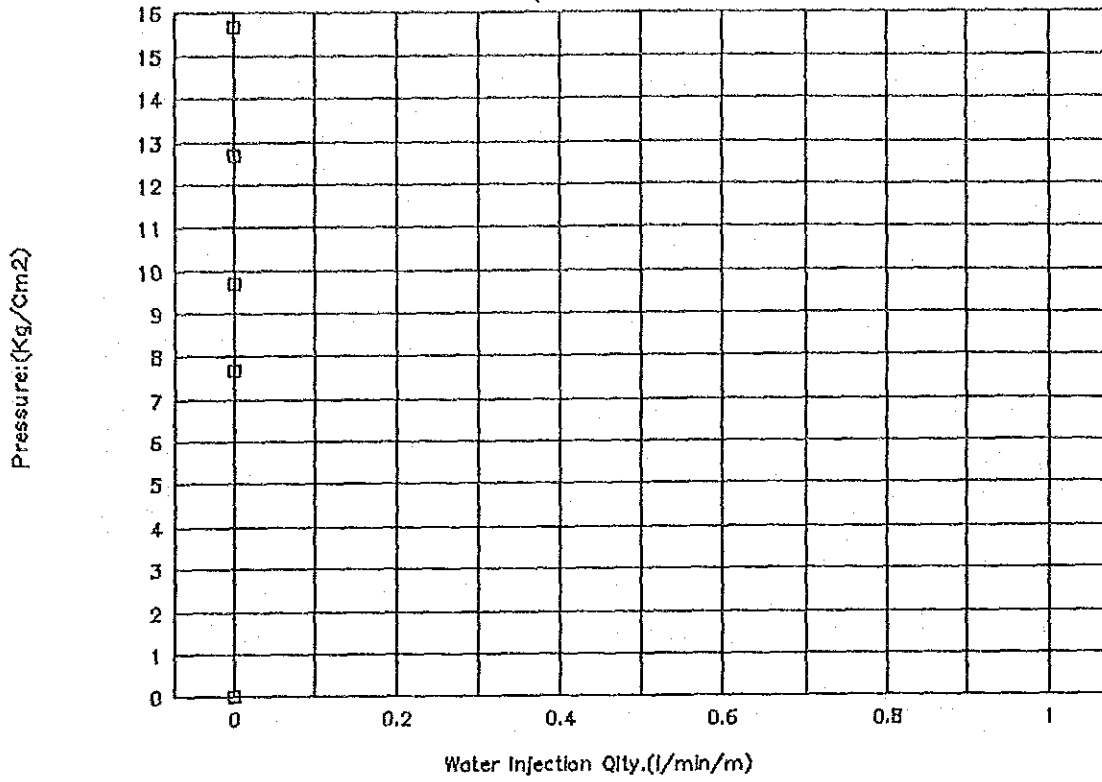
# P/Q.Curve: Hole No.JD-9

Depth:96-103m



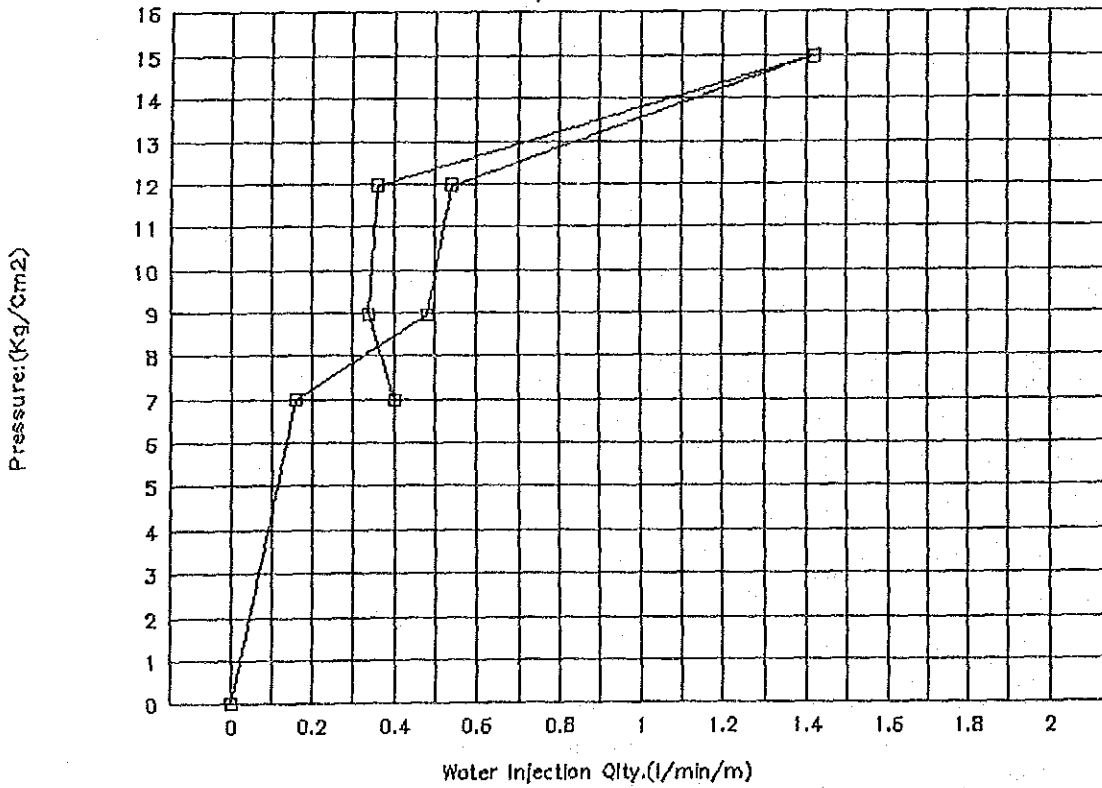
### P/Q.Curve: Hole No.JD-9

Depth:103-109m



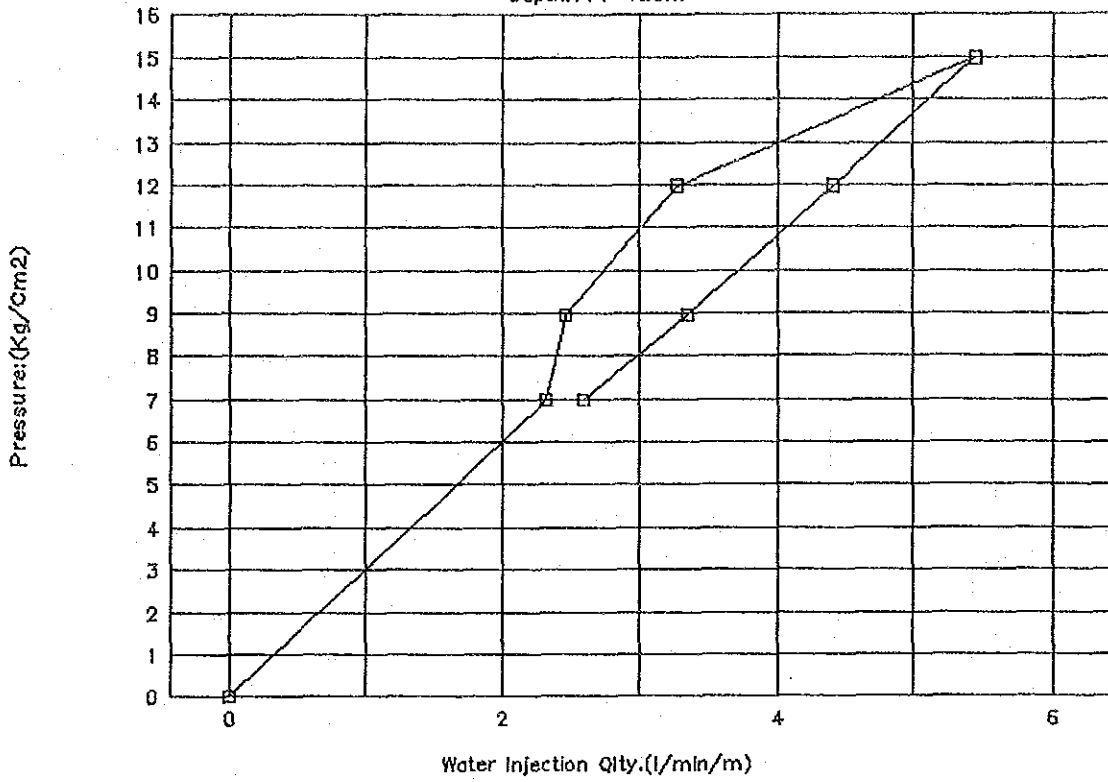
### P/Q.Curve: Hole No.JD-9

Depth:109-114m



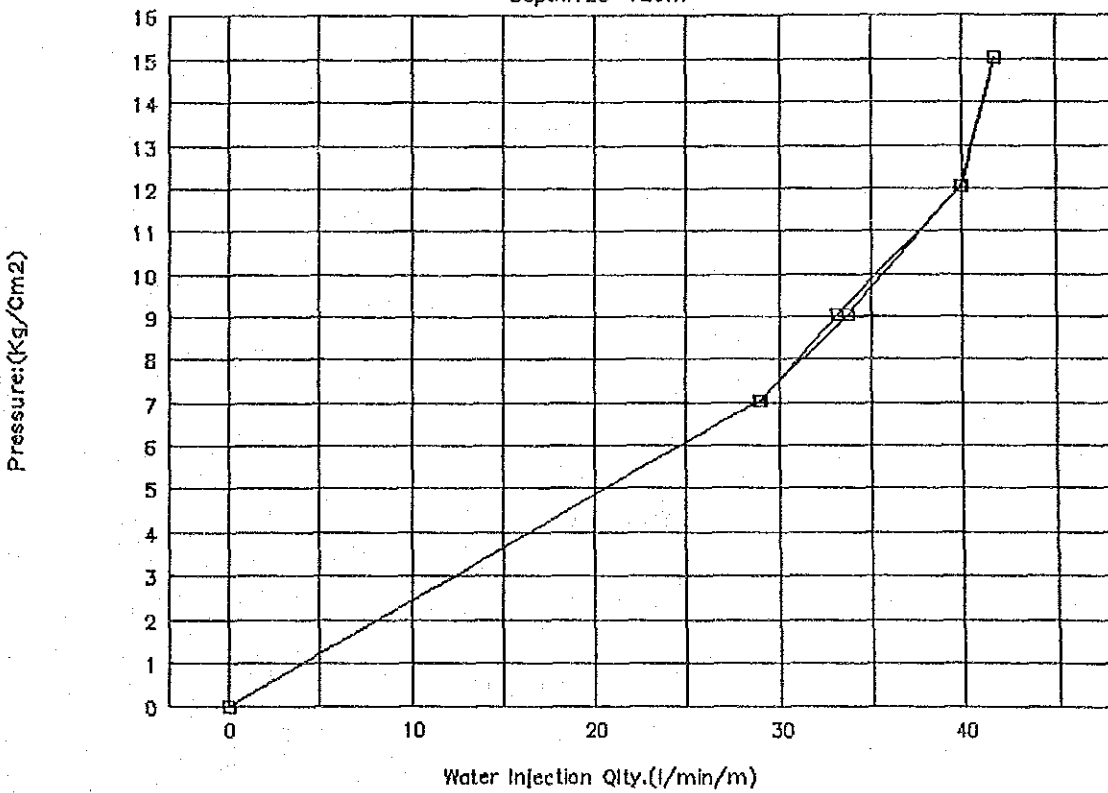
P/Q.Curve: Hole No.JD-9

Depth:114-120m



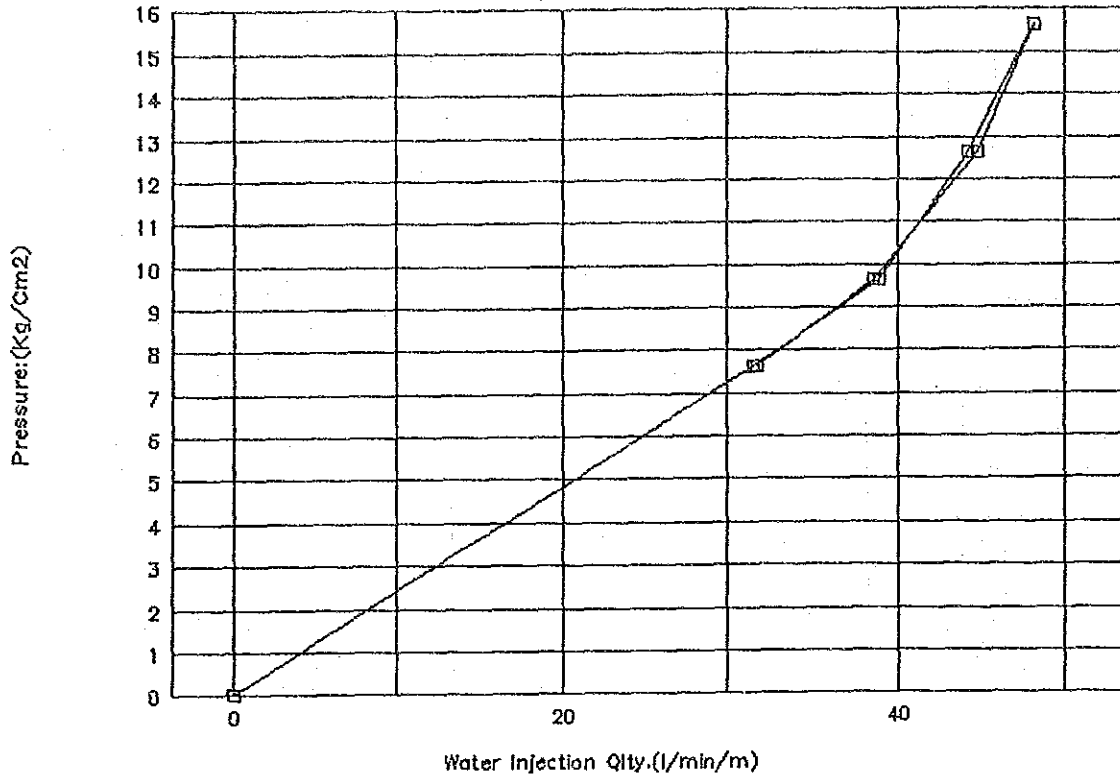
P/Q.Curve: Hole No.JD-9

Depth:120-125m



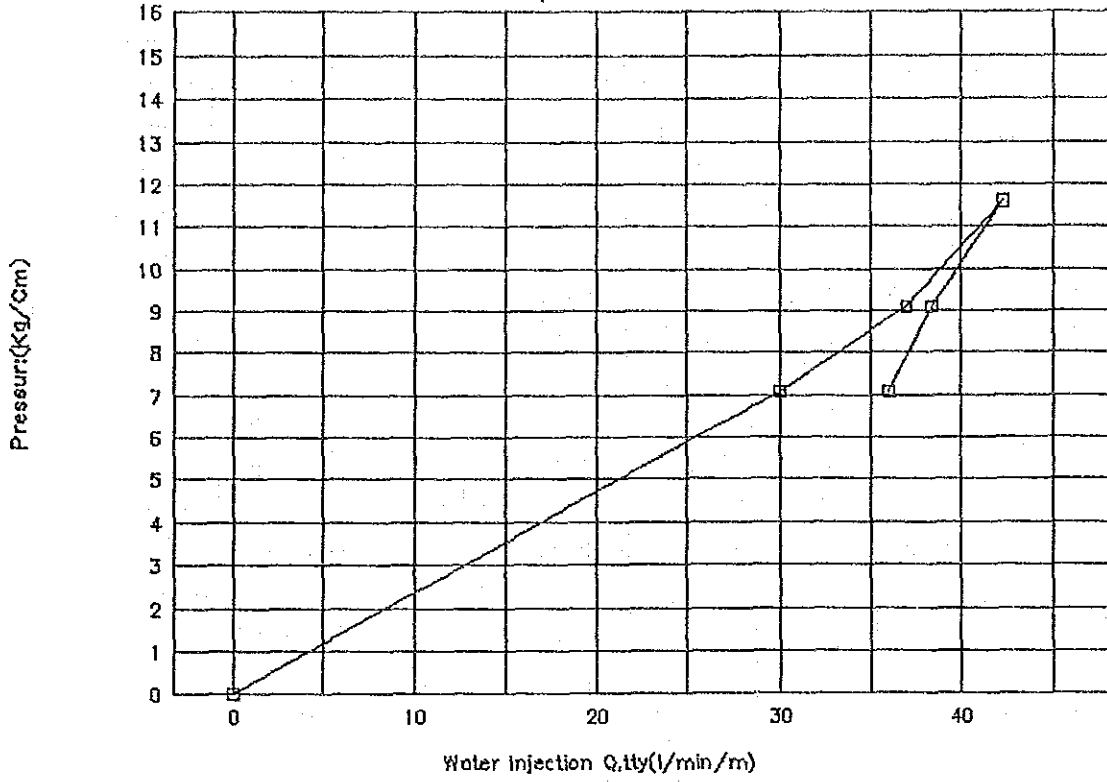
# P/Q Curve: Hole No. JD-9

Depth: 126-132m



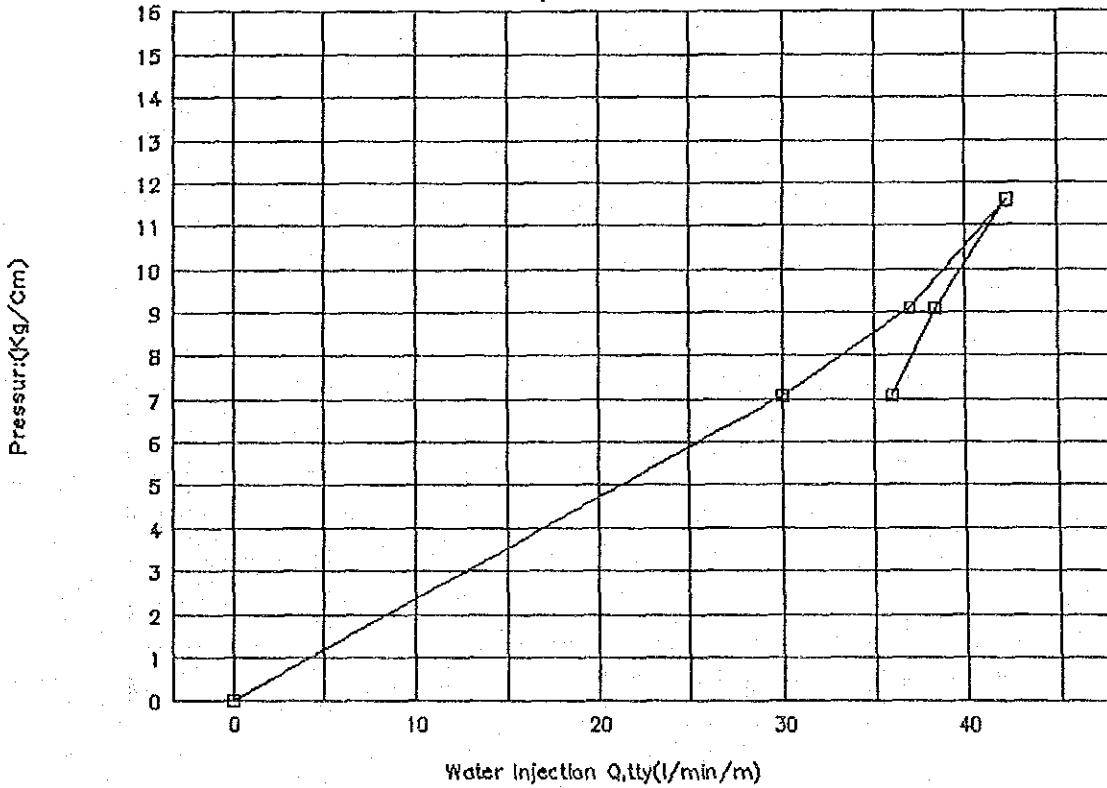
### P:Q Curve Hole No:JD-10

Depth:64m-70m



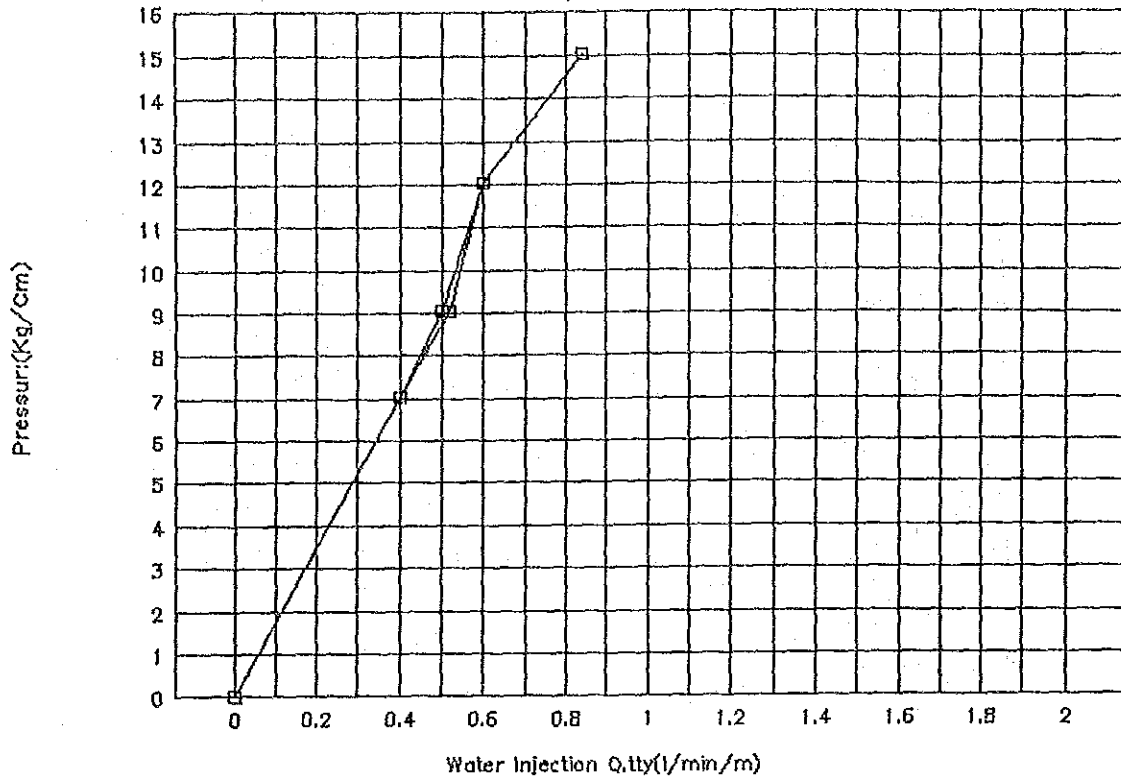
### P:Q Curve Hole No:JD-10

Depth:64m-70m



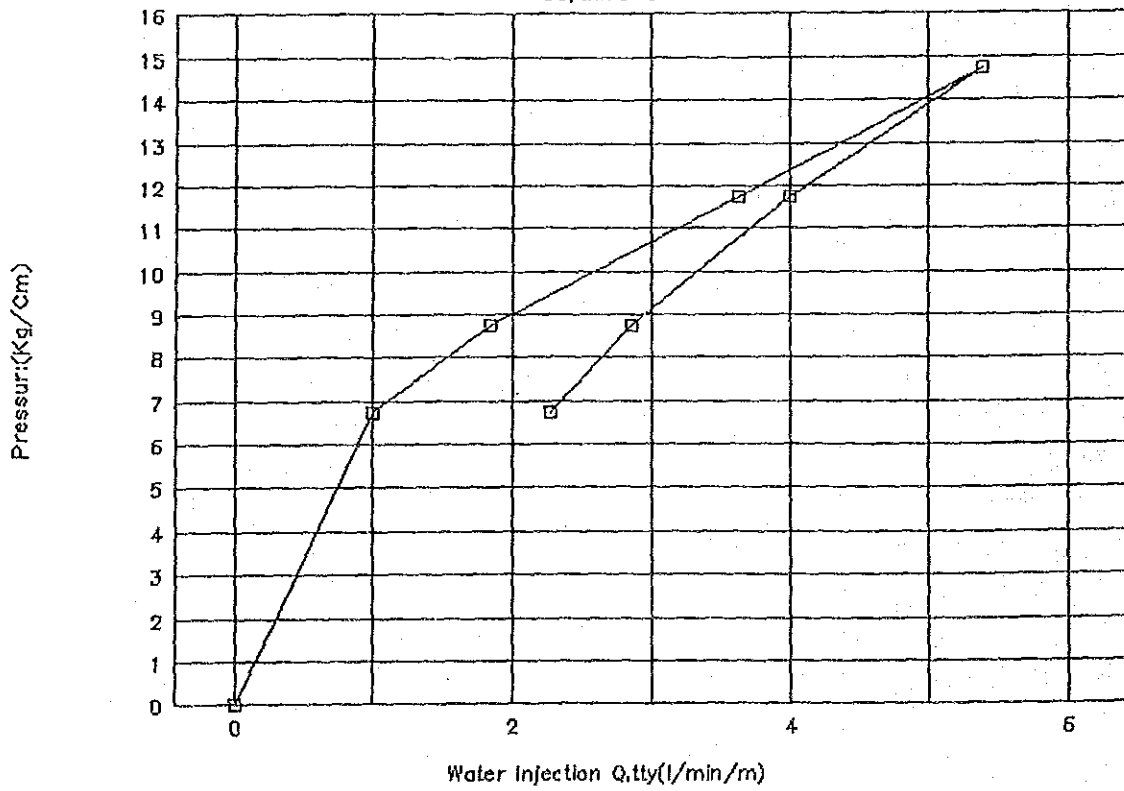
P:Q Curve Hole No:JD-10

Depth:70-75



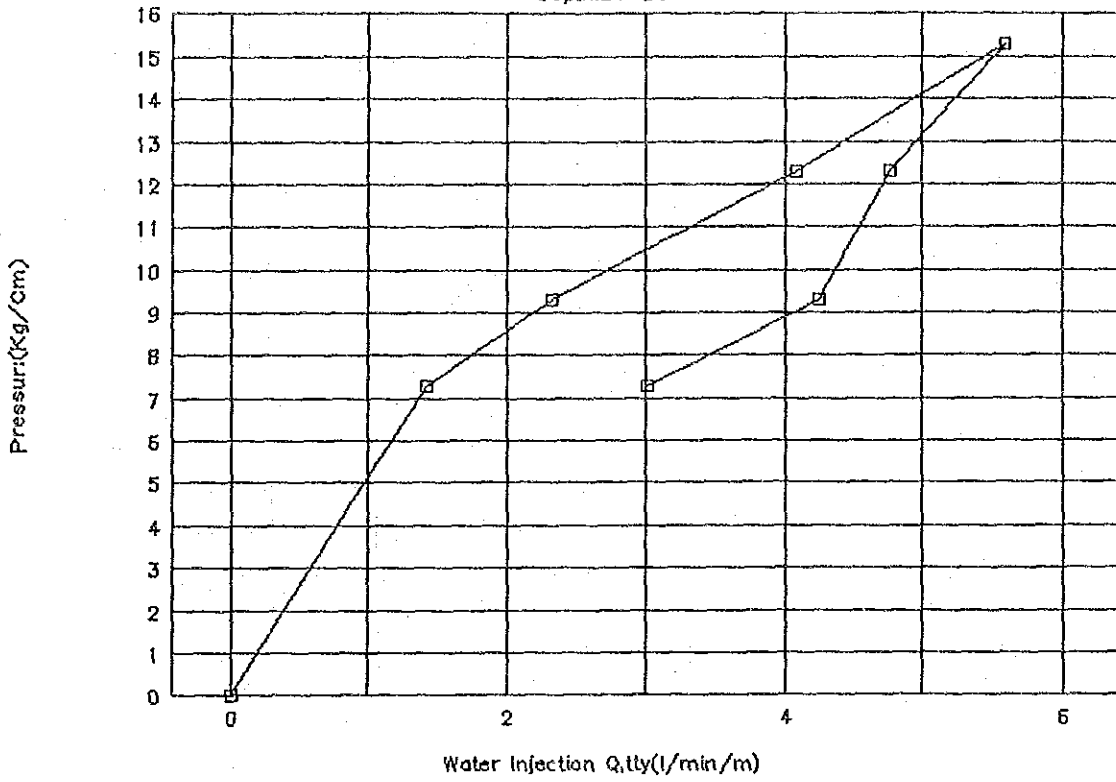
P:Q Curve Hole No:JD-10

Depth:70-80



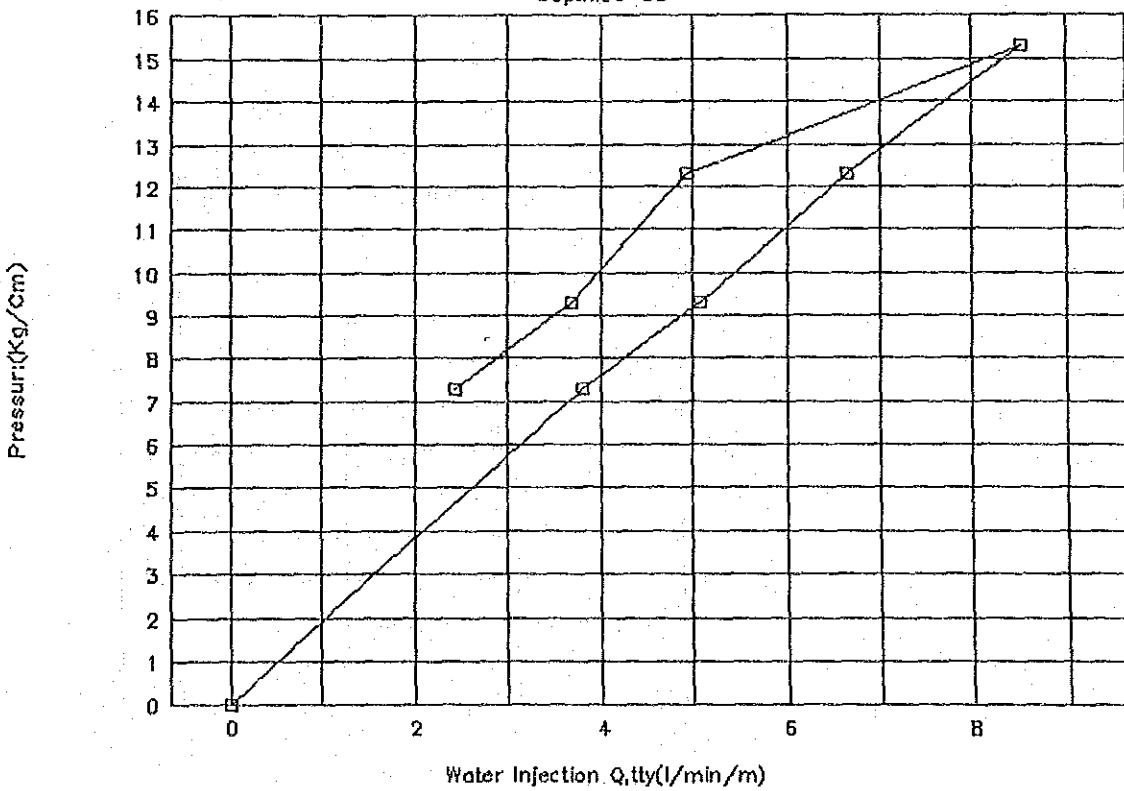
P:Q Curve Hole No:JD-10

Depth:80-90



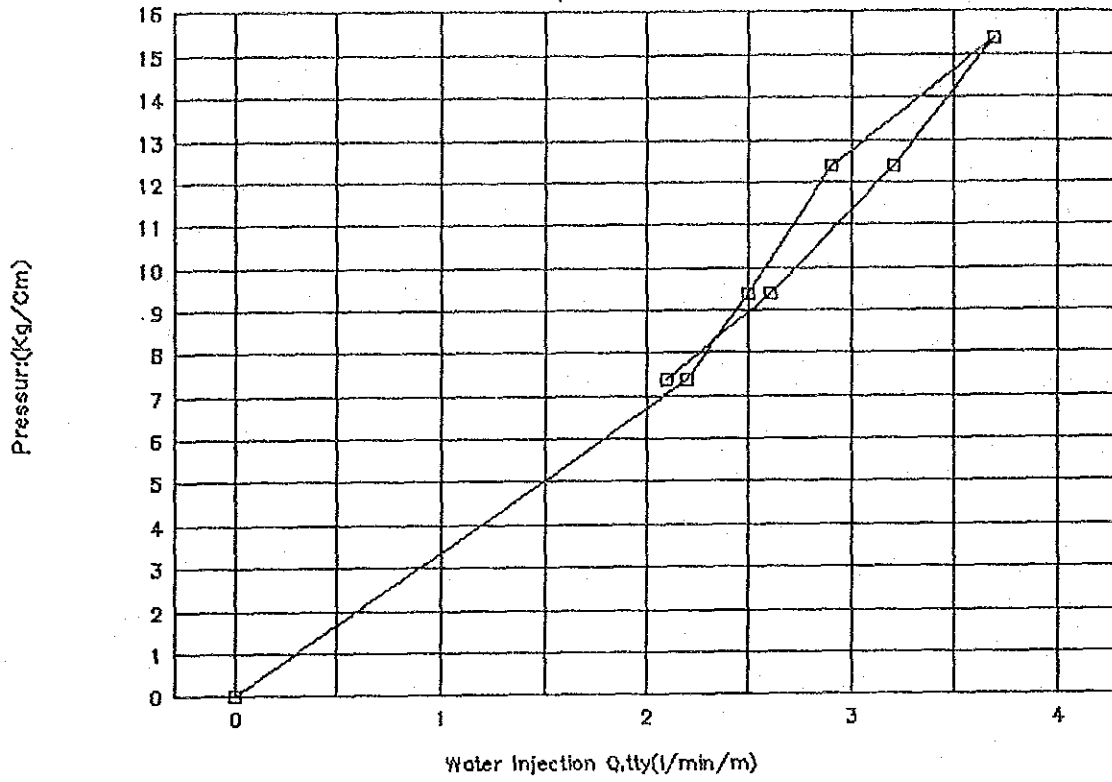
P:Q Curve Hole No:JD-10

Depth:90-95



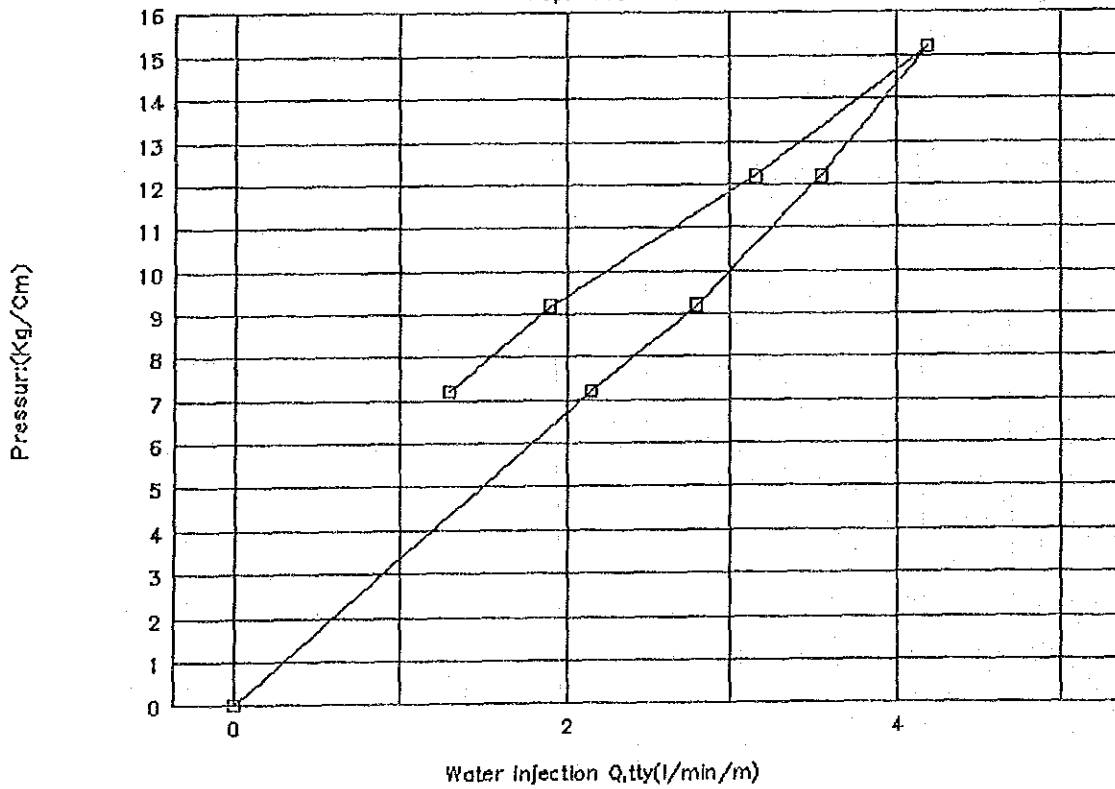
### P:Q Curve Hole No:JD-10

Depth:95-100



### P:Q Curve Hole No:JD-10

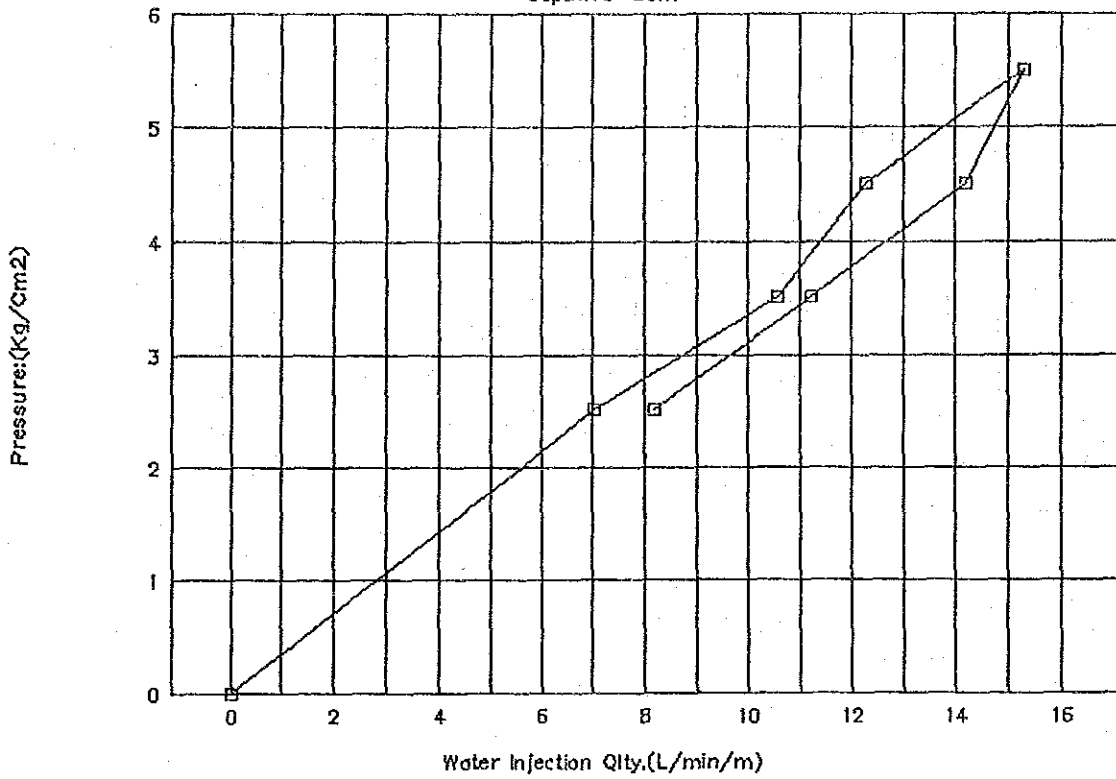
Depth:100-110





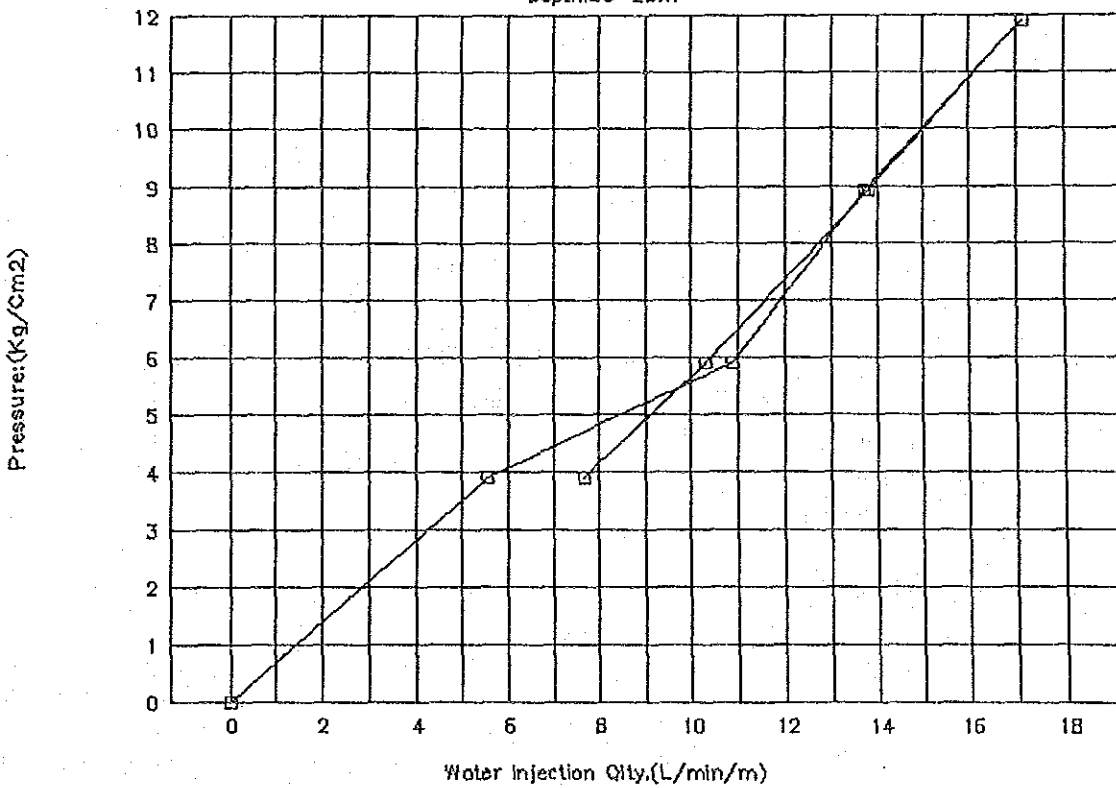
### P/Q.Curve: Hole No.JD-11

Depth:15-20m



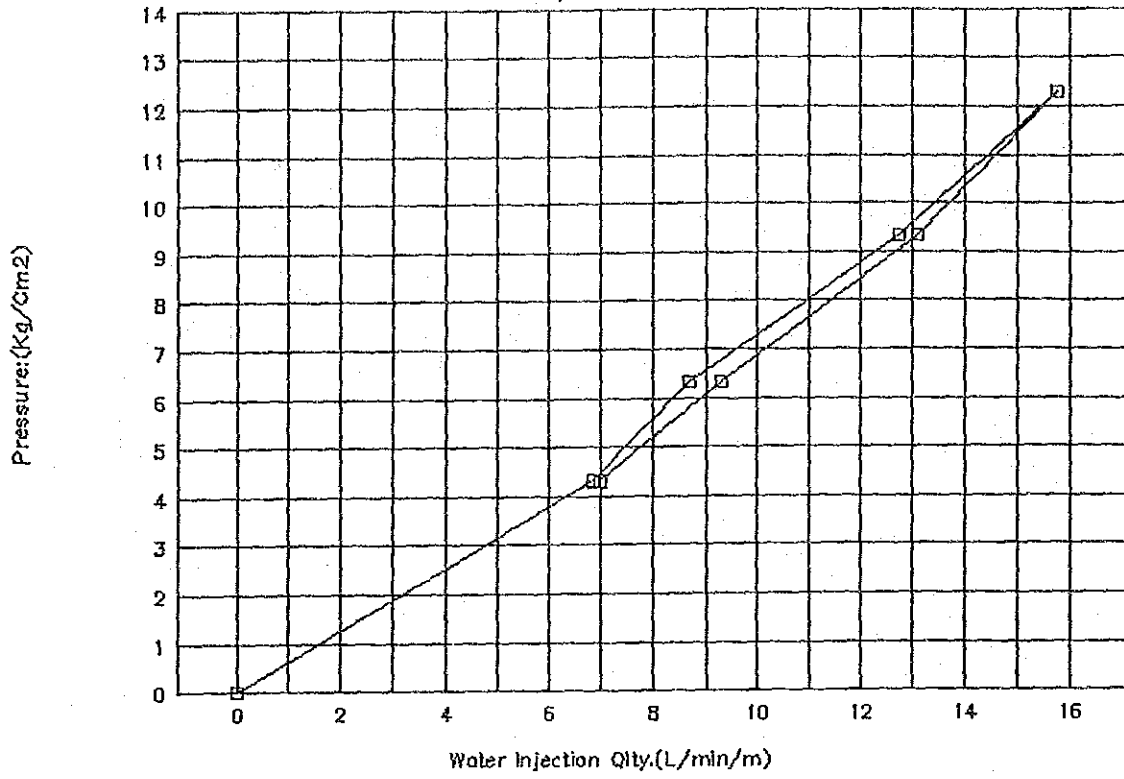
### P/Q.Curve: Hole No.JD-11

Depth:20-25m



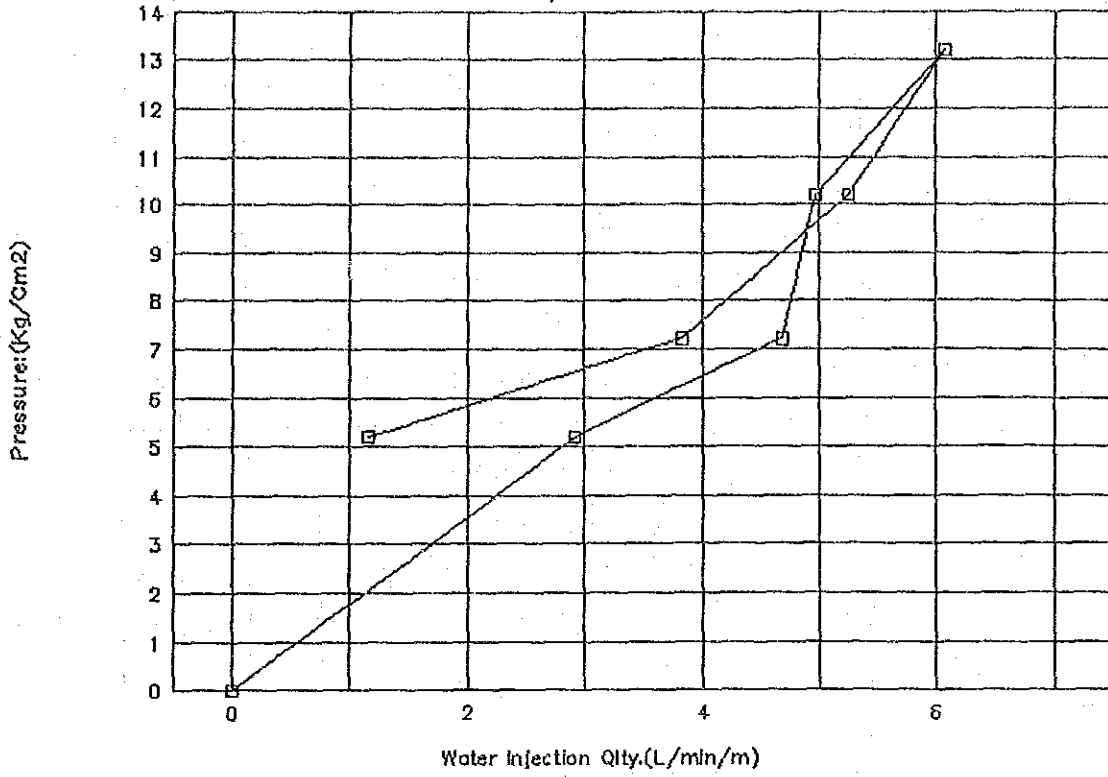
# P/Q.Curve: Hole No.JD-11

Depth:25-30m



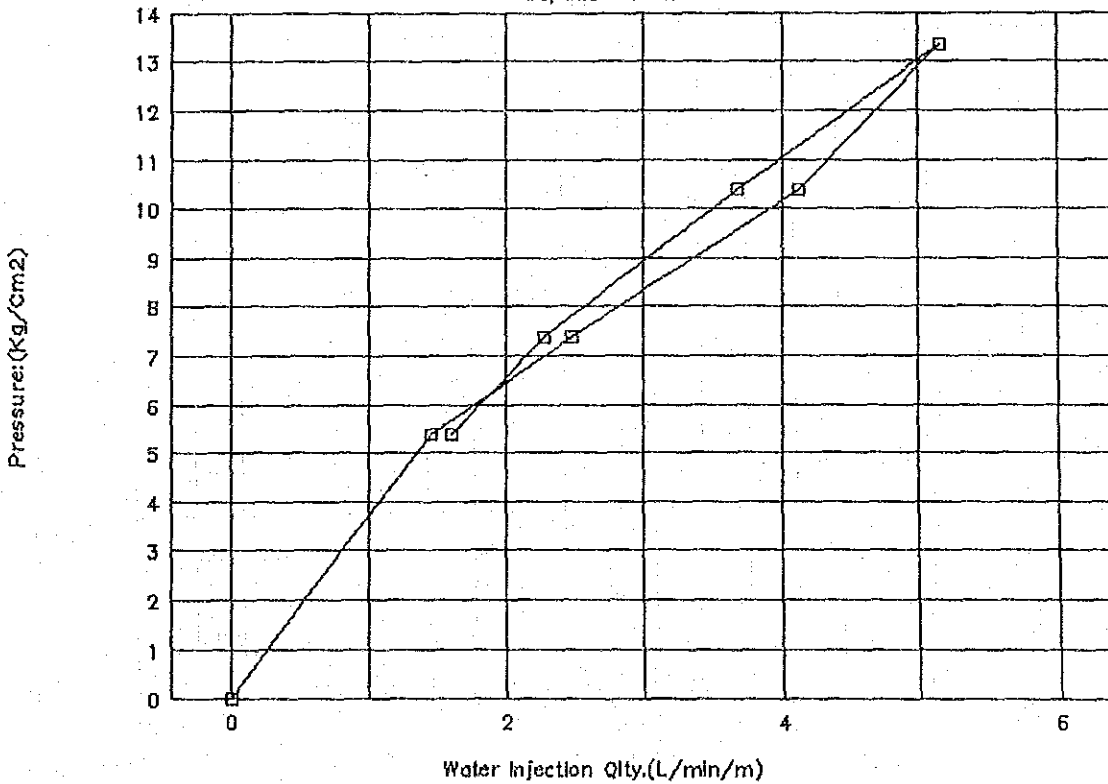
### P/Q.Curve: Hole No.JD-12

Depth:50-65m



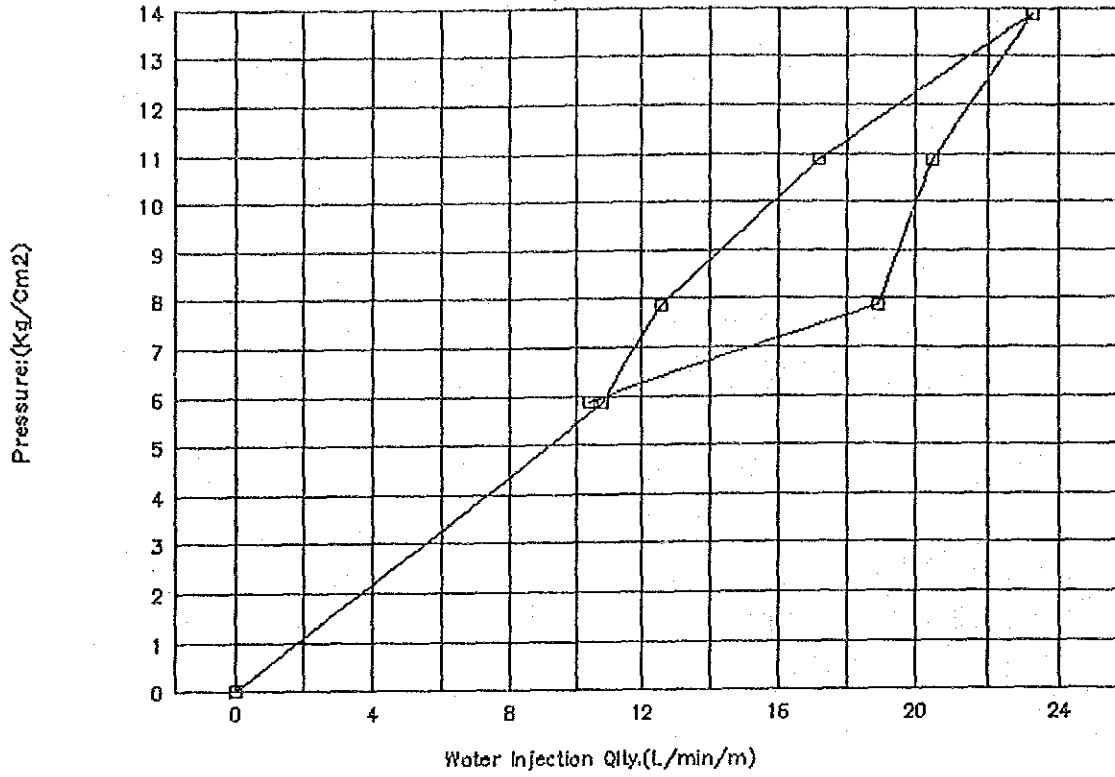
### P/Q.Curve: Hole No.JD-12

Depth:65-70m



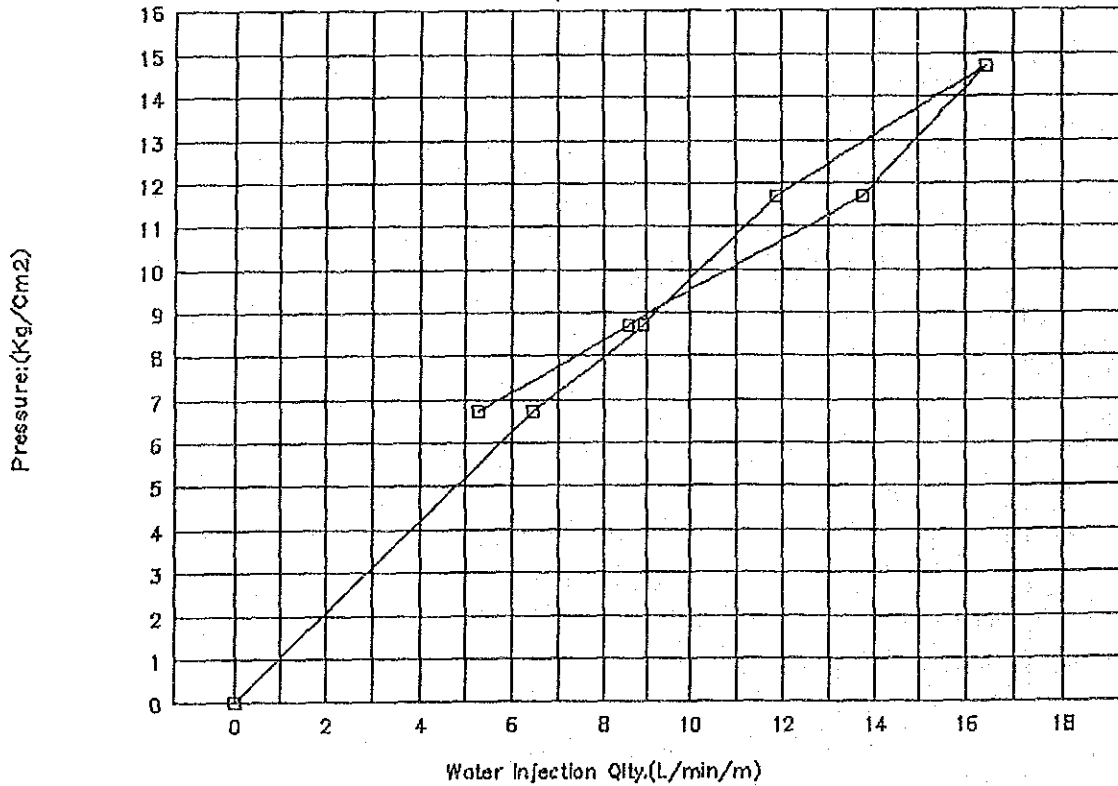
### P/Q.Curve: Hole No.JD-12

Depth:70-75m



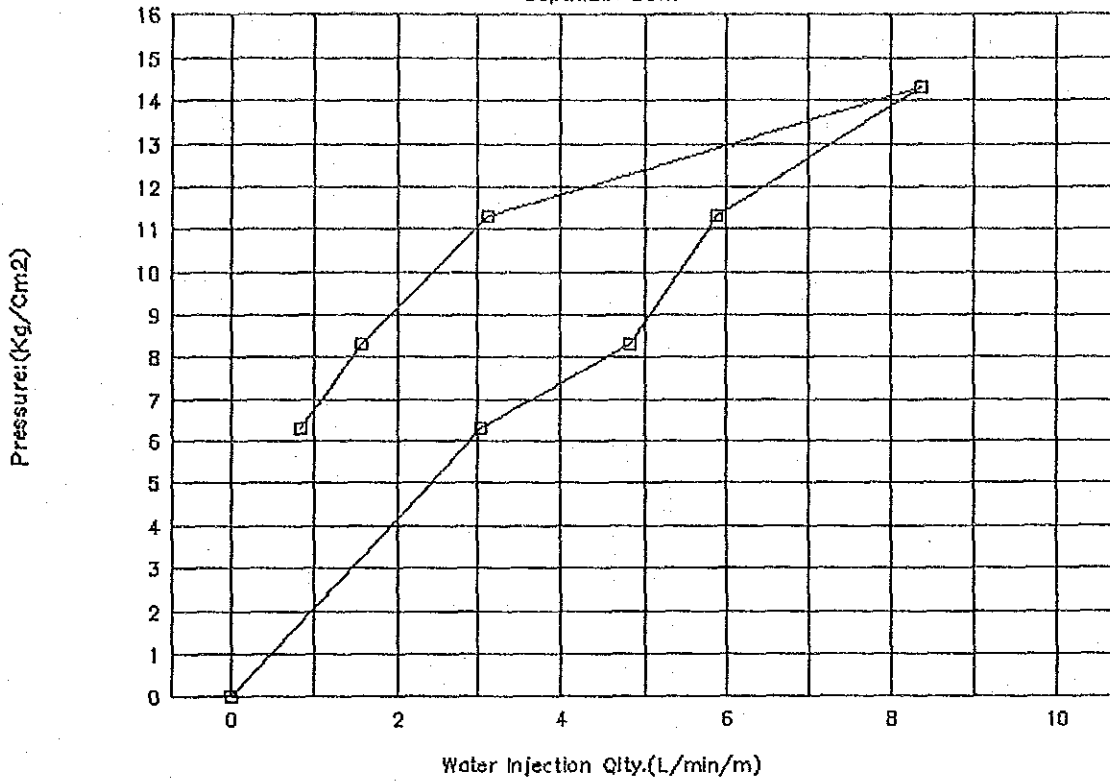
### P/Q.Curve: Hole No.JD-12

Depth:75-87m



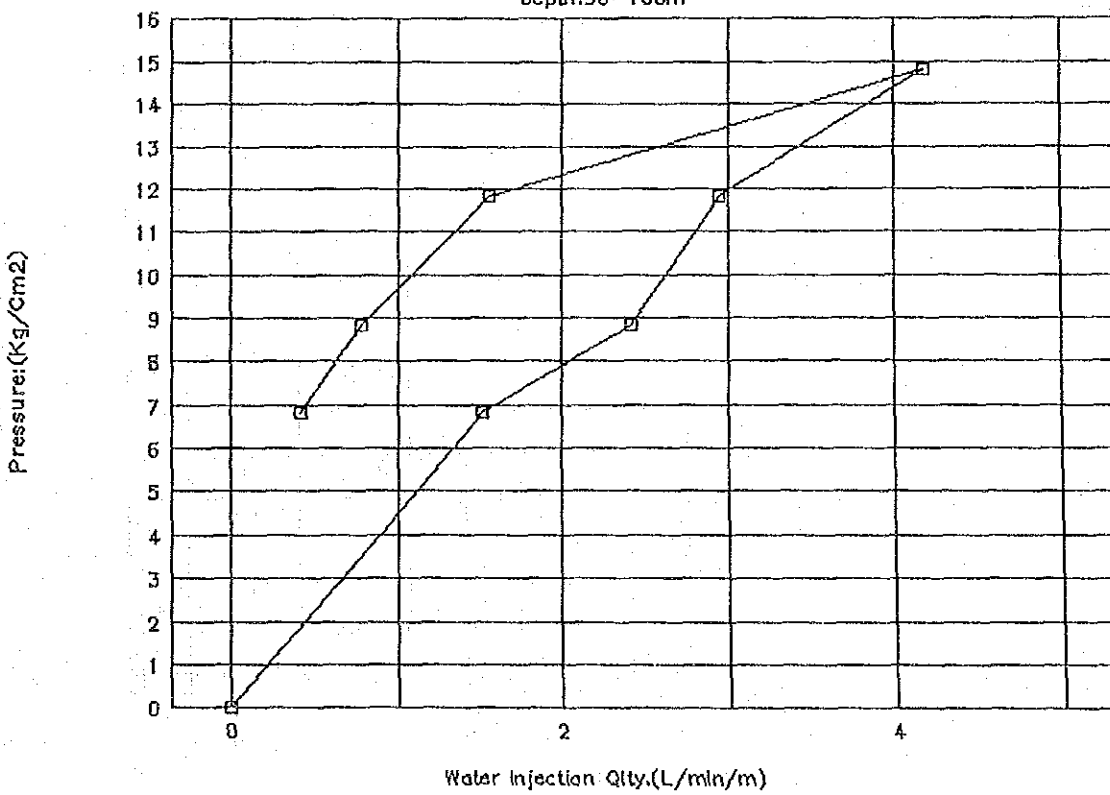
### P/Q.Curve: Hole No.JD-12

Depth:85-90m



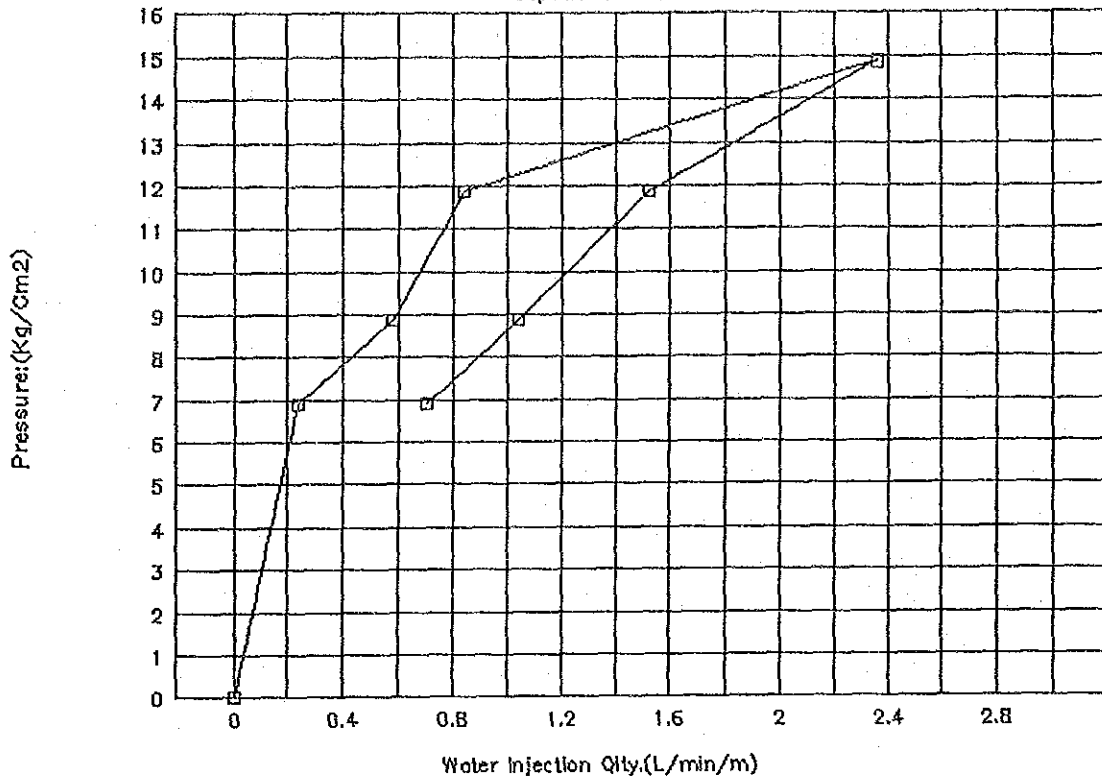
### P/Q.Curve: Hole No.JD-12

Depth:90-100m



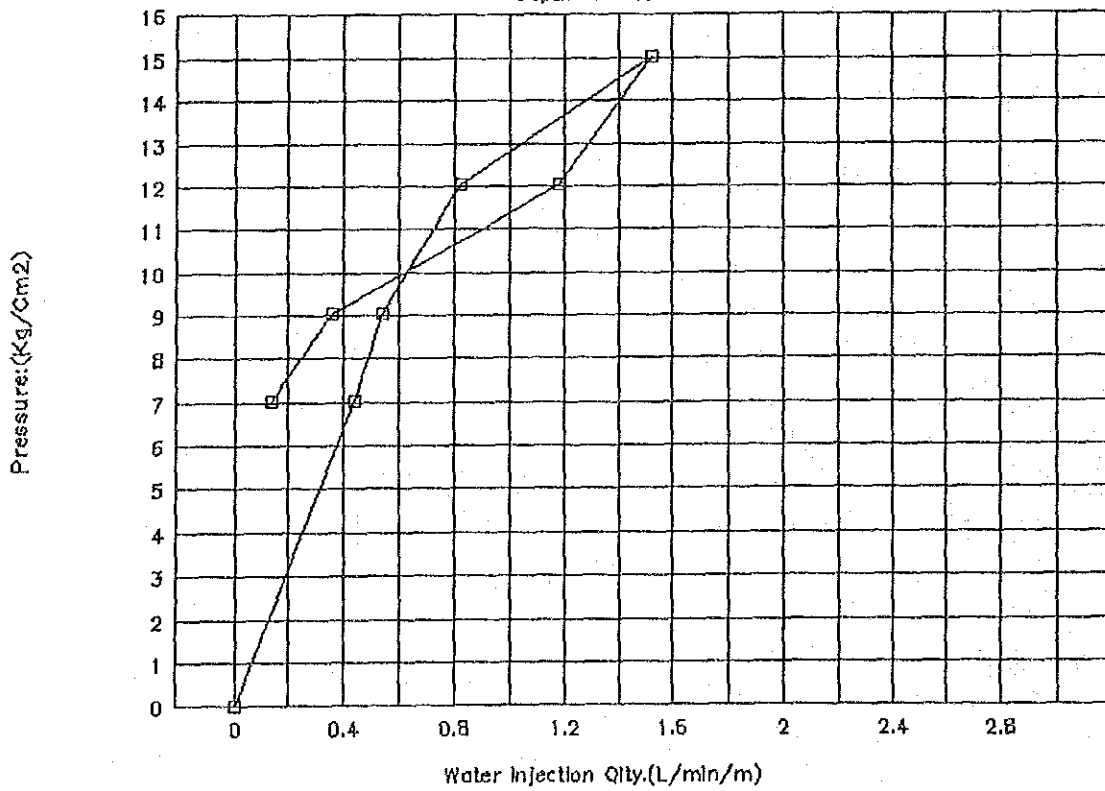
P/Q.Curve: Hole No.JD-12

Depth:100-110m



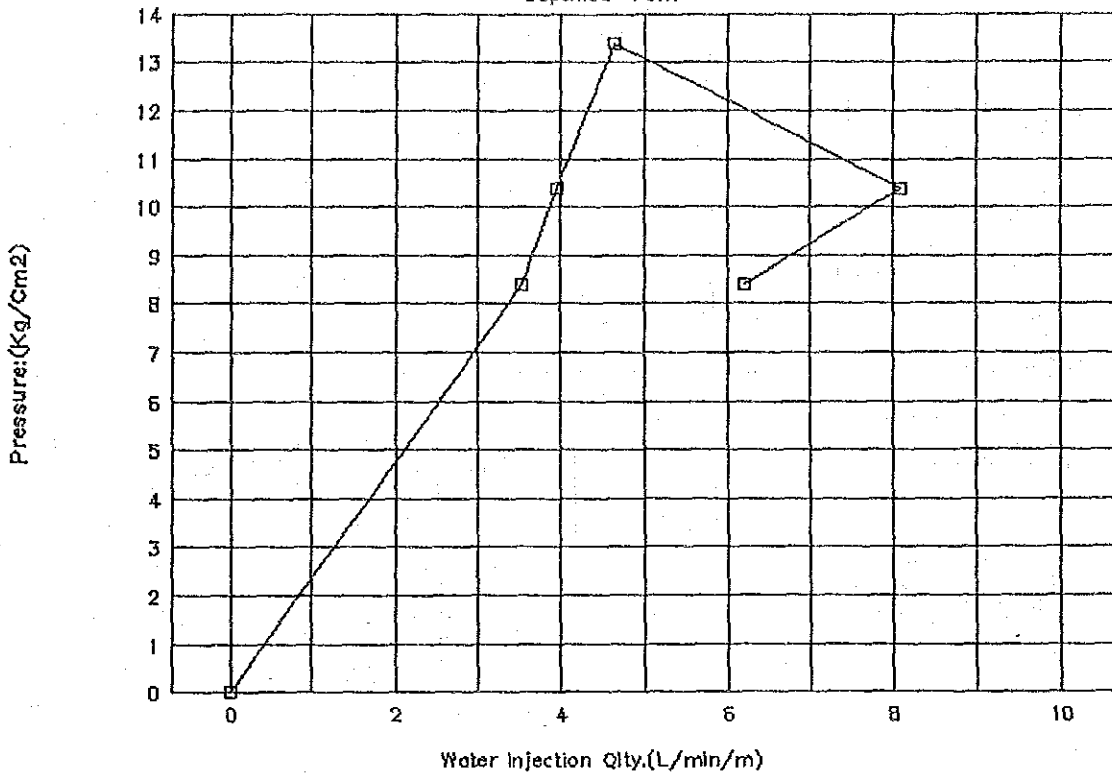
P/Q.Curve: Hole No.JD-12

Depth:110-120m



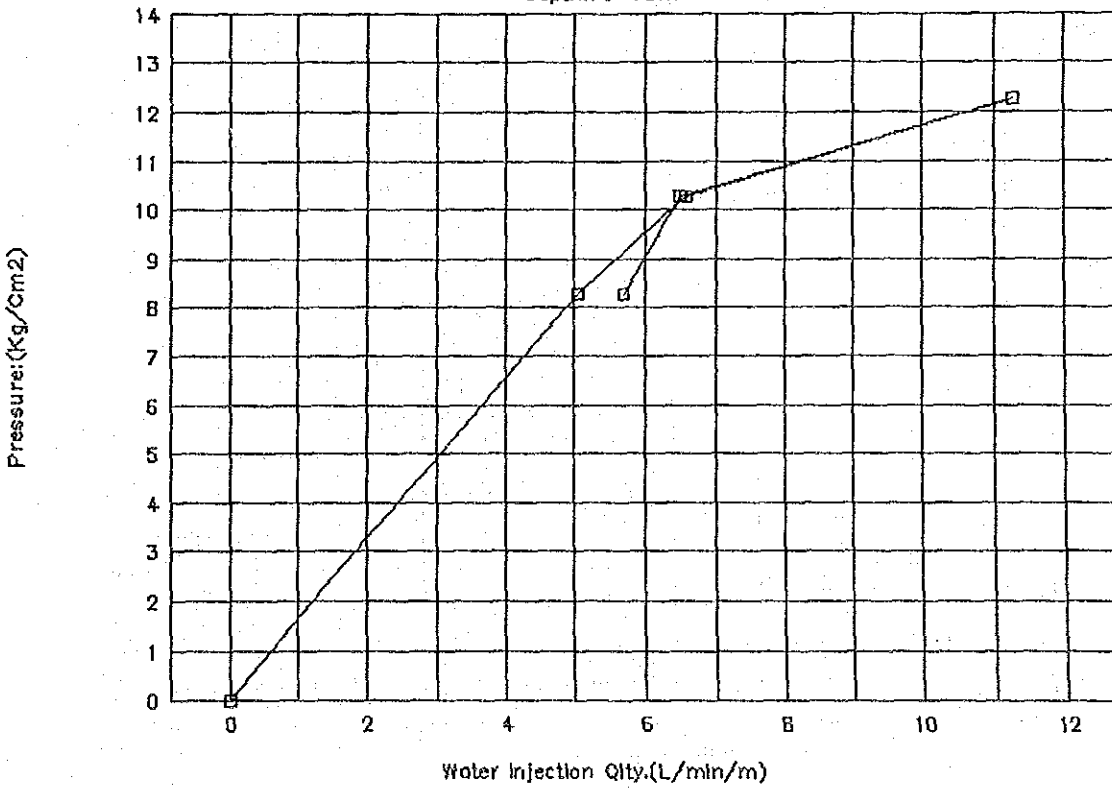
### P/Q.Curve: Hole No.JD-13

Depth:65-70m



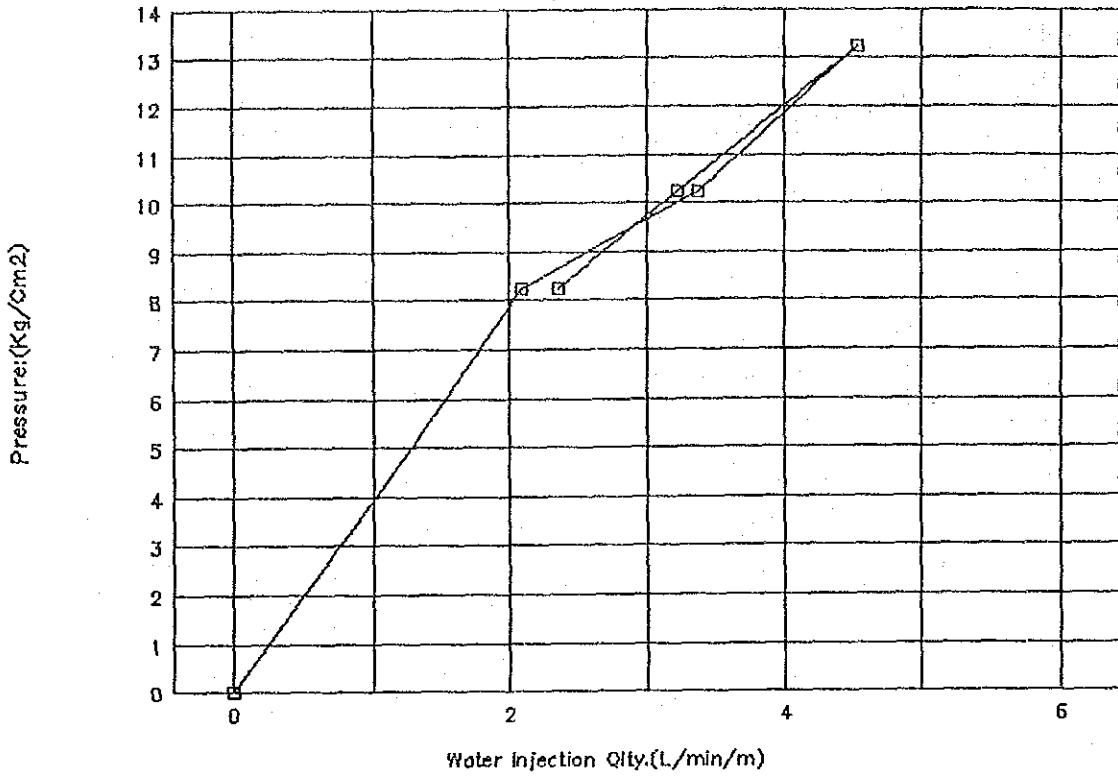
### P/Q.Curve: Hole No.JD-13

Depth:70-75m



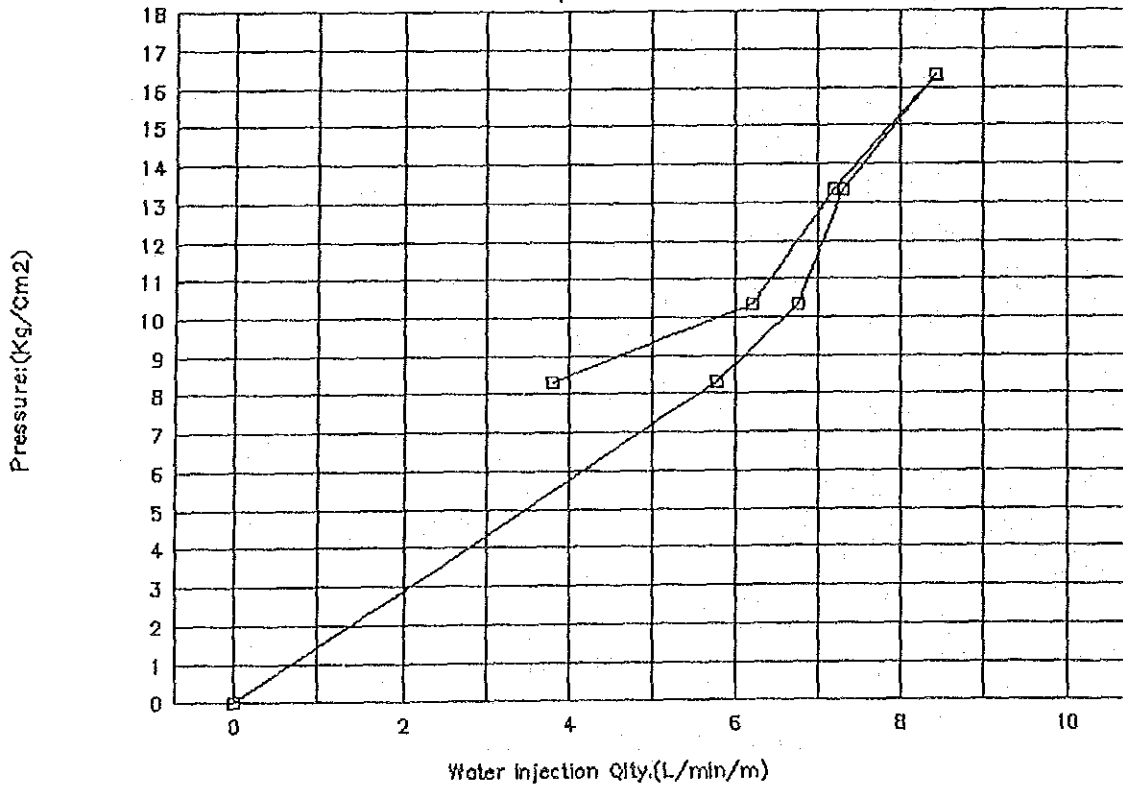
### P/Q.Curve: Hole No.JD-13

Depth:73-80m



### P/Q.Curve: Hole No.JD-13

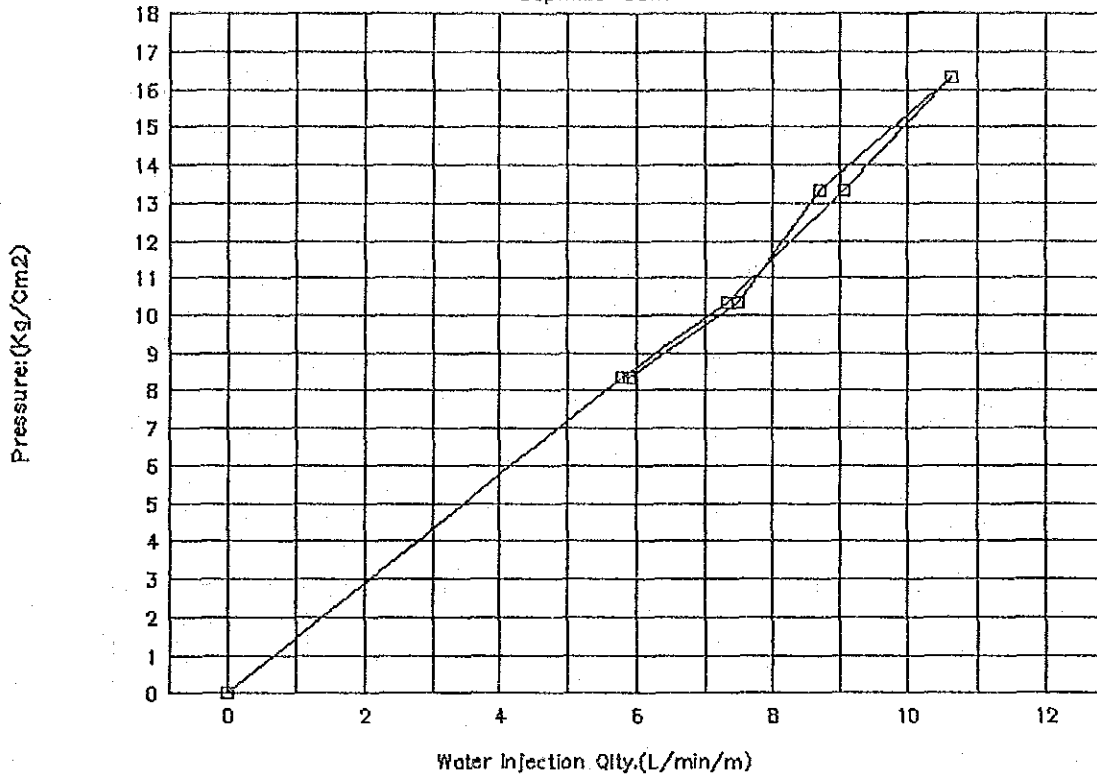
Depth:80-85m





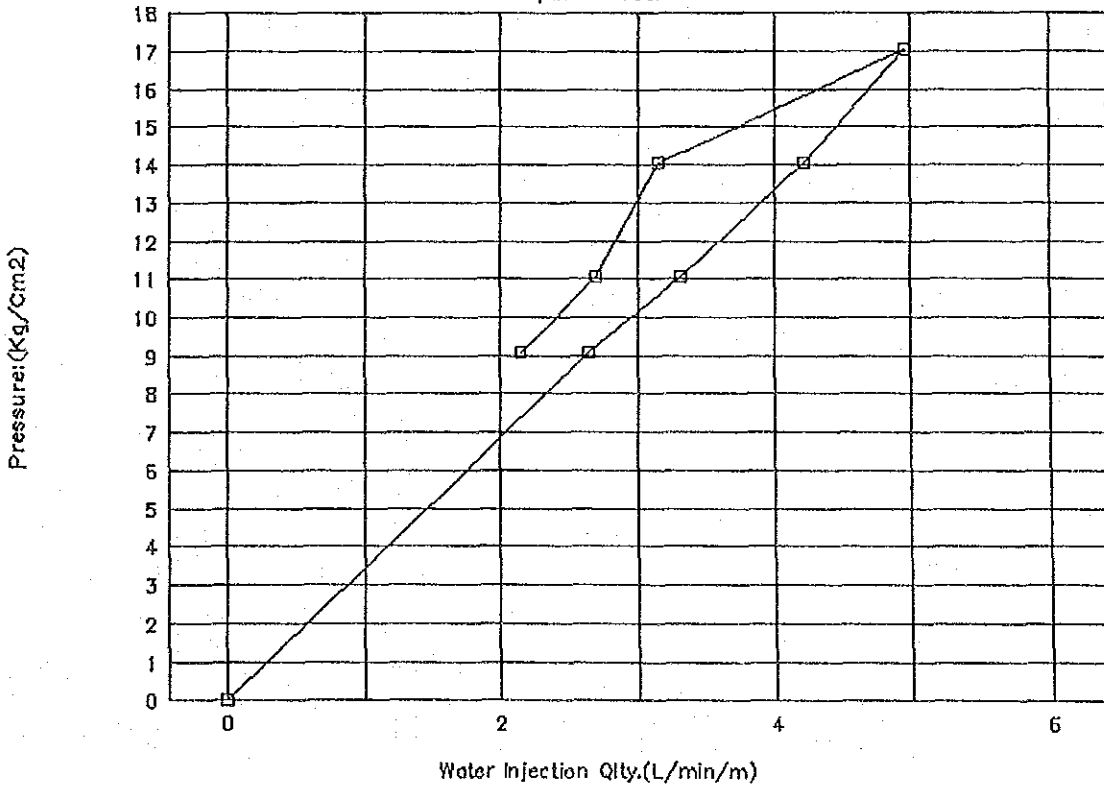
### P/Q.Curve: Hole No.JD-13

Depth:85-90m



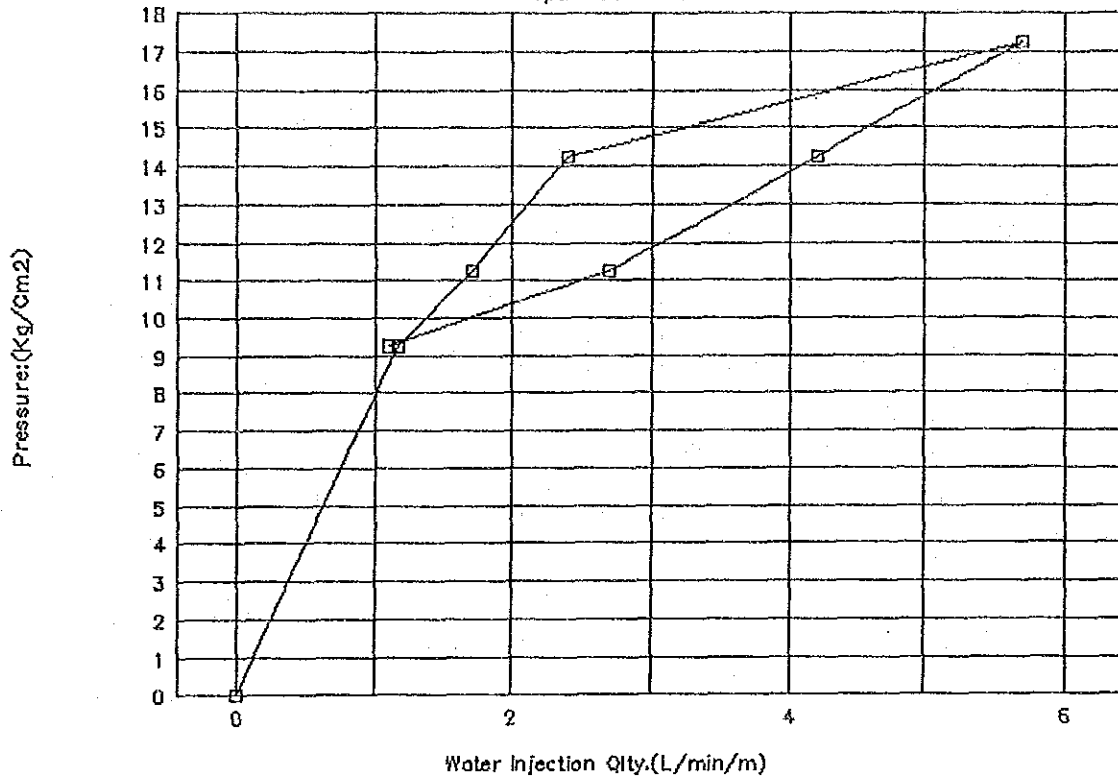
### P/Q.Curve: Hole No.JD-13

Depth:90-100m



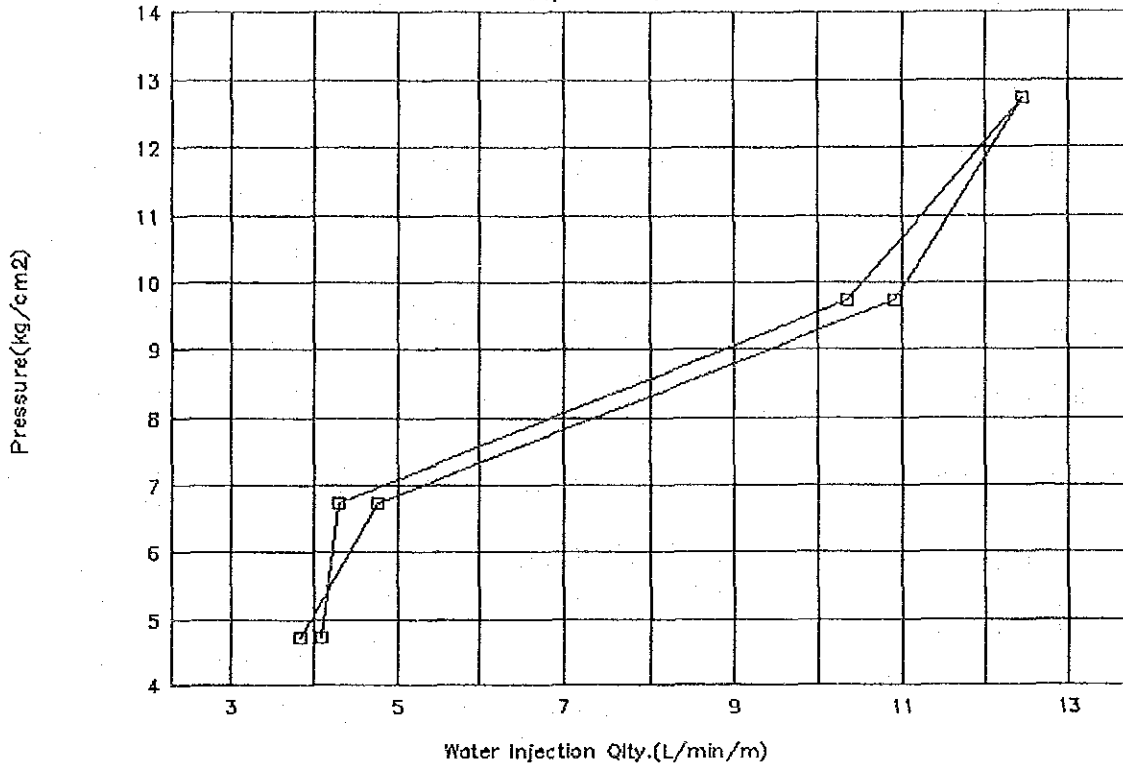
# P/Q.Curve: Hole No.JD-13

Depth:100-110m



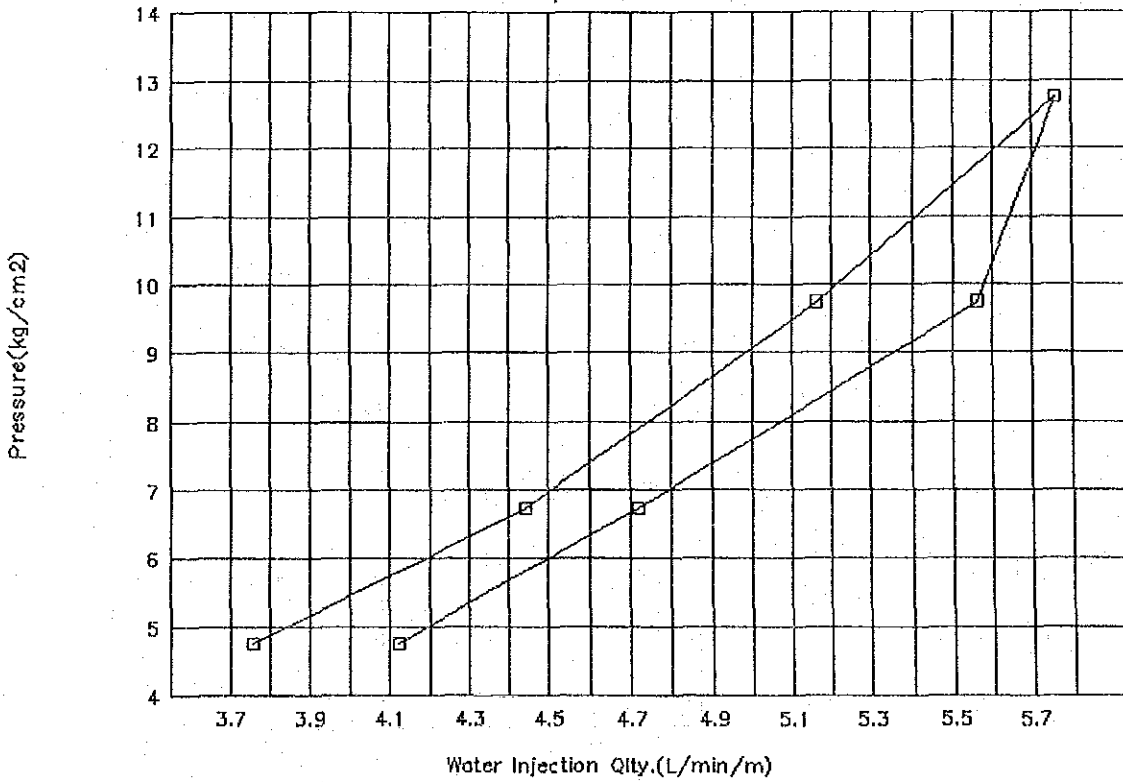
### P/Q.Curve: Hole No.JD-101

Depth:55-60m



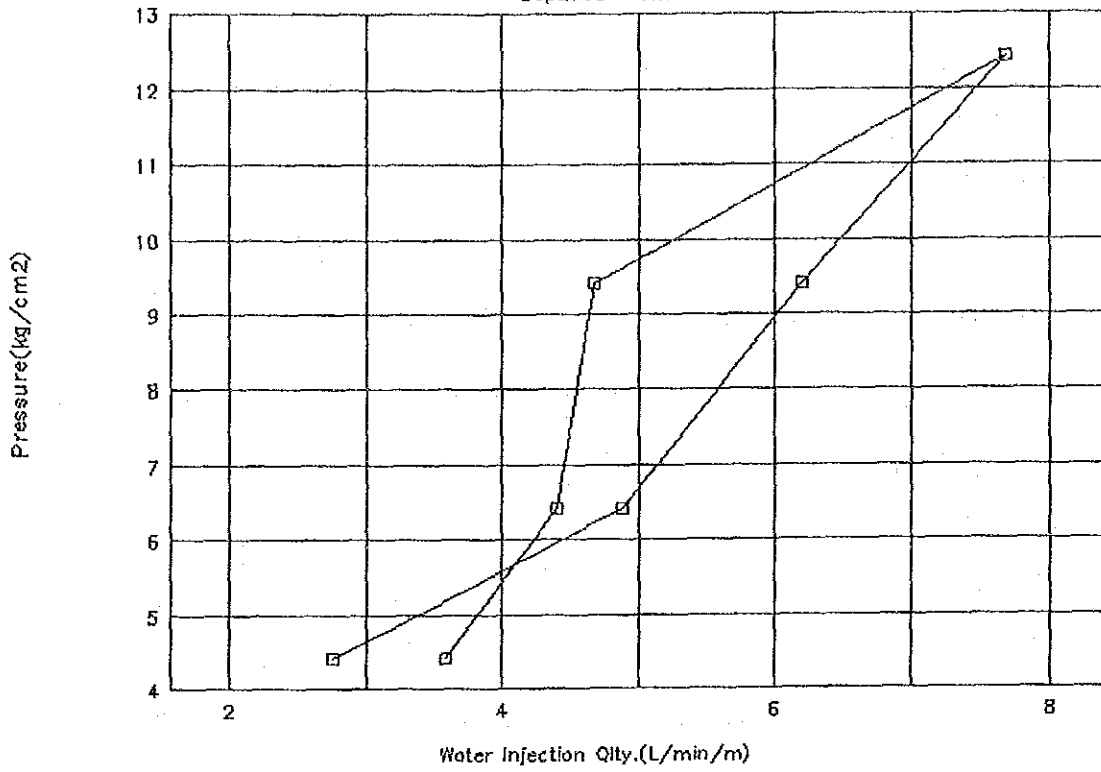
### P/Q.Curve: Hole No.JD-101

Depth:60-65m



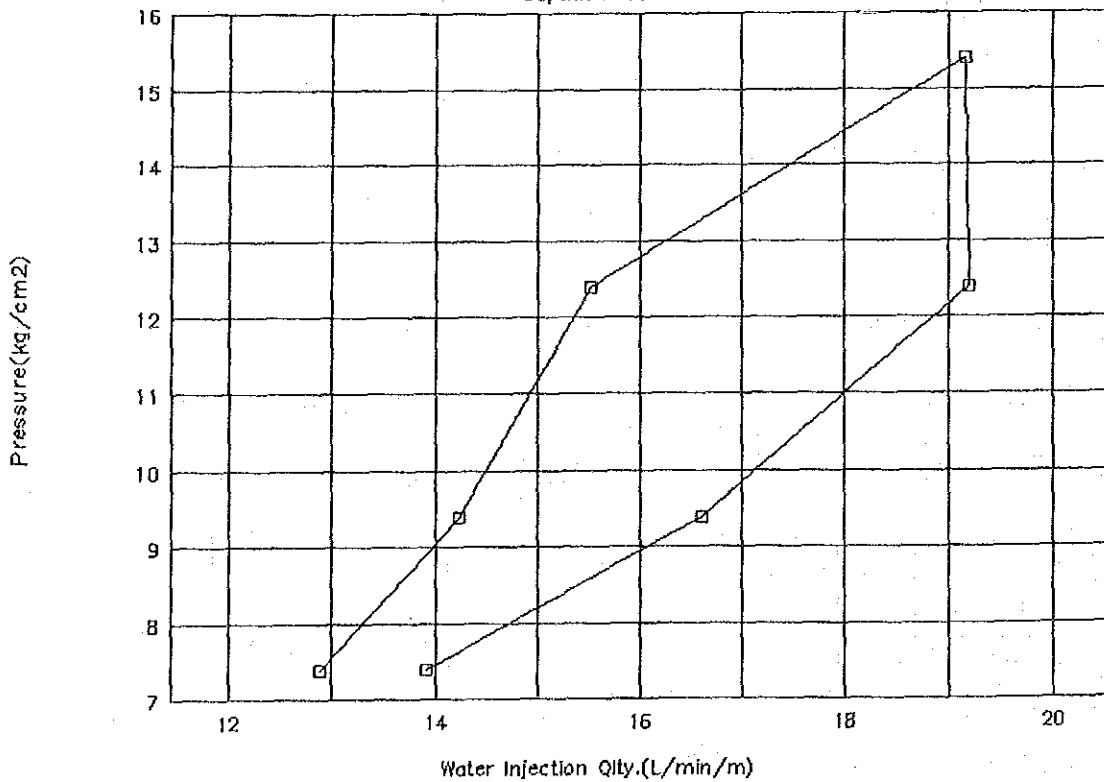
### P/Q.Curve: Hole No.JD-101

Depth:65-70m



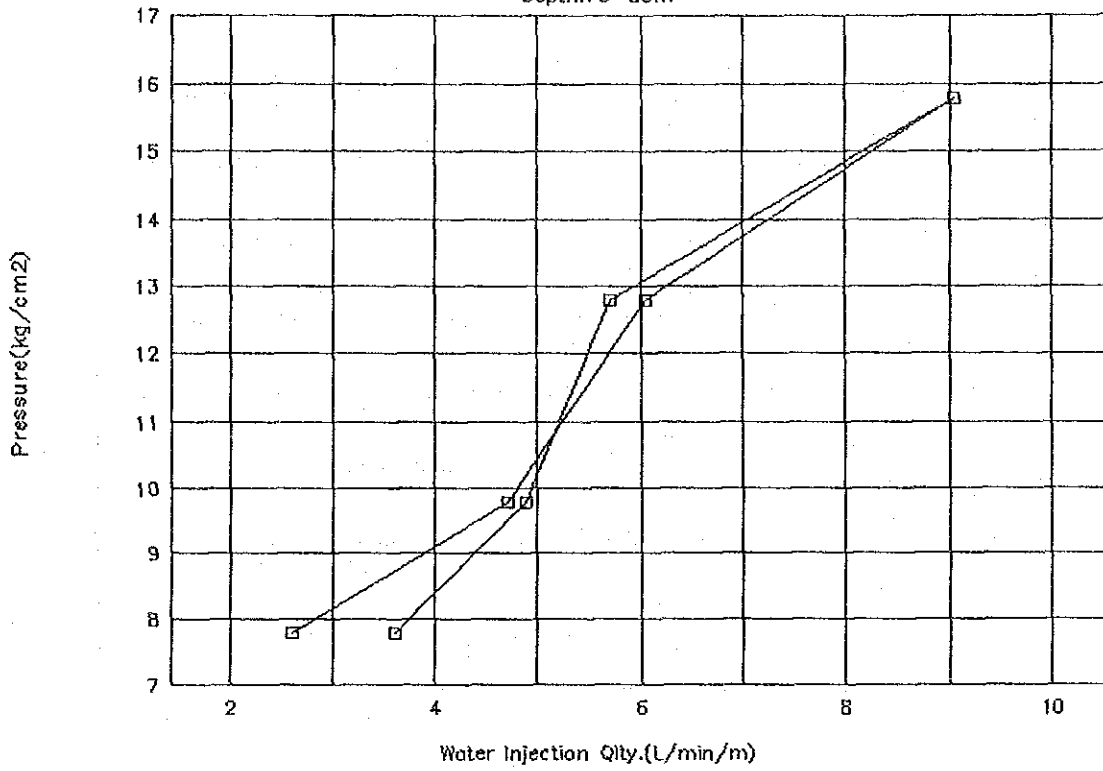
### P/Q.Curve: Hole No.JD-101

Depth:70-75m



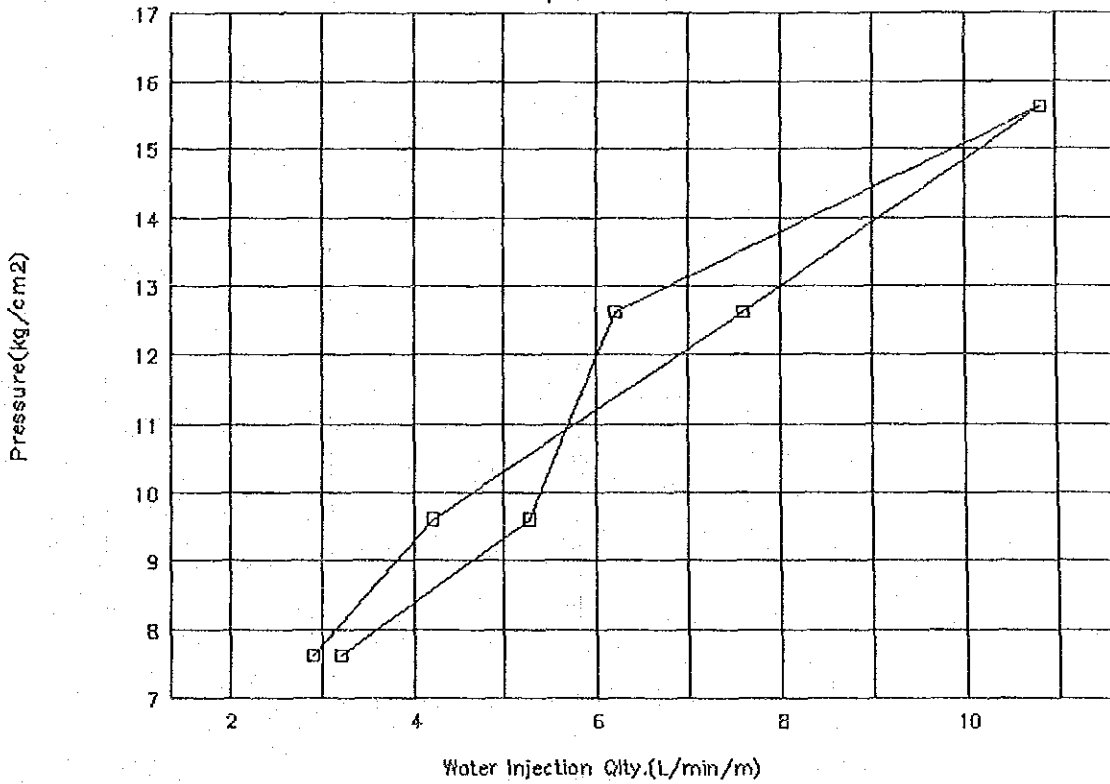
### P/Q.Curve: Hole No.JD-101

Depth:75-80m



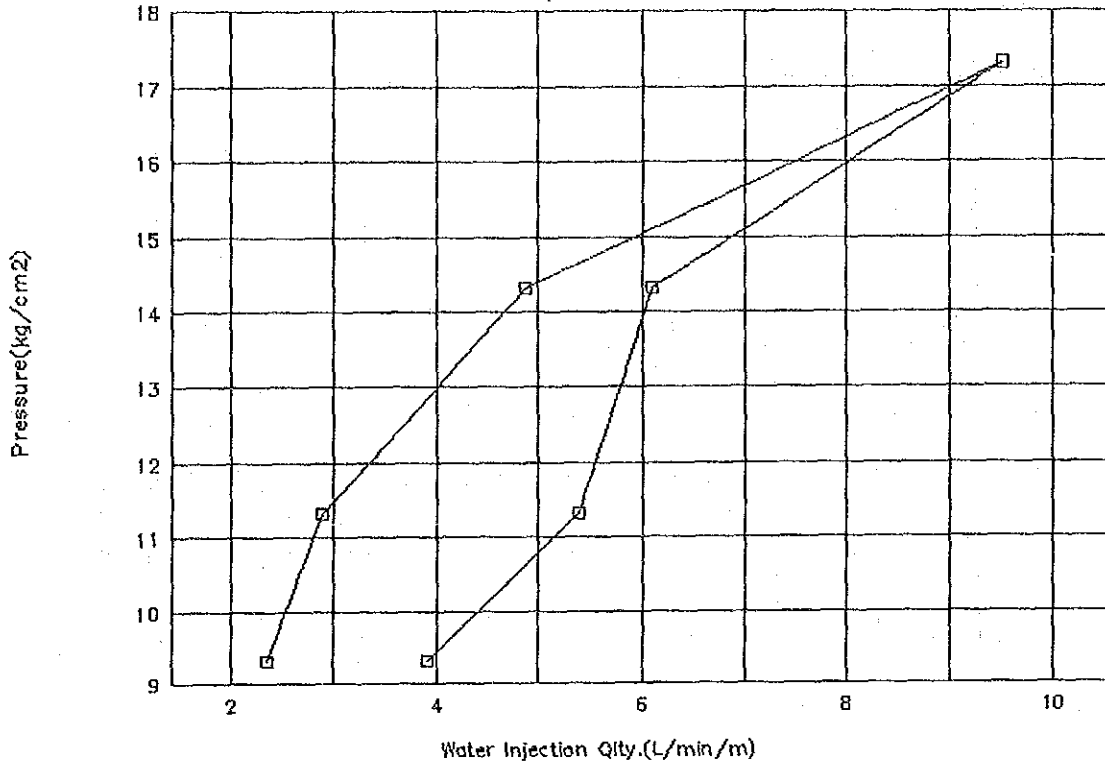
### P/Q.Curve: Hole No.JD-101

Depth:80-85m



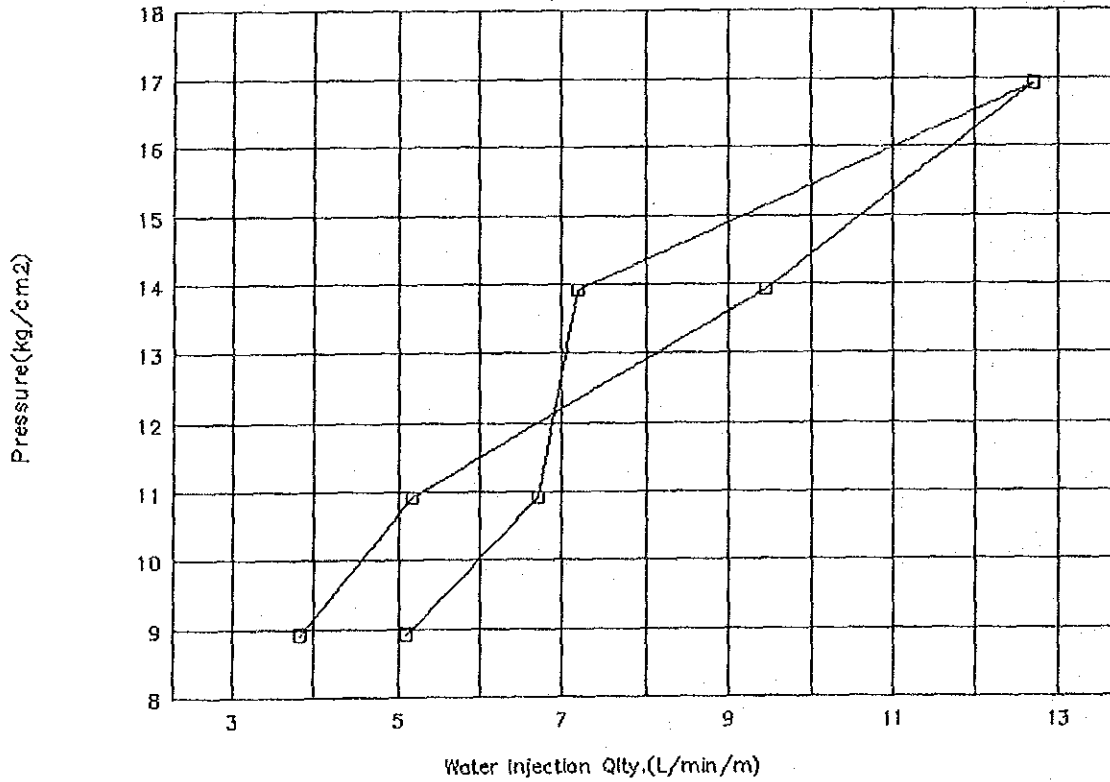
### P/Q.Curve: Hole No.JD-101

Depth:85-90m



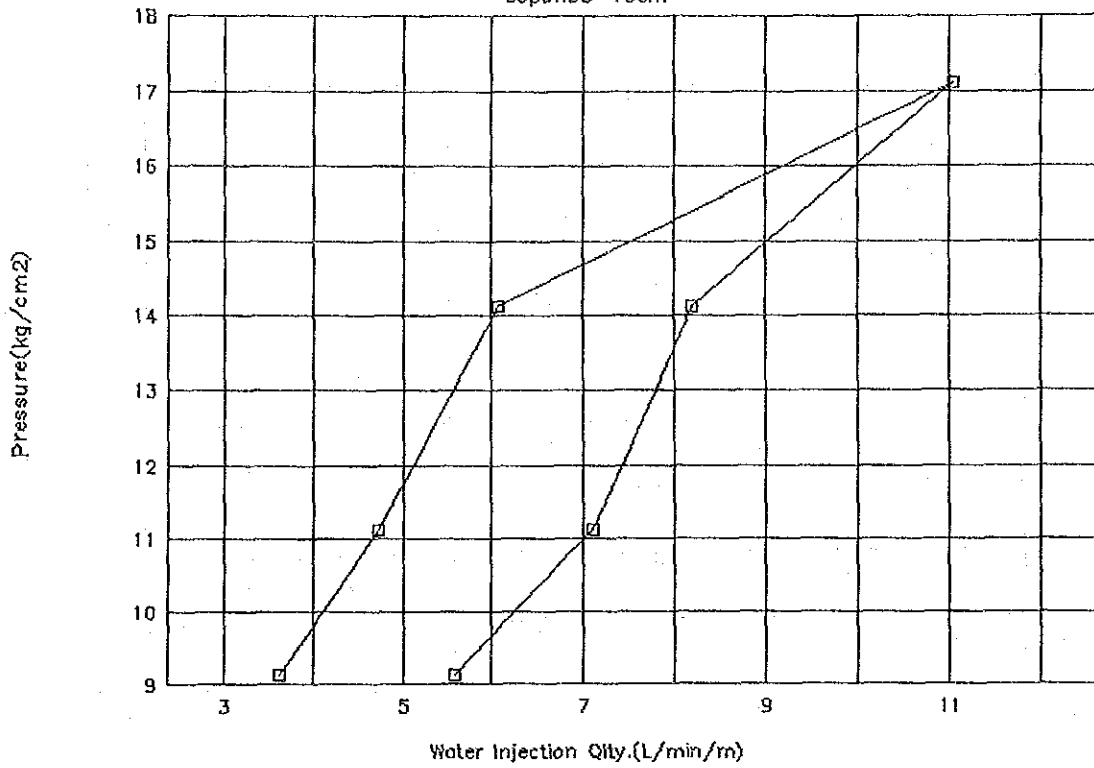
### P/Q.Curve: Hole No.JD-101

Depth:90-95m



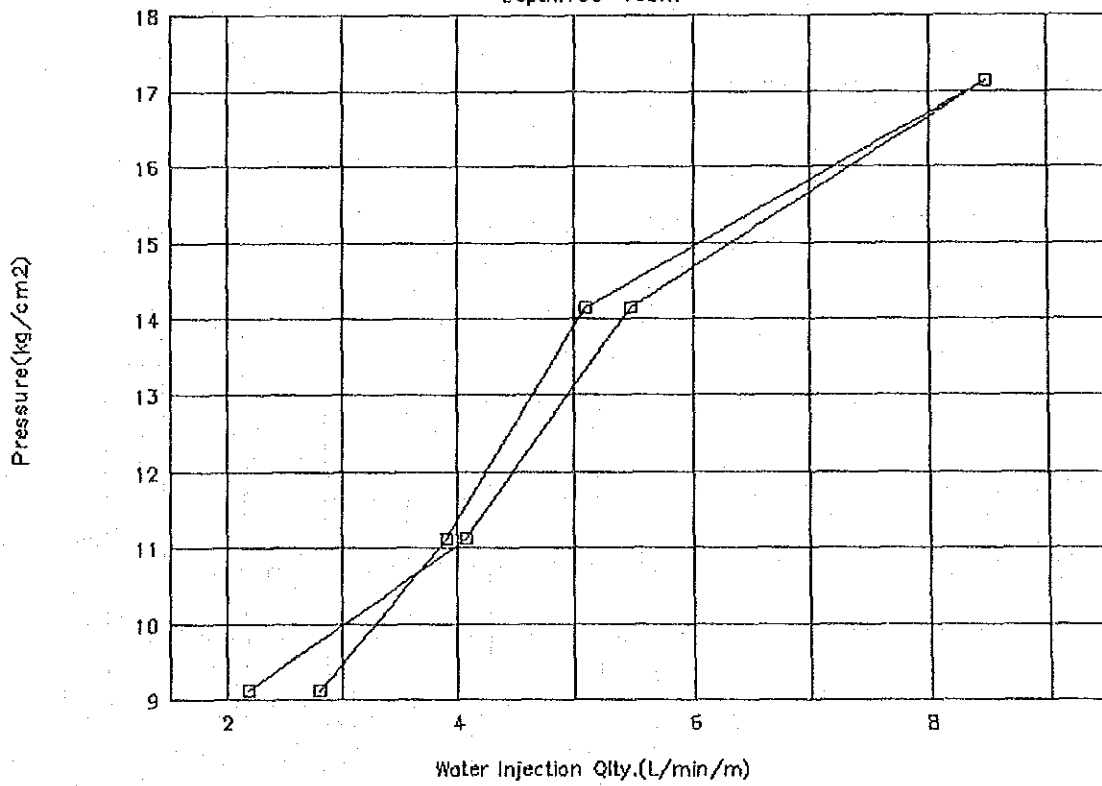
### P/Q.Curve: Hole No.JD-101.

Depth:95-100m



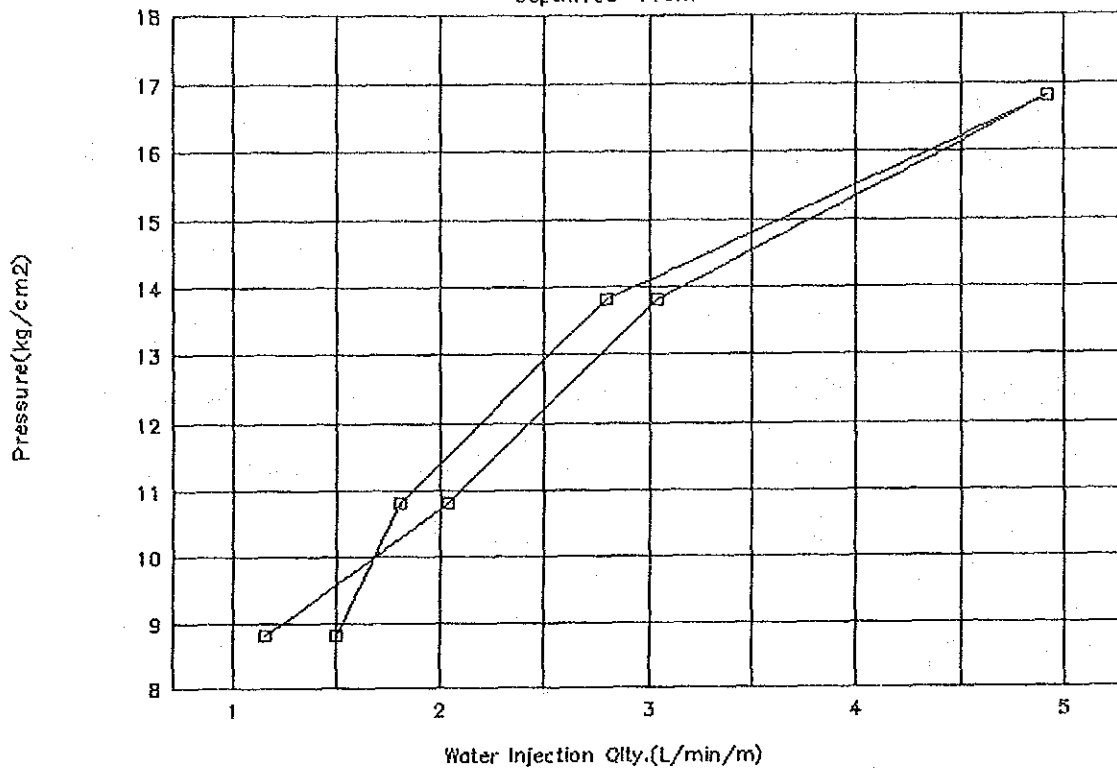
### P/Q.Curve: Hole No.JD-101

Depth:100-105m



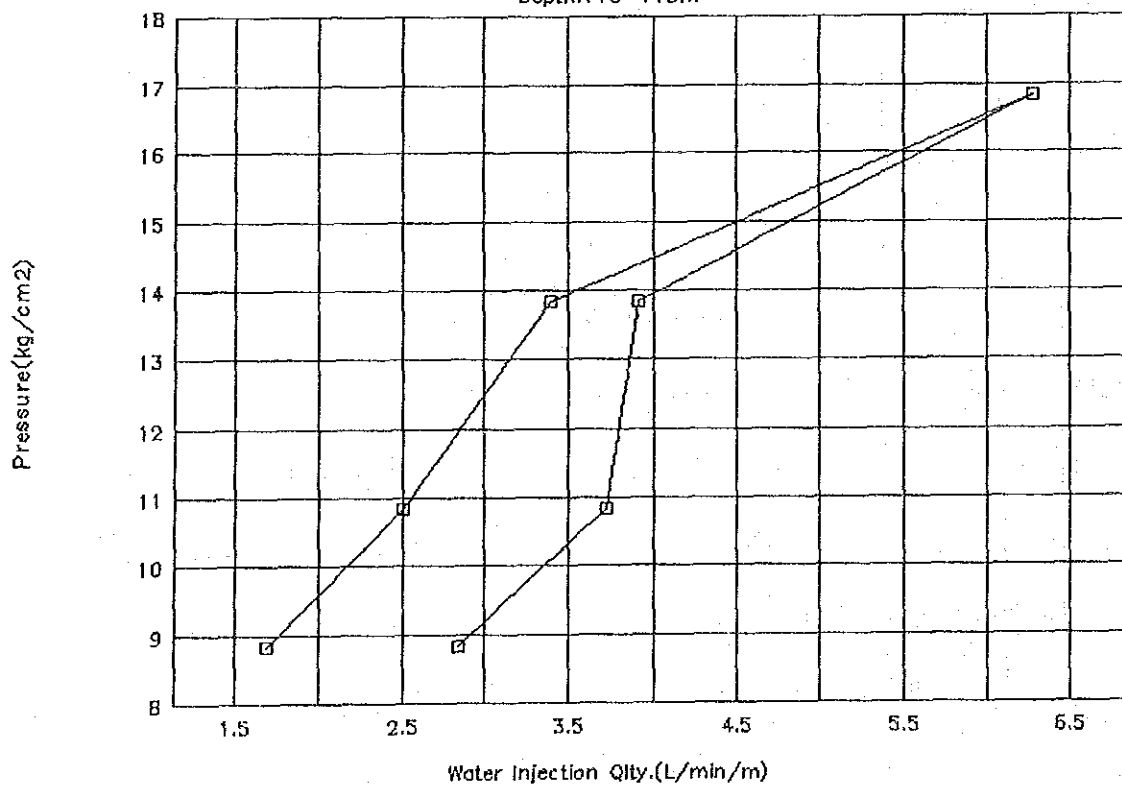
### P/Q.Curve: Hole No.JD-101

Depth:105-110m



### P/Q.Curve: Hole No.JD-101

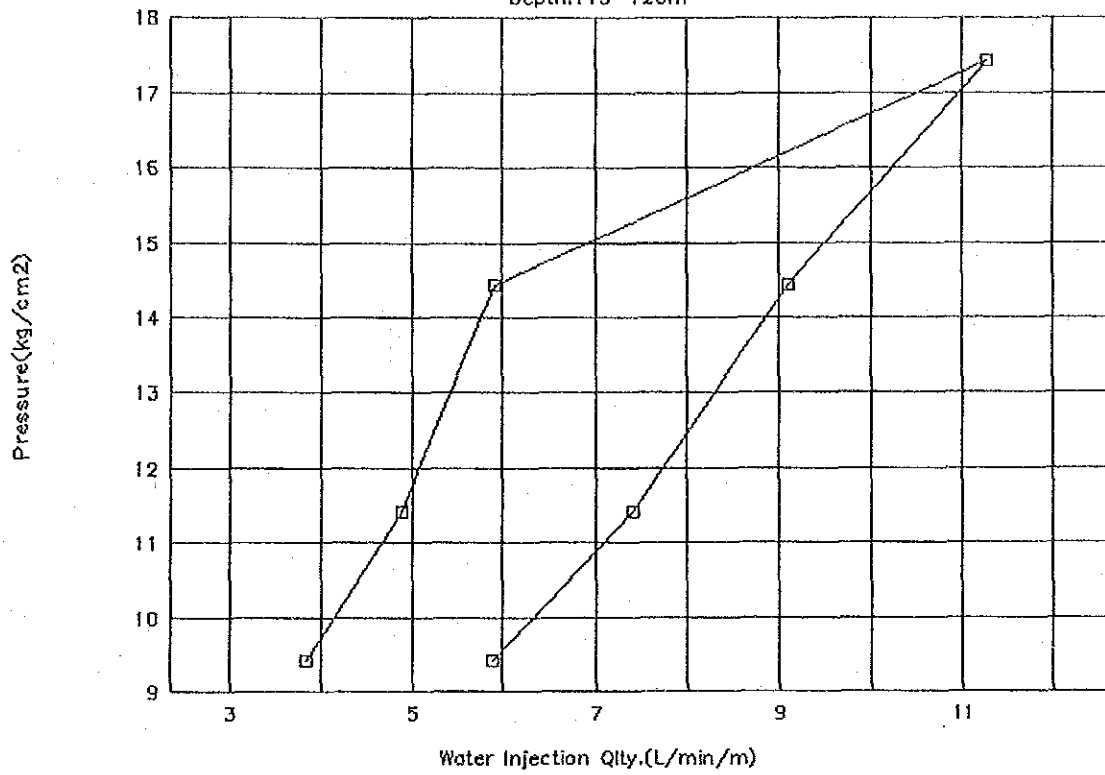
Depth:110-115m





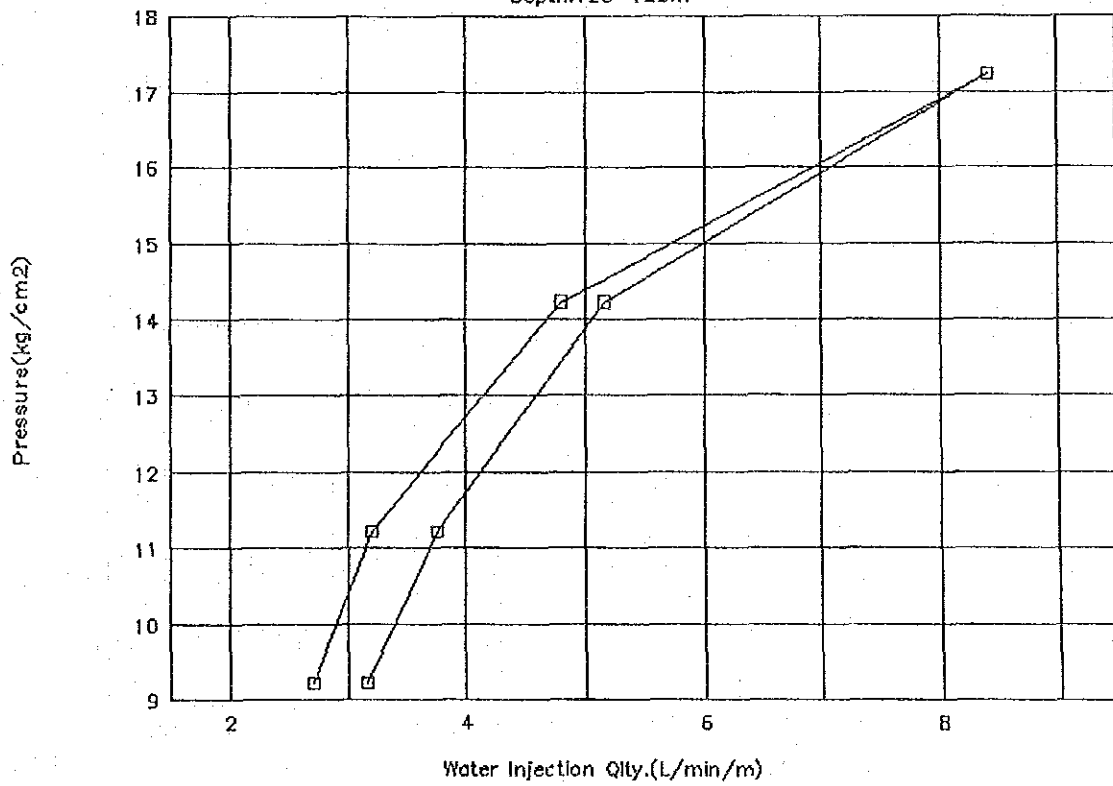
P/Q.Curve: Hole No.JD-101

Depth:115-120m



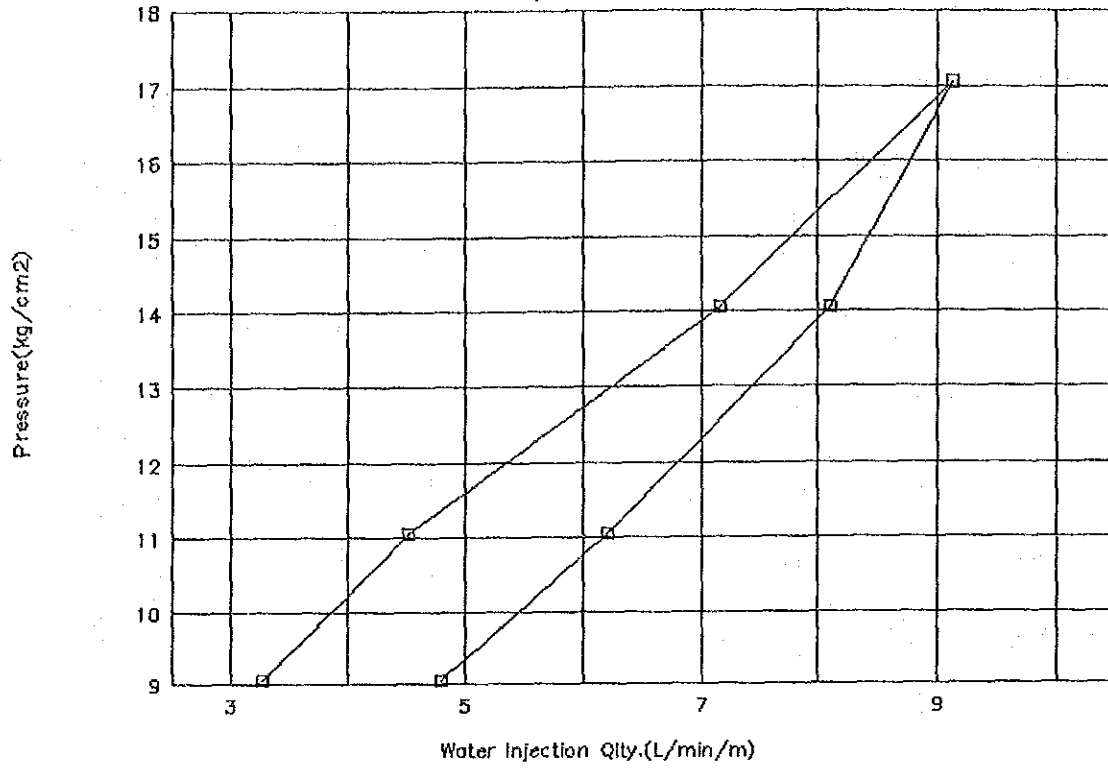
P/Q.Curve: Hole No.JD-101

Depth:120-125m



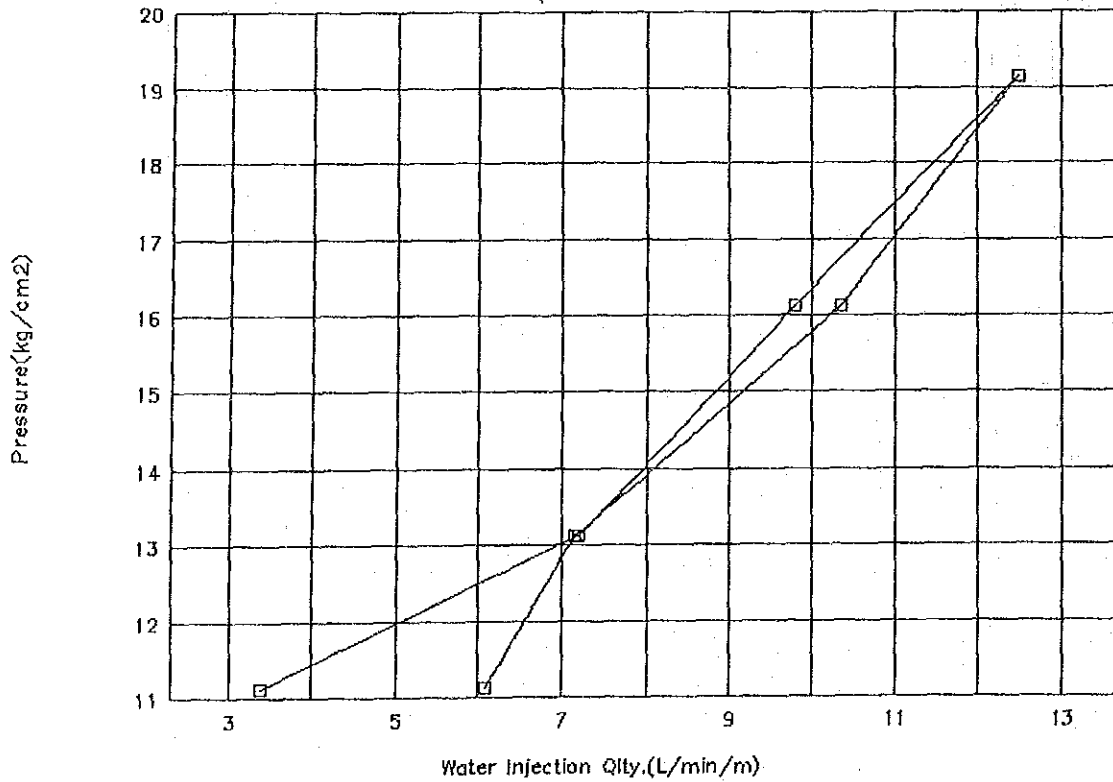
### P/Q.Curve: Hole No.JD-101

Depth:125-130m



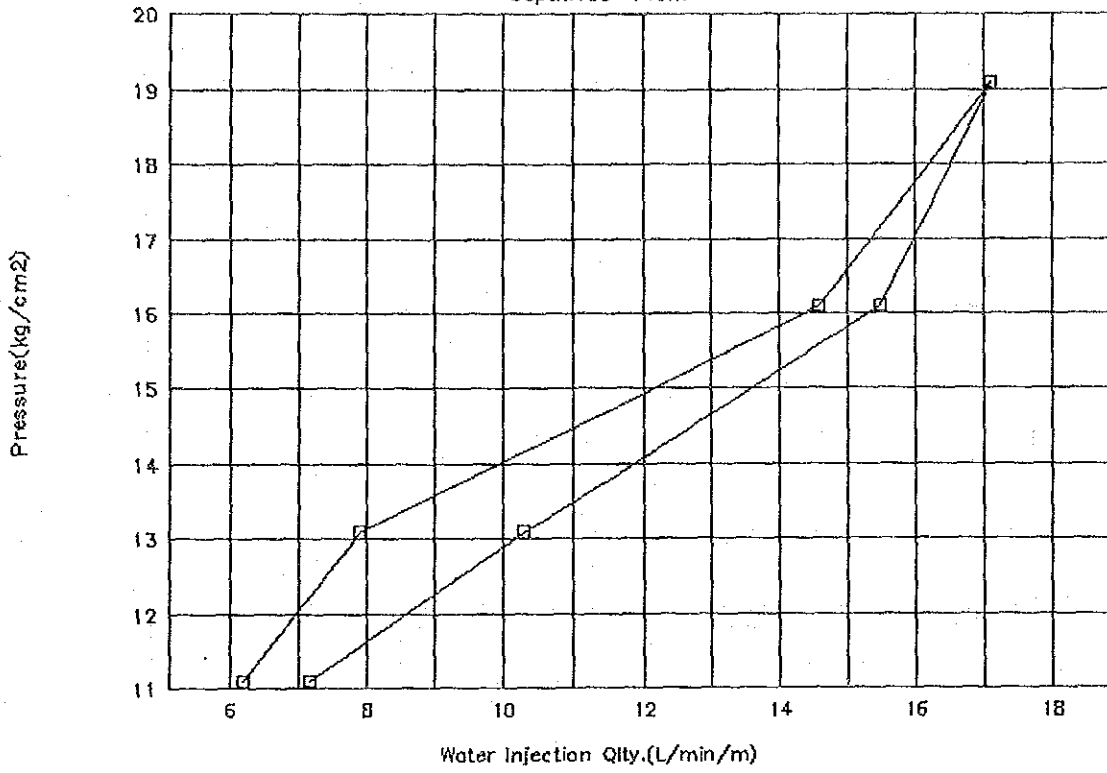
### P/Q.Curve: Hole No.JD-101

Depth:130-135m



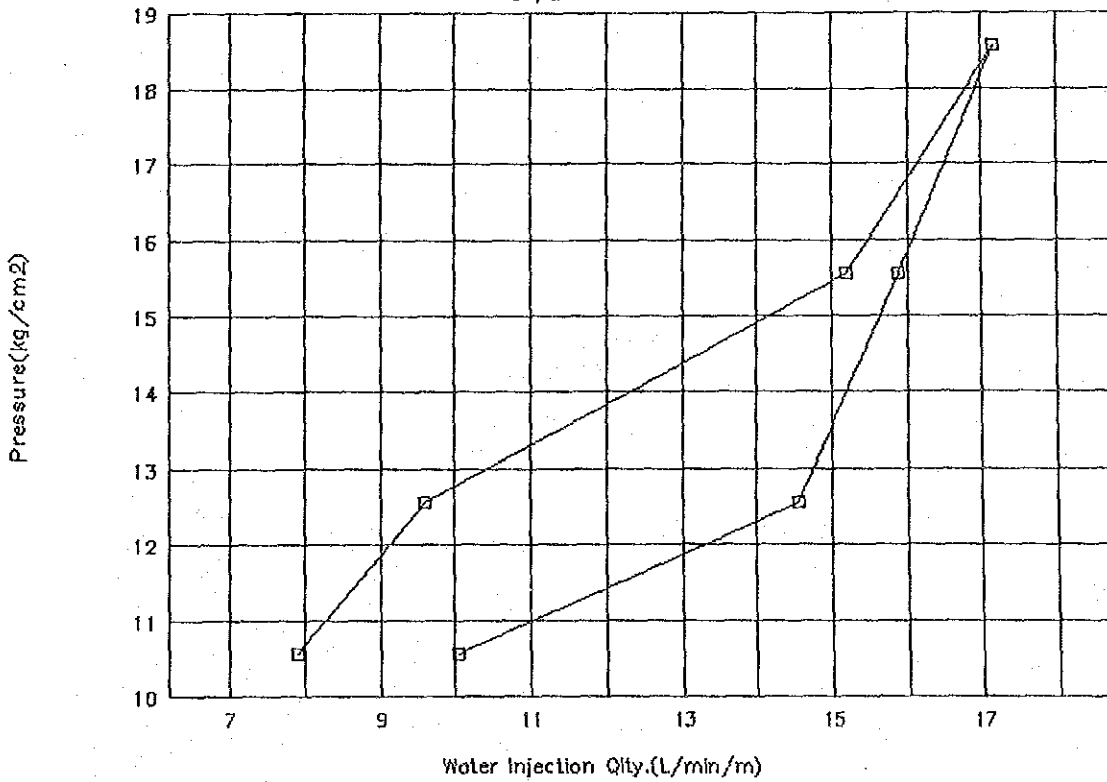
### P/Q.Curve: Hole No.JD-101

Depth:135-140m



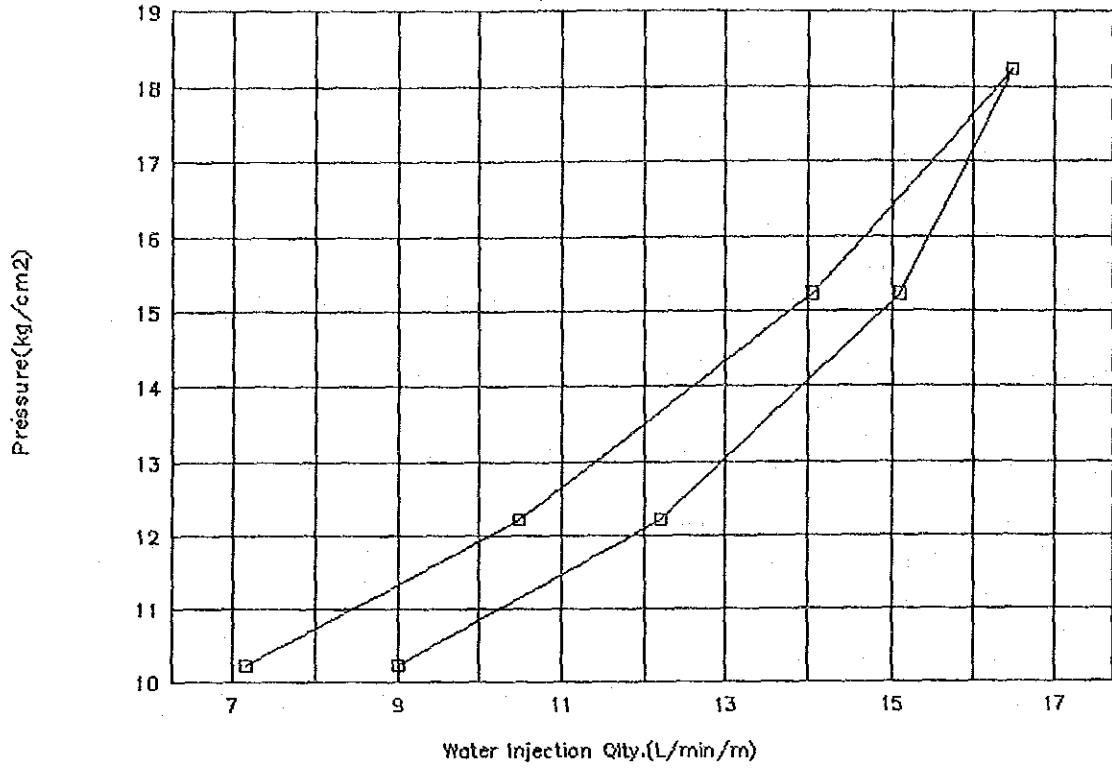
### P/Q.Curve: Hole No.JD-101

Depth:140-145m



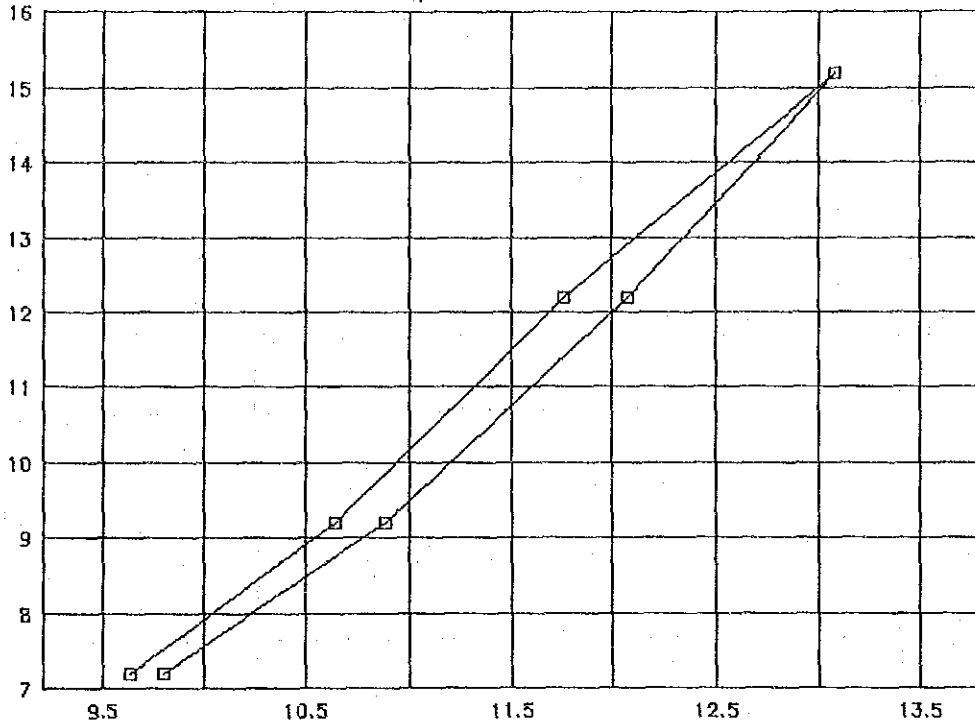
# P/Q.Curve: Hole No.JD-101

Depth:145-150m



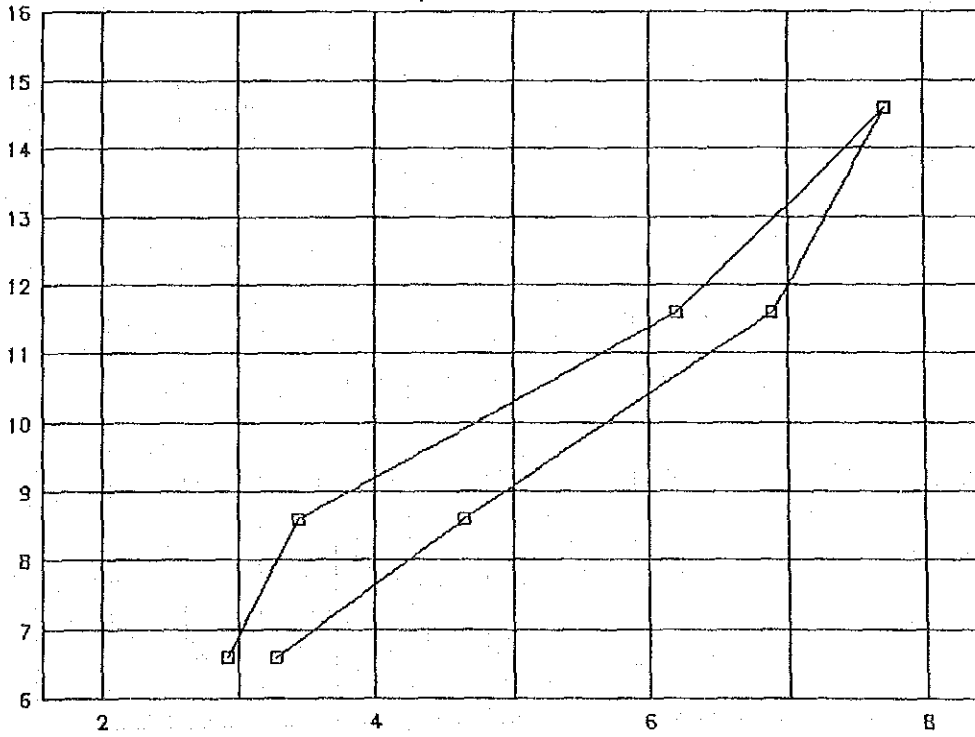
### P/Q.Curve: Hole No.JD-102

Depth:55-60m



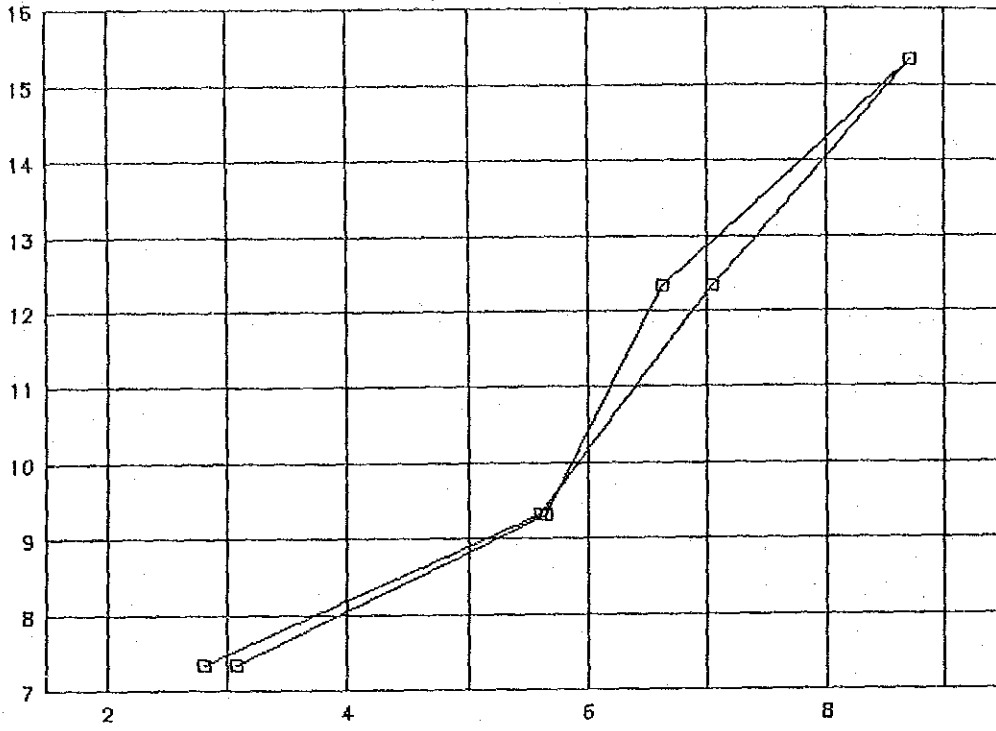
### P/Q.Curve: Hole No.JD-102

Depth:60-65m



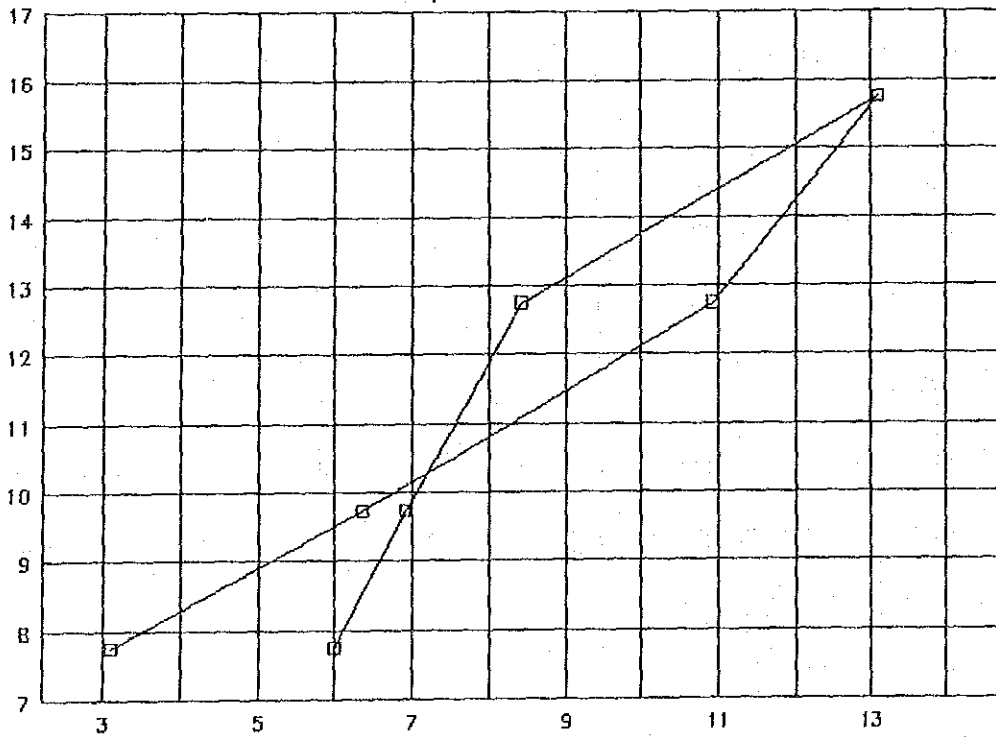
P/Q.Curve: Hole No.JD-102

Depth:65-70m



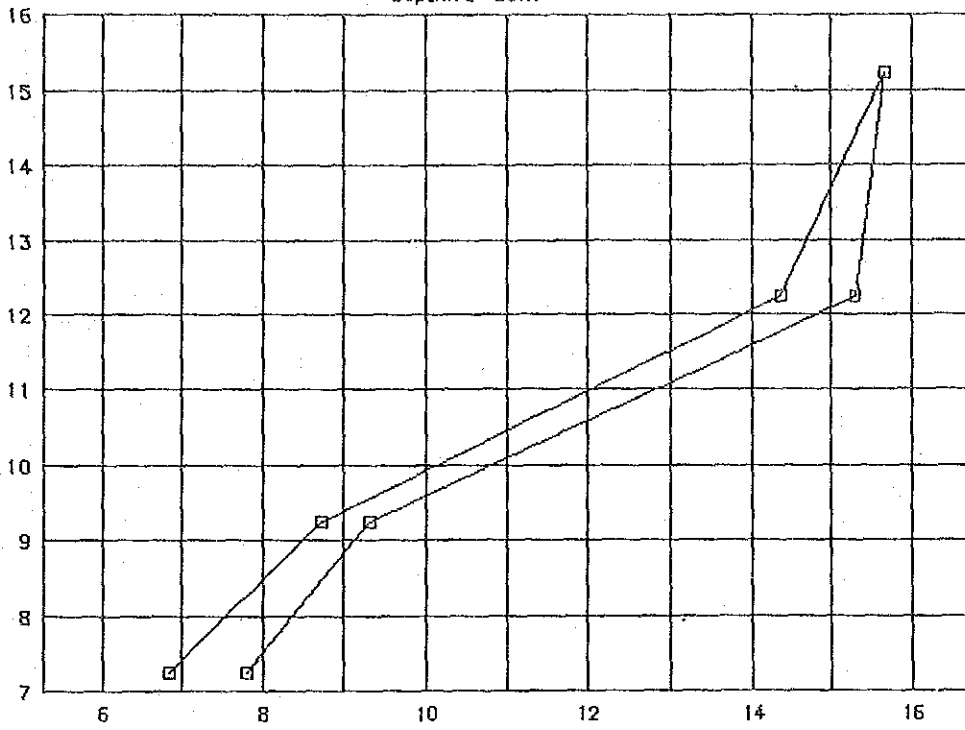
P/Q.Curve: Hole No.JD-102

Depth:70-75m



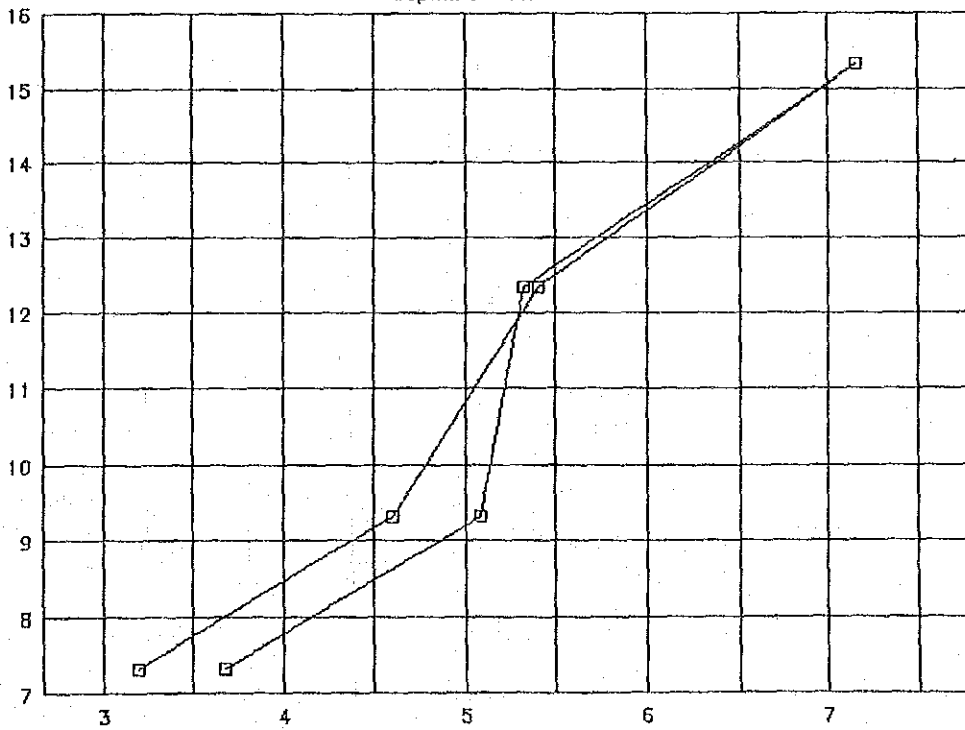
### P/Q.Curve: Hole No.JD-102

Depth:75-80m



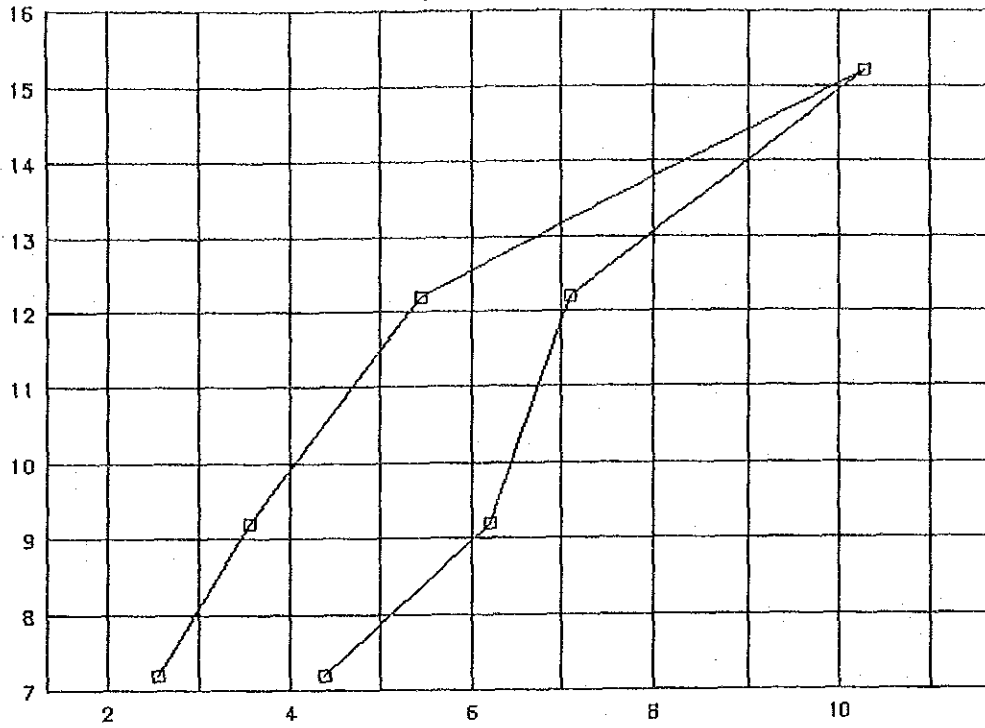
### P/Q.Curve: Hole No.JD-102

Depth:80-85m



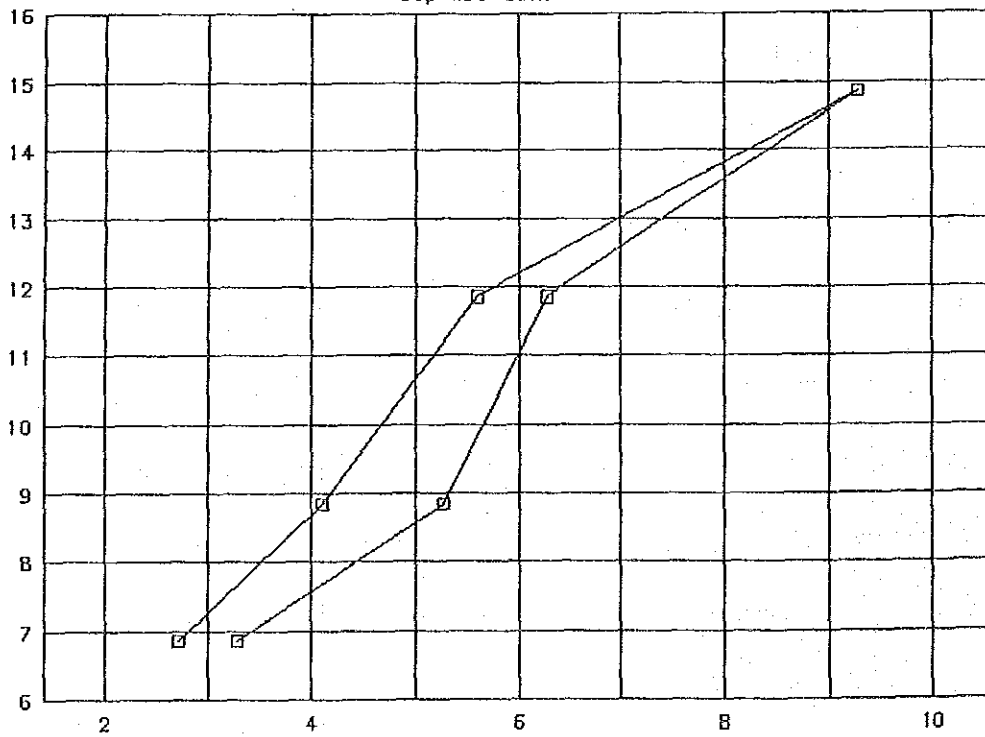
### P/Q.Curve: Hole No.JD-102

Depth:85-90m



### P/Q.Curve: Hole No.JD-102

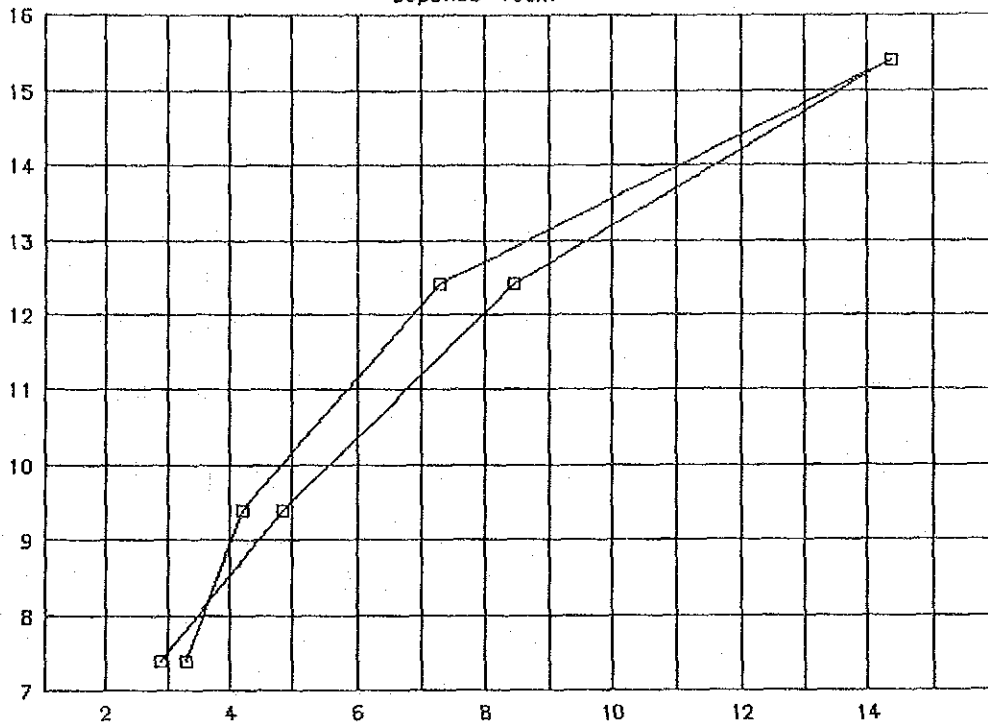
Depth:90-95m





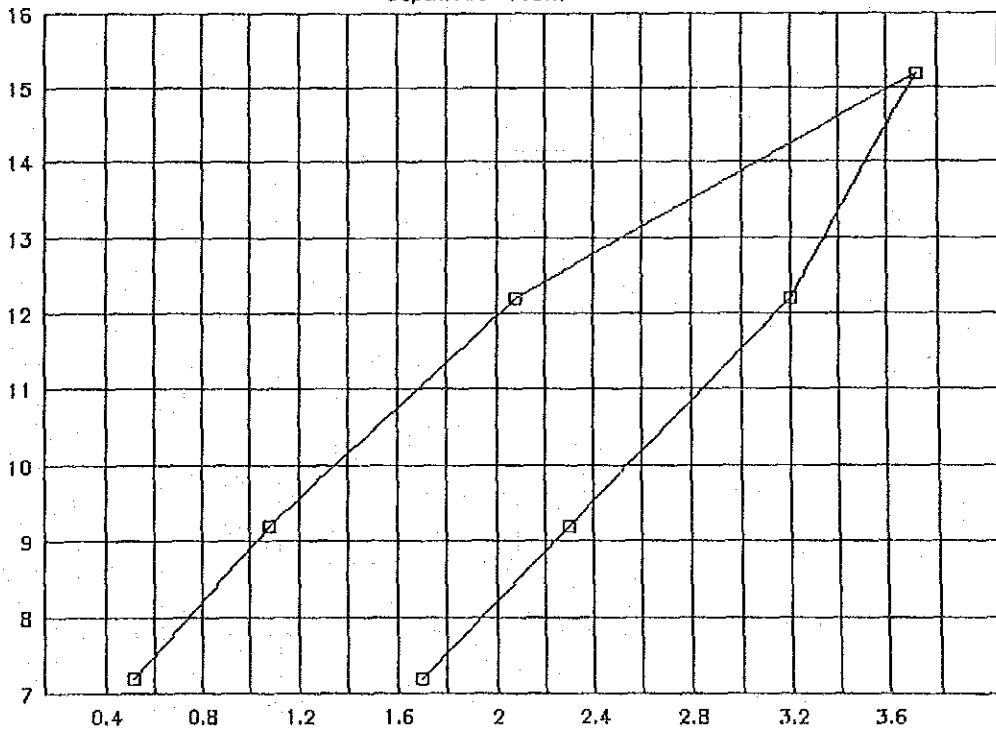
### P/Q.Curve: Hole No.JD-102

Depth:95-100m



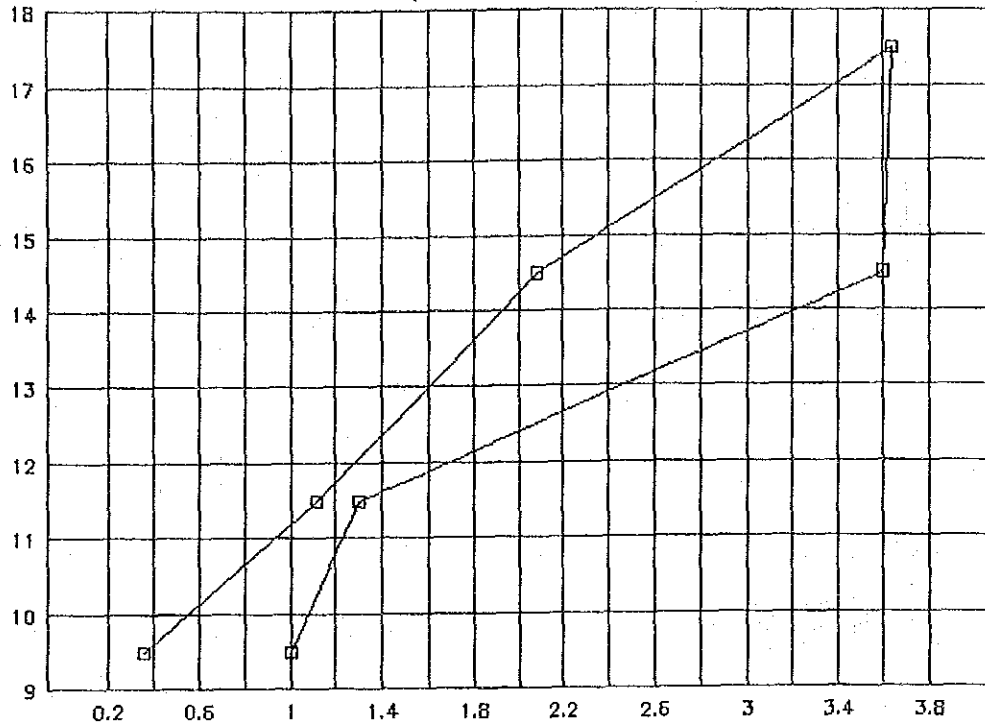
### P/Q.Curve: Hole No.JD-102

Depth:100-105m



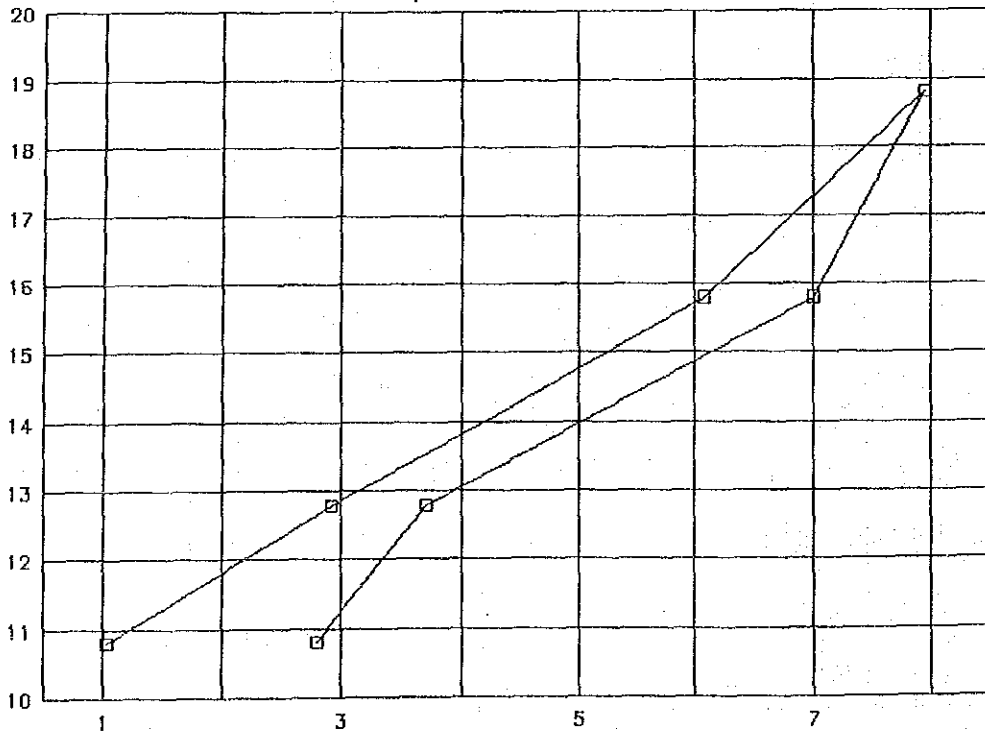
### P/Q.Curve: Hole No.JD-102

Depth:105-110m



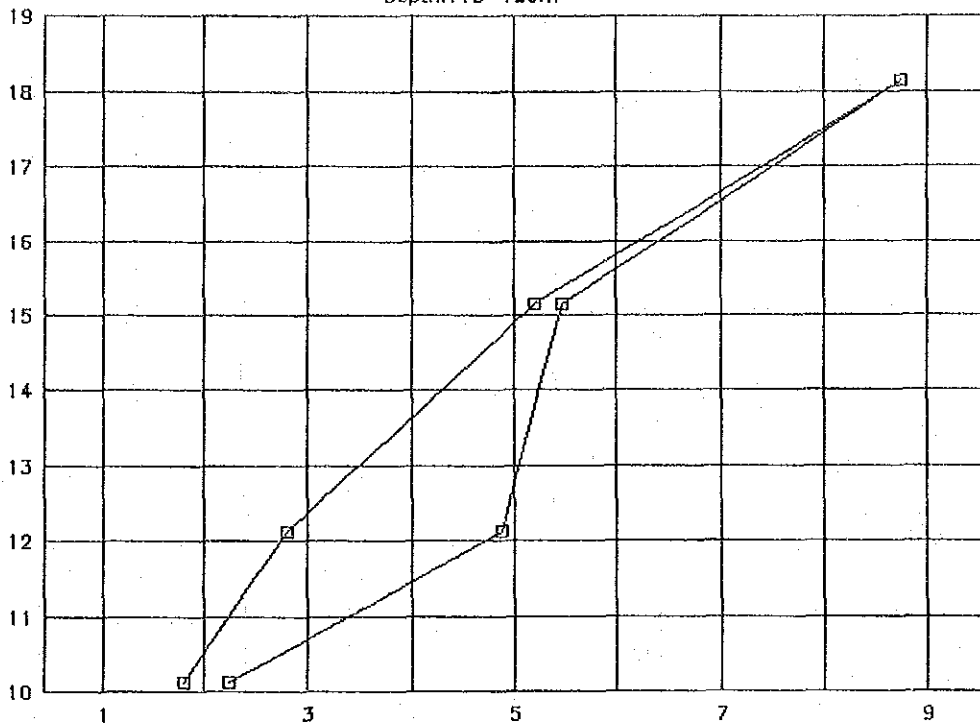
### P/Q.Curve: Hole No.JD-102

Depth:110-115m



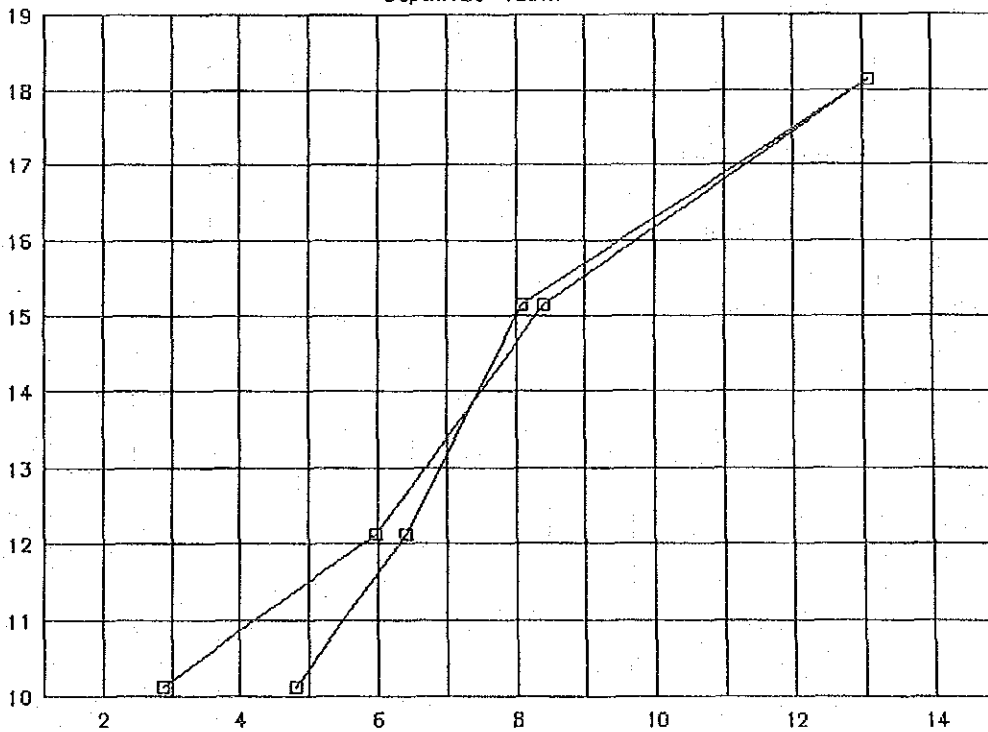
### P/Q.Curve: Hole No.JD-102

Depth:115-120m



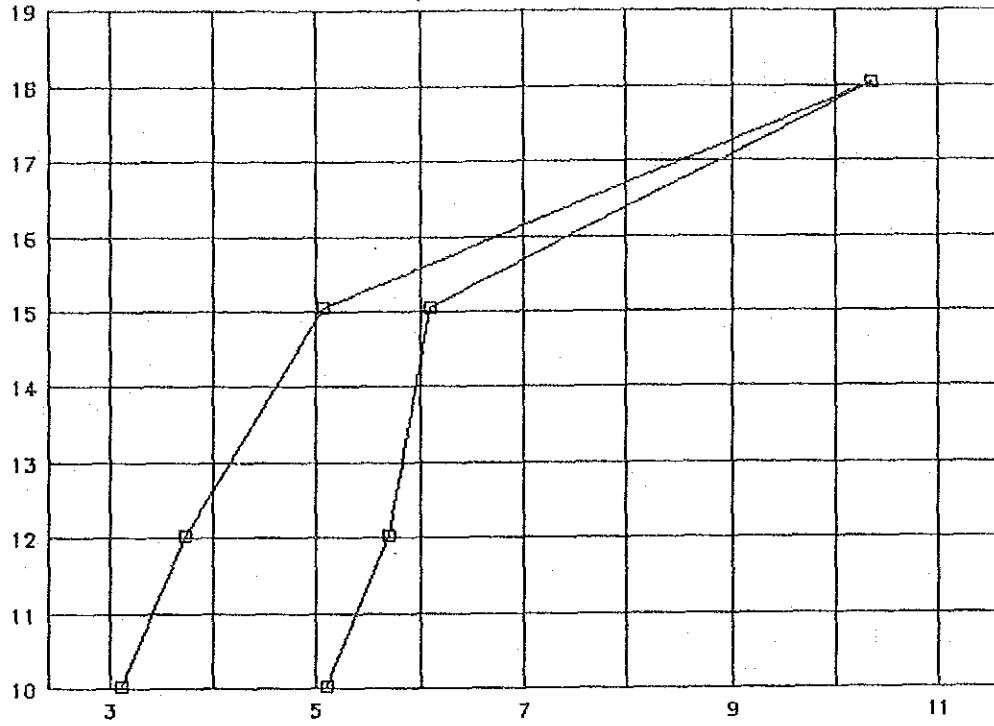
### P/Q.Curve: Hole No.JD-102

Depth:120-125m



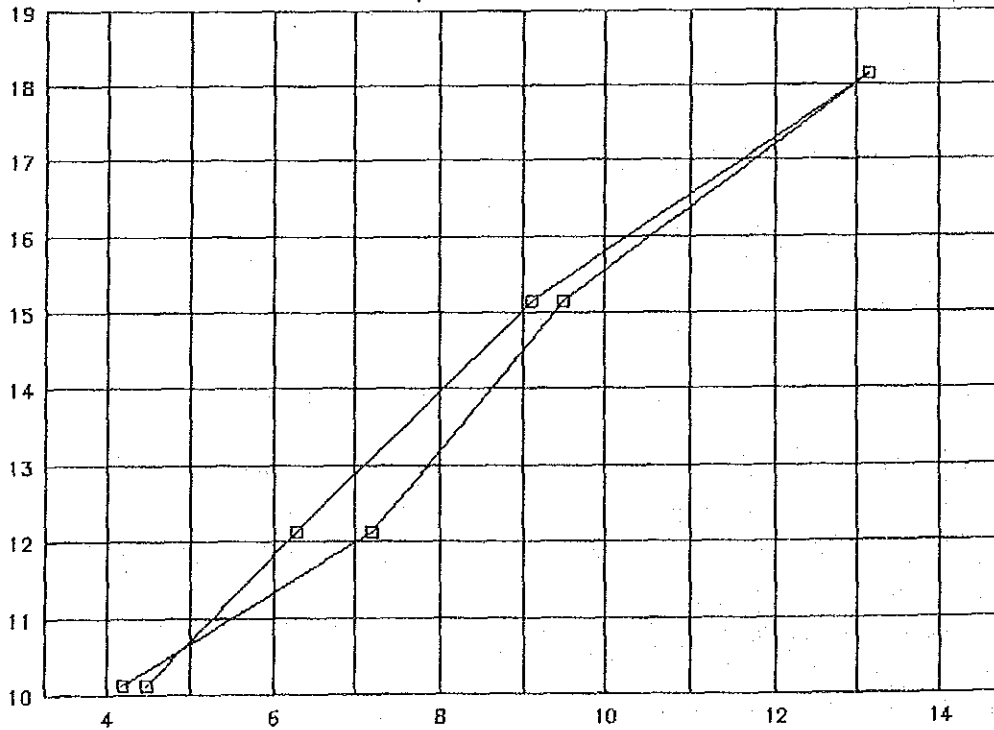
### P/Q.Curve: Hole No.JD-102

Depth:125-130m



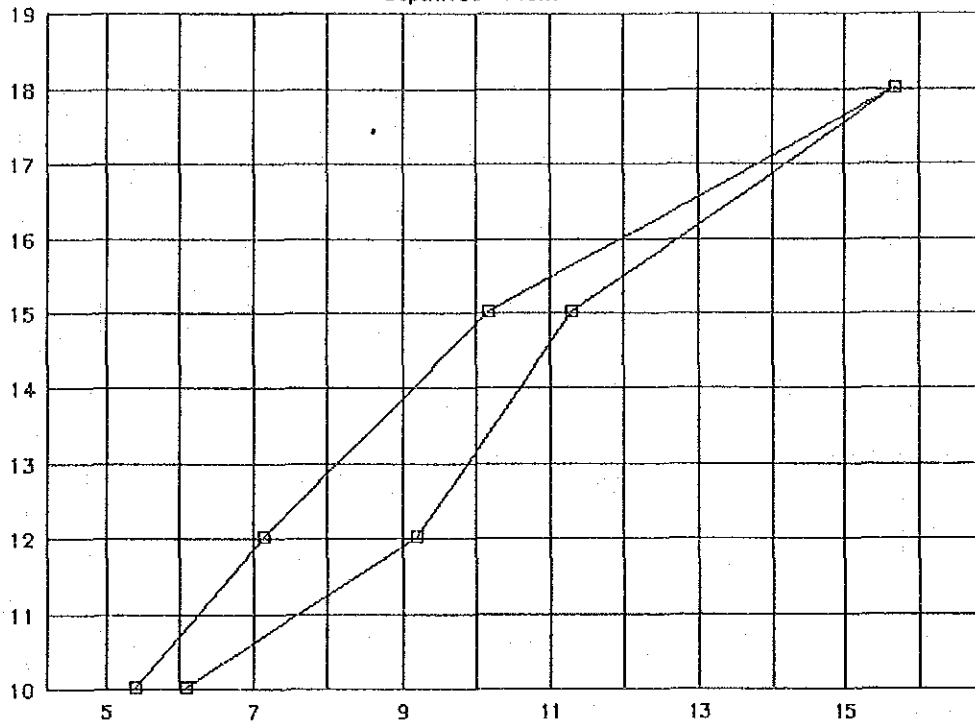
### P/Q.Curve: Hole No.JD-102

Depth:130-135m



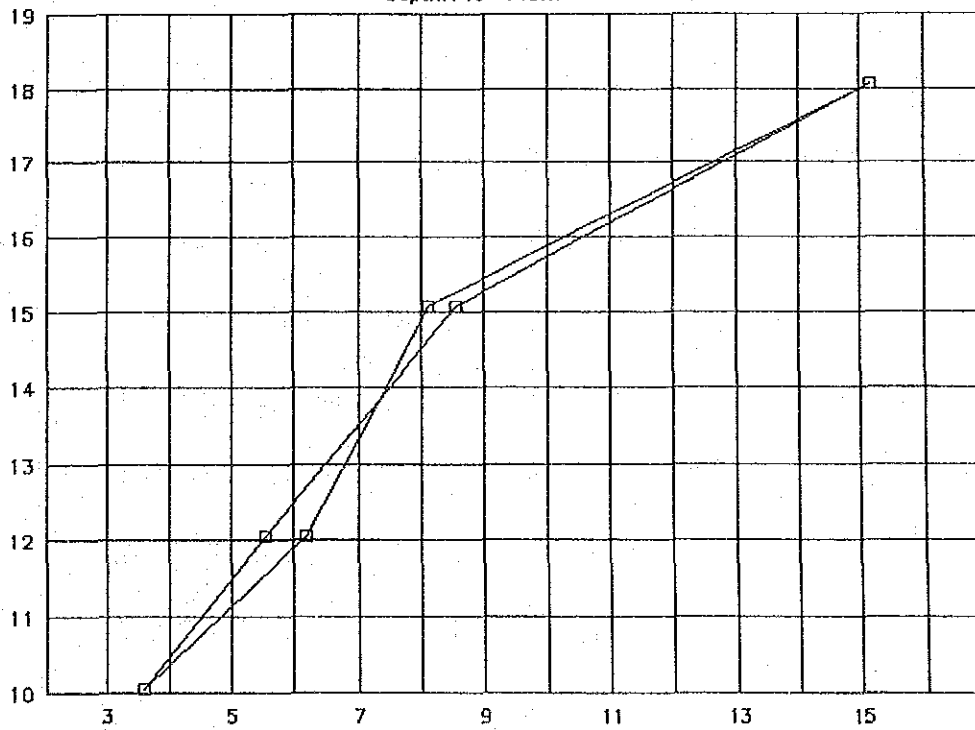
### P/Q.Curve: Hole No.JD-102

Depth:135-140m



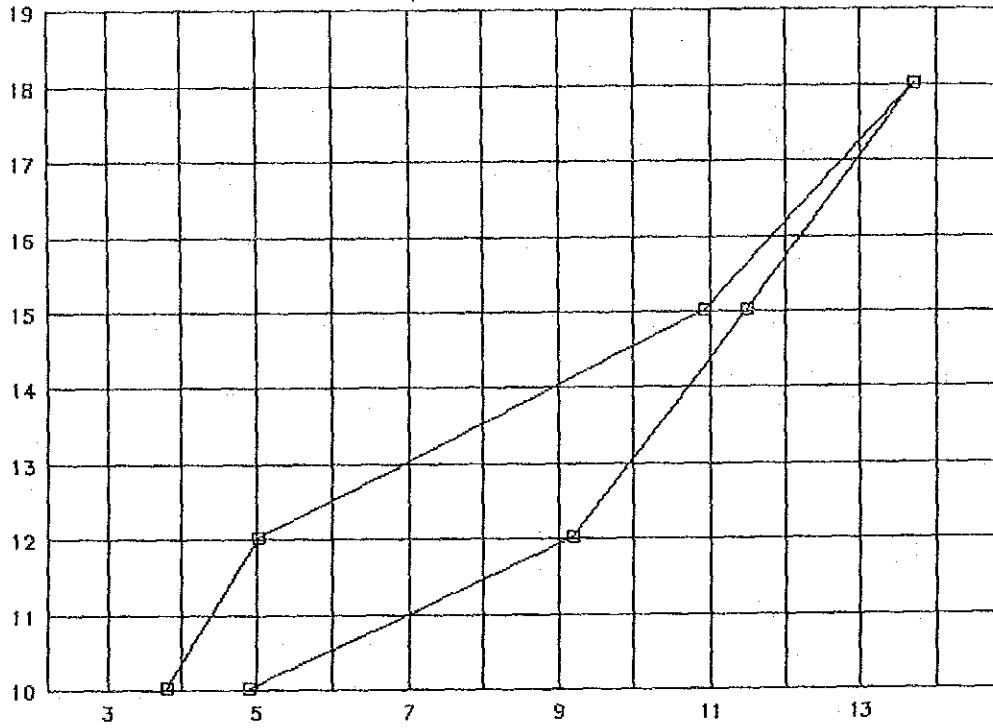
### P/Q.Curve: Hole No.JD-102

Depth:140-145m



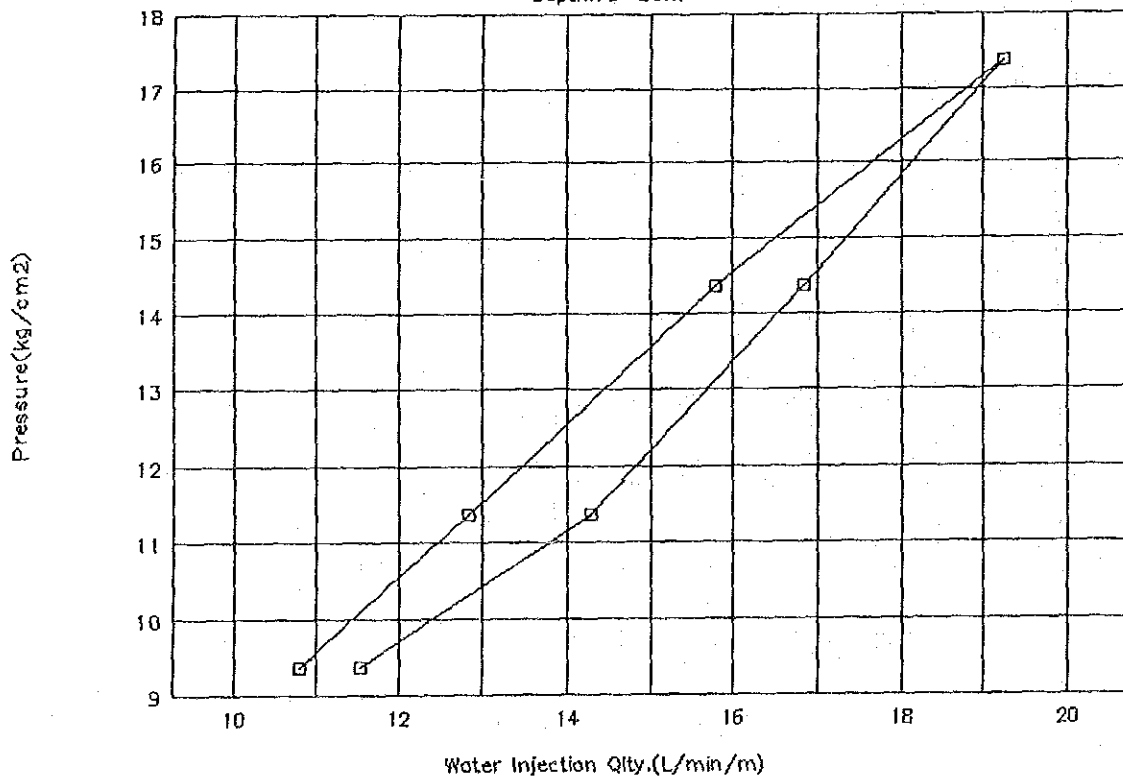
### P/Q.Curve: Hole No.JD-102

Depth:145-150m



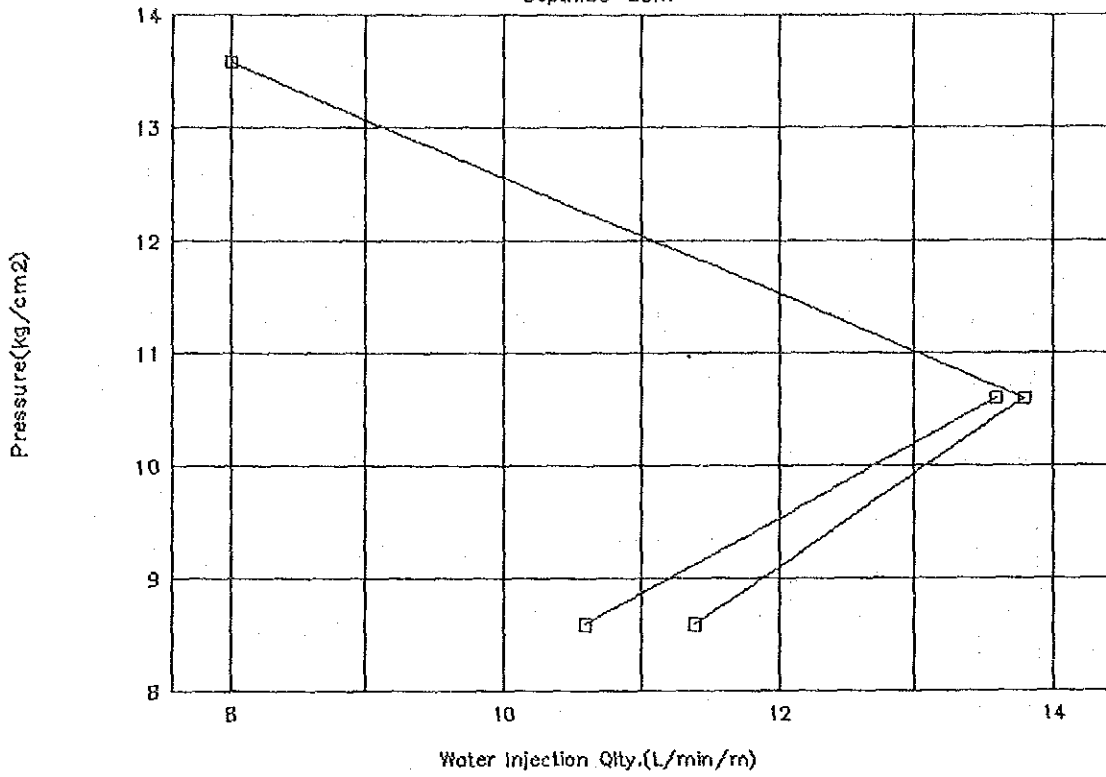
### P/Q.Curve: Hole No.JD-103

Depth:75-80m



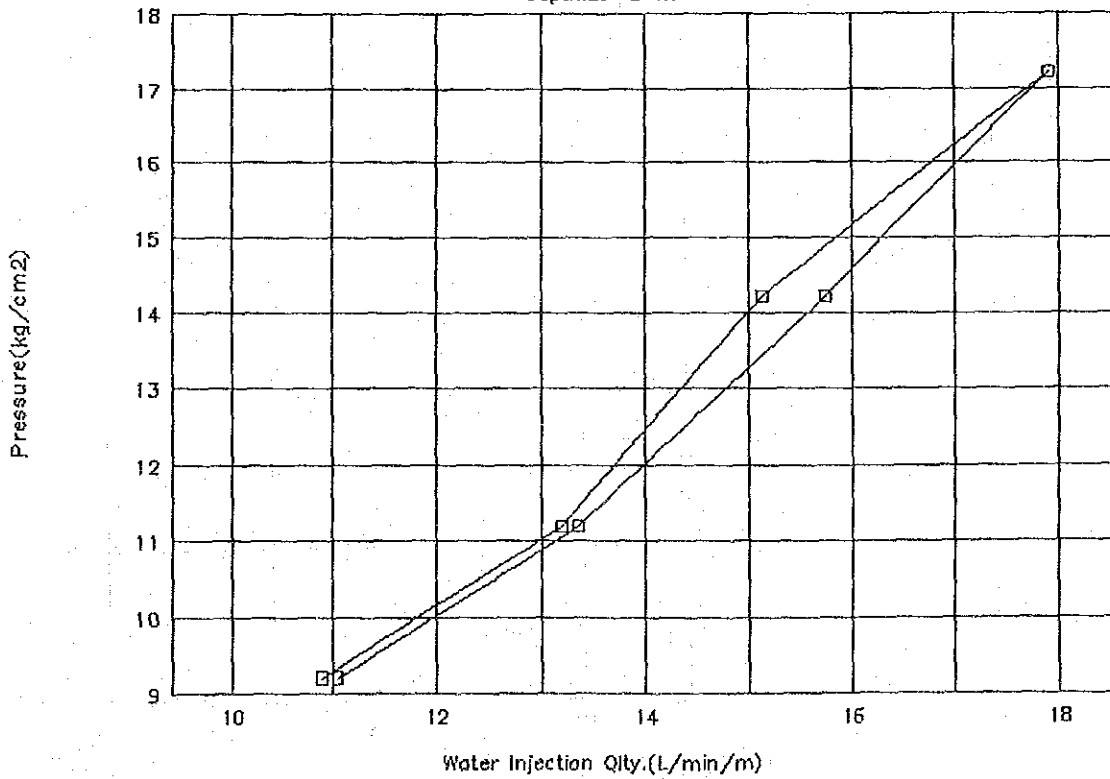
### P/Q.Curve: Hole No.JD-103

Depth:80-85m



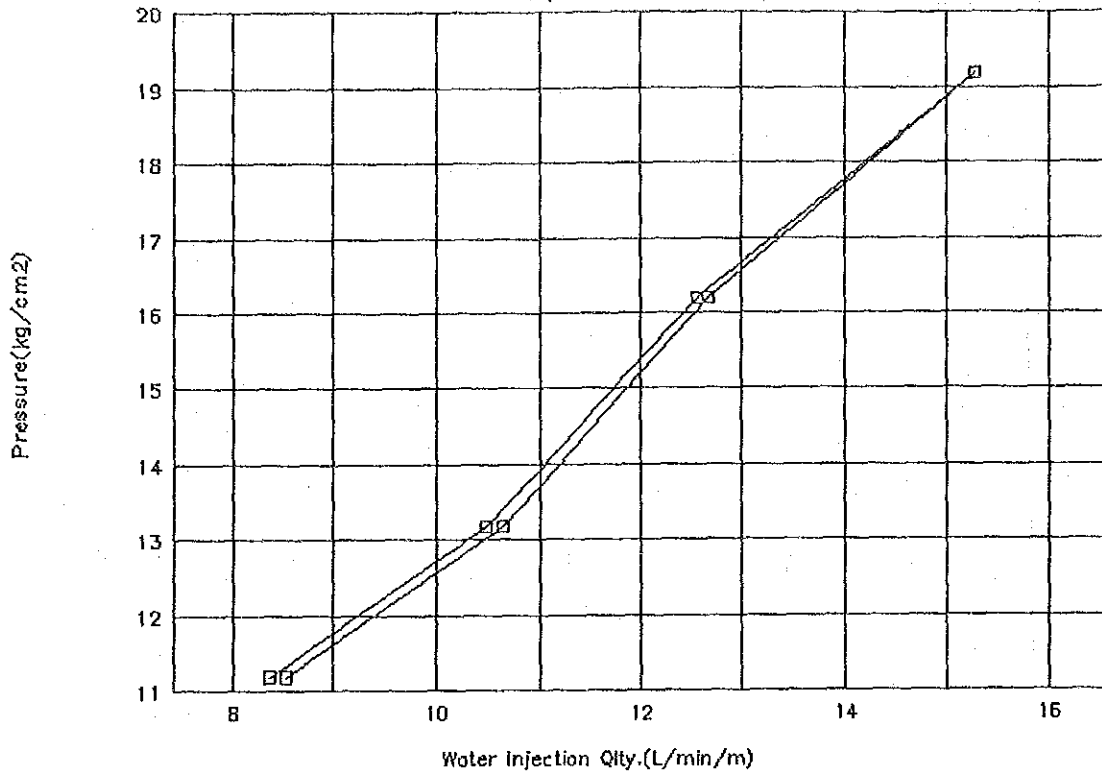
### P/Q.Curve: Hole No.JD-103

Depth:85-90m



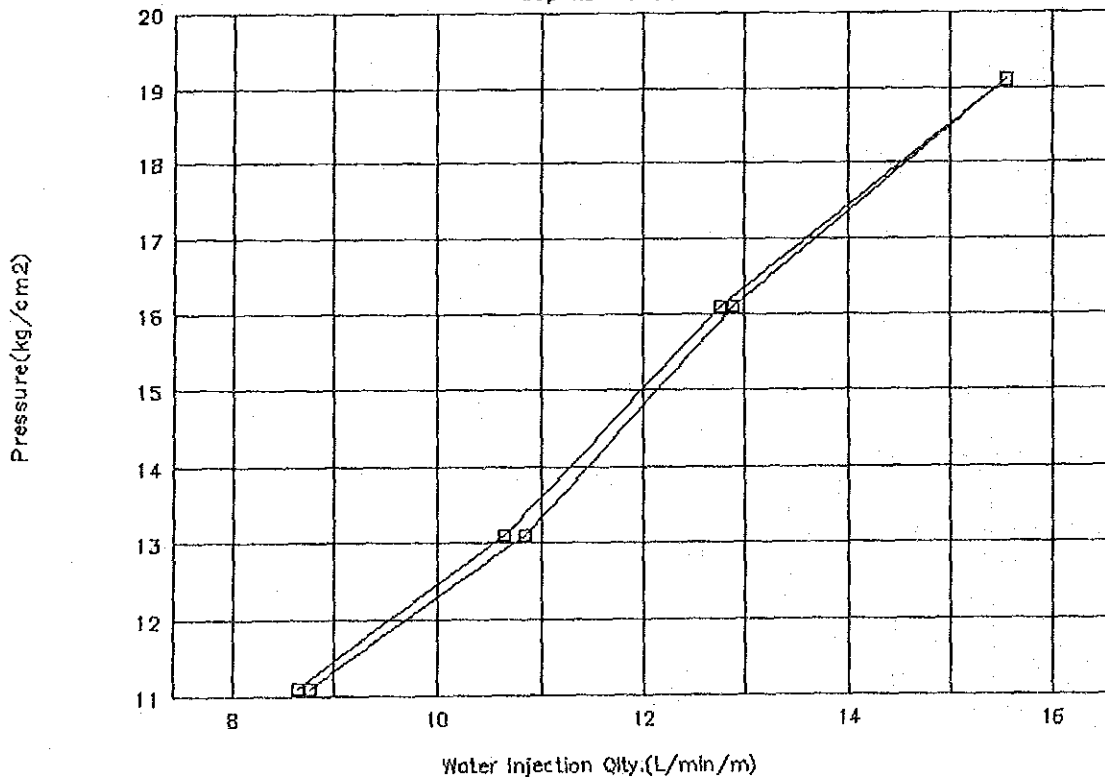
### P/Q.Curve: Hole No.JD-103

Depth:90-95m



### P/Q.Curve: Hole No.JD-103

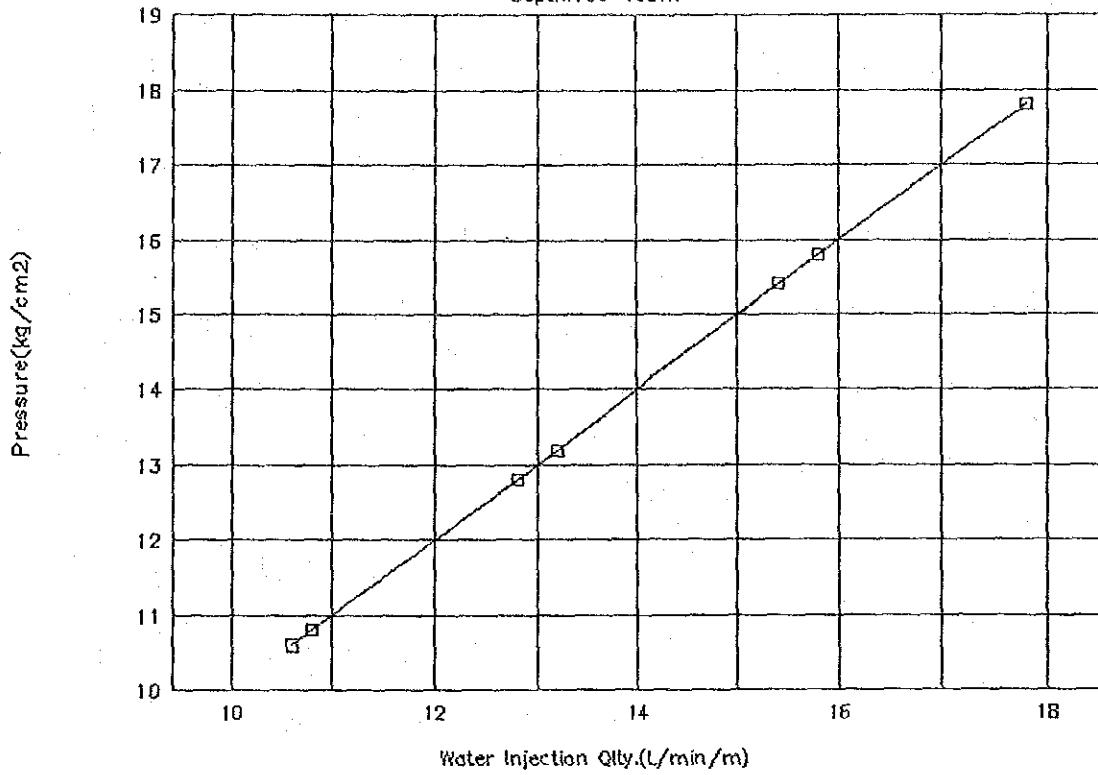
Depth:95-100m





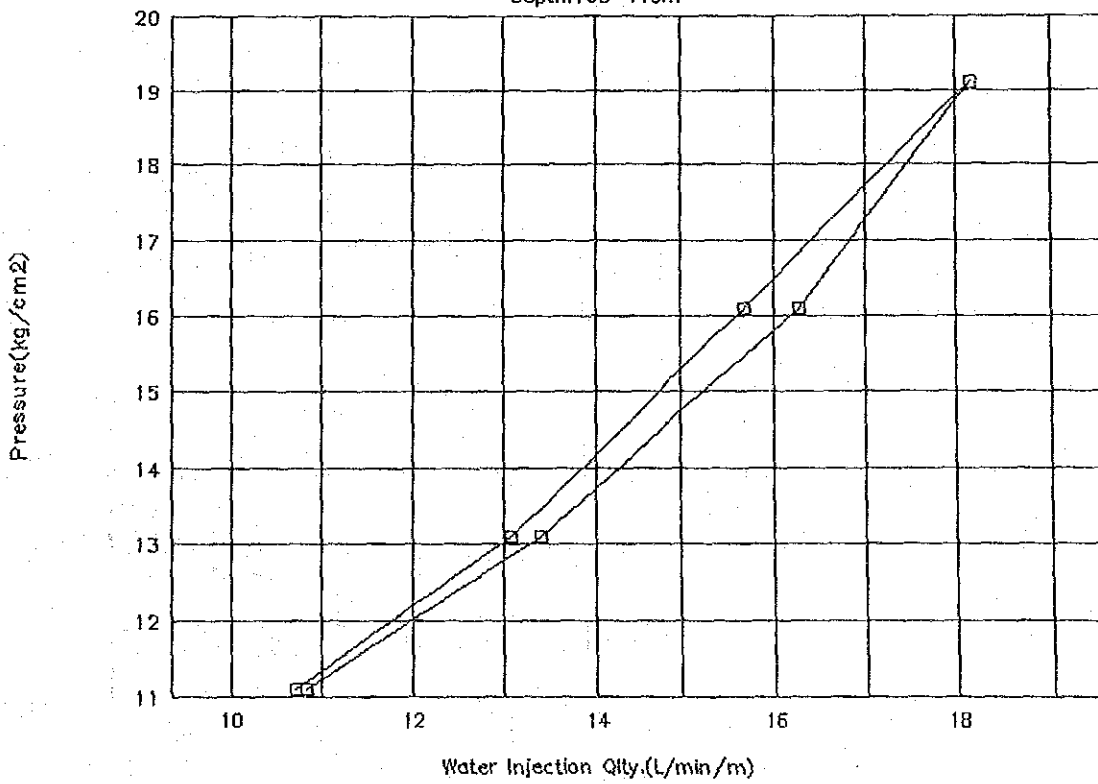
### P/Q.Curve: Hole No.JD-103

Depth:100-105m



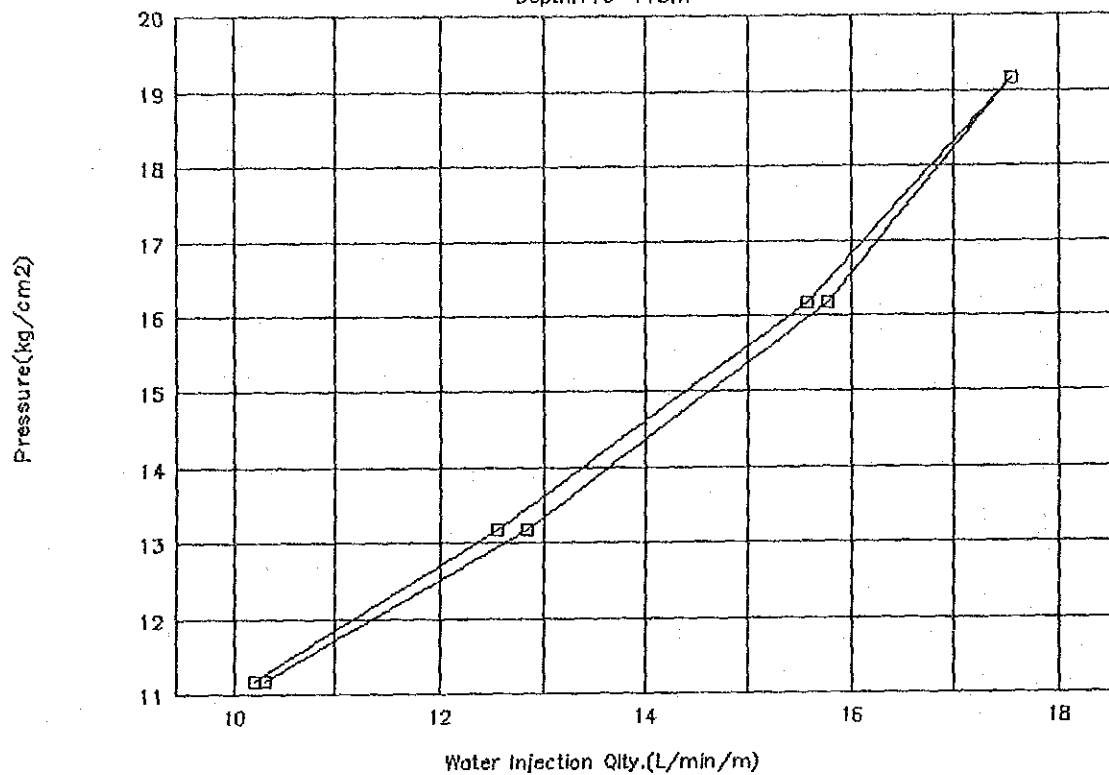
### P/Q.Curve: Hole No.JD-103

Depth:105-110m



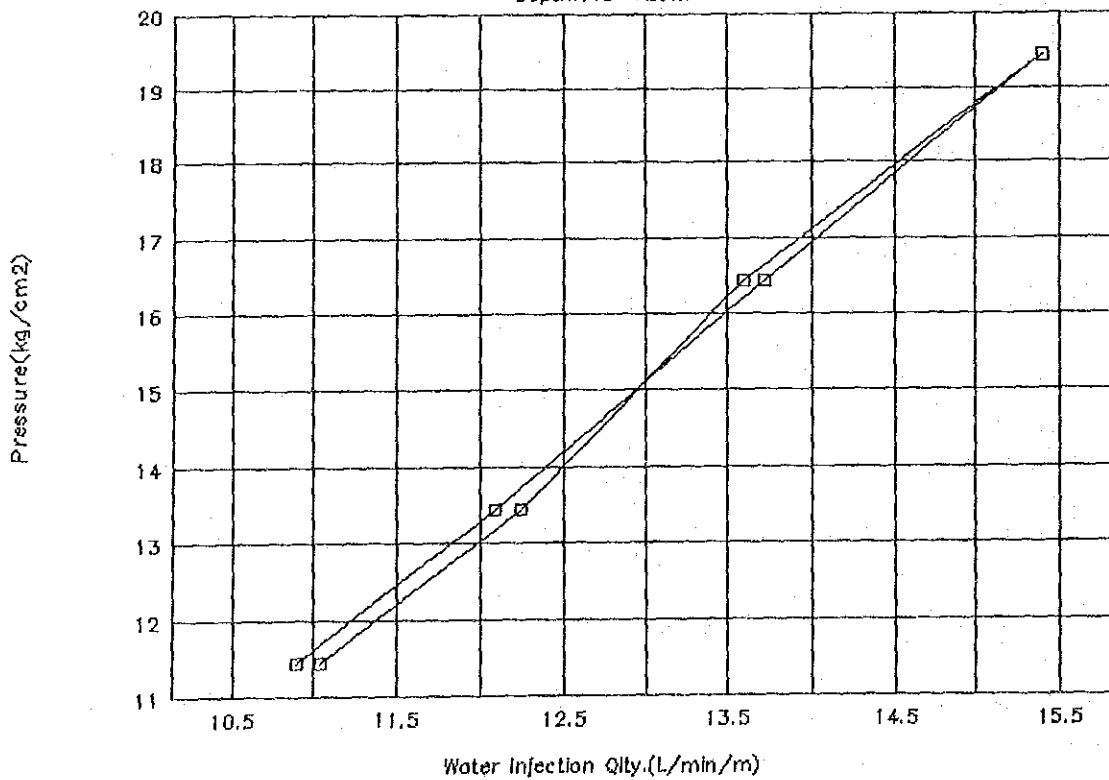
### P/Q.Curve: Hole No.JD-103

Depth:110-115m



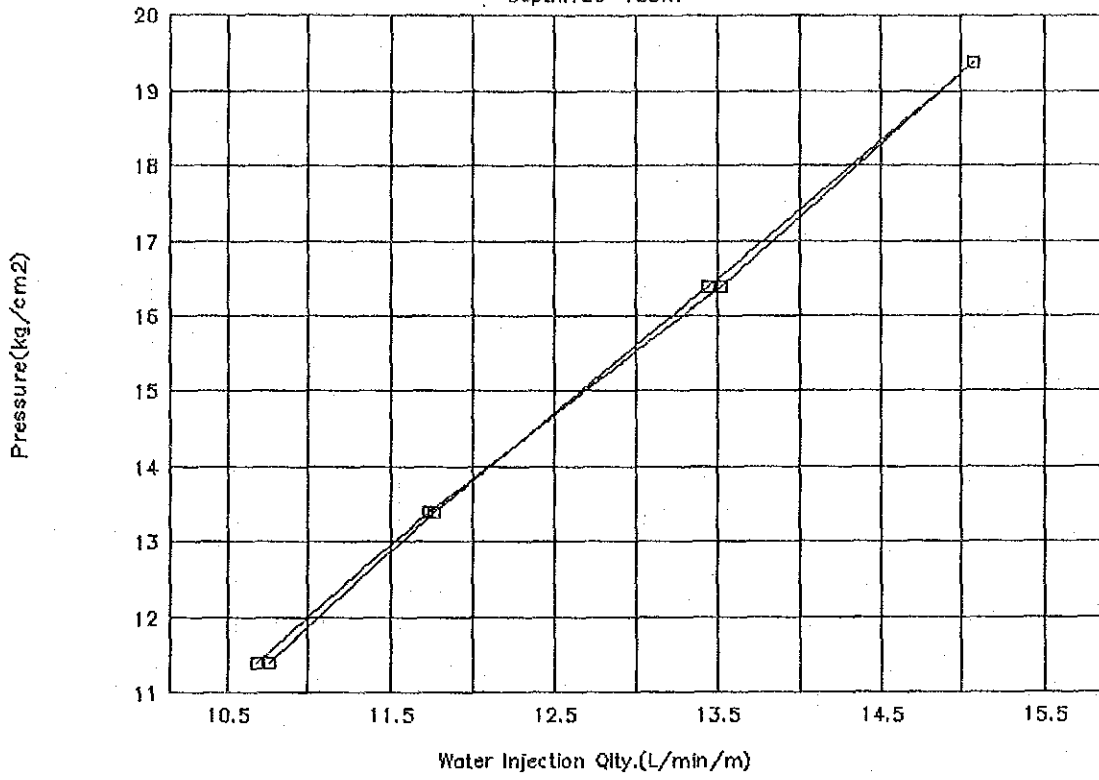
### P/Q.Curve: Hole No.JD-103

Depth:115-120m



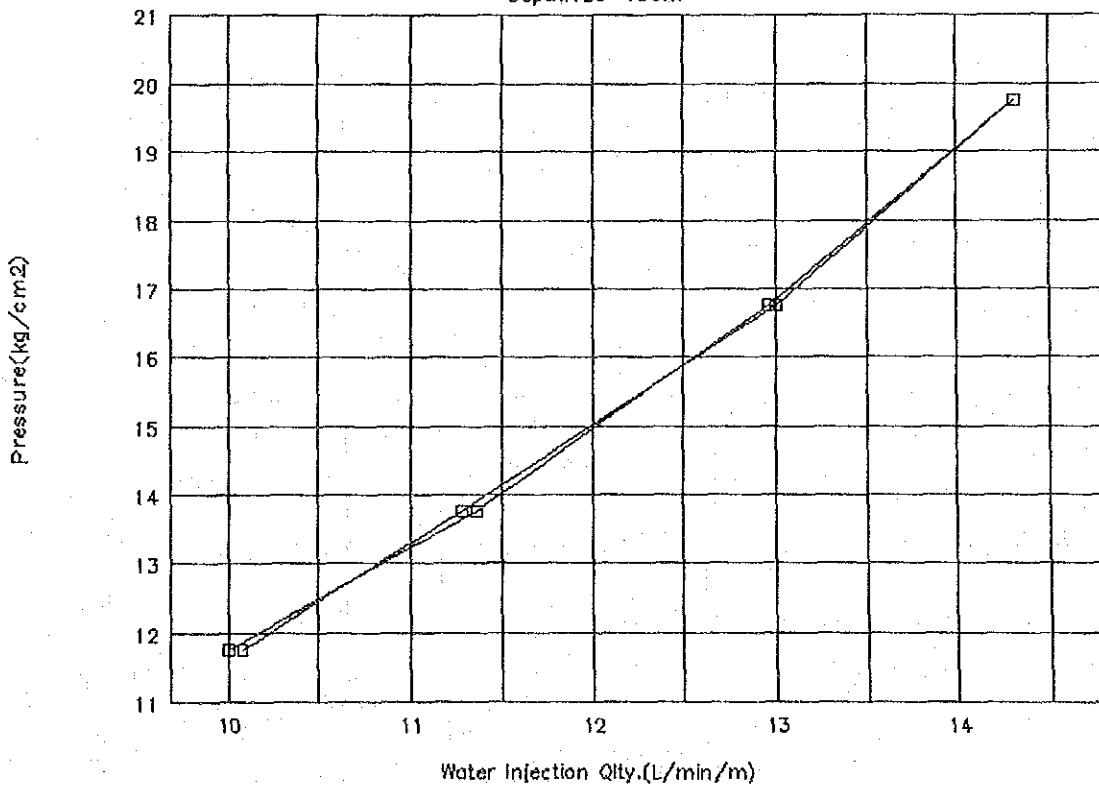
### P/Q.Curve: Hole No.JD-103

Depth:120-125m



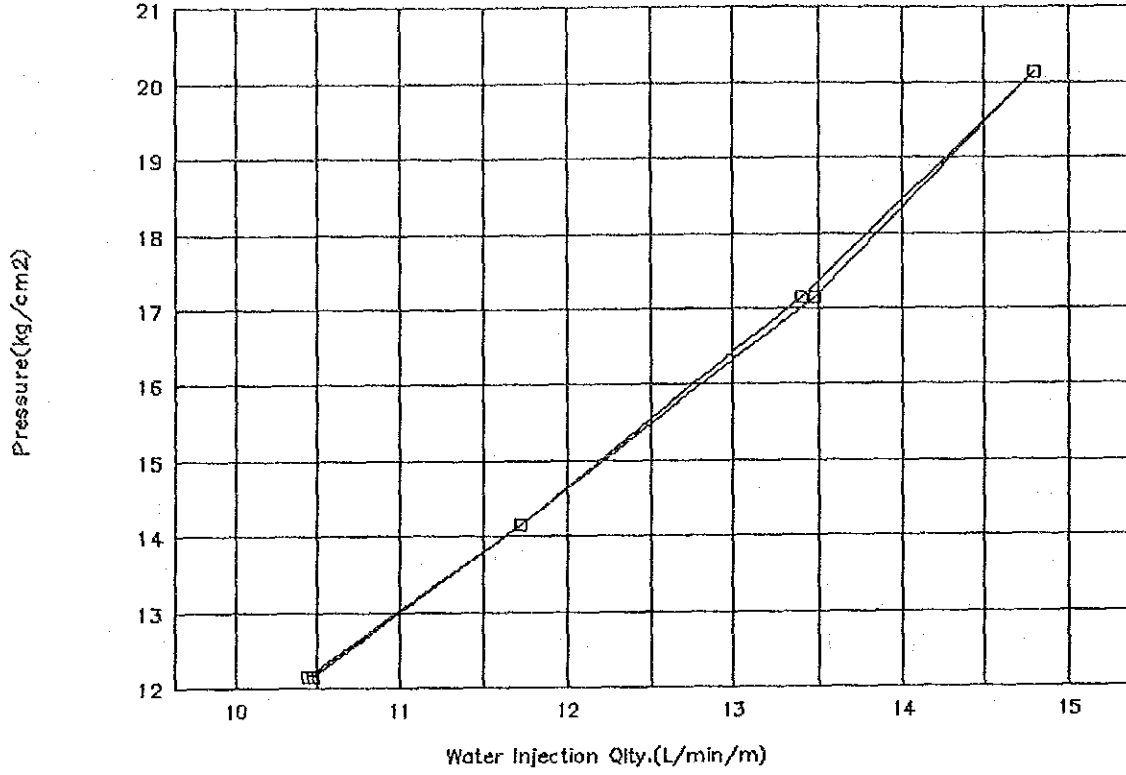
### P/Q.Curve: Hole No.JD-103

Depth:125-130m



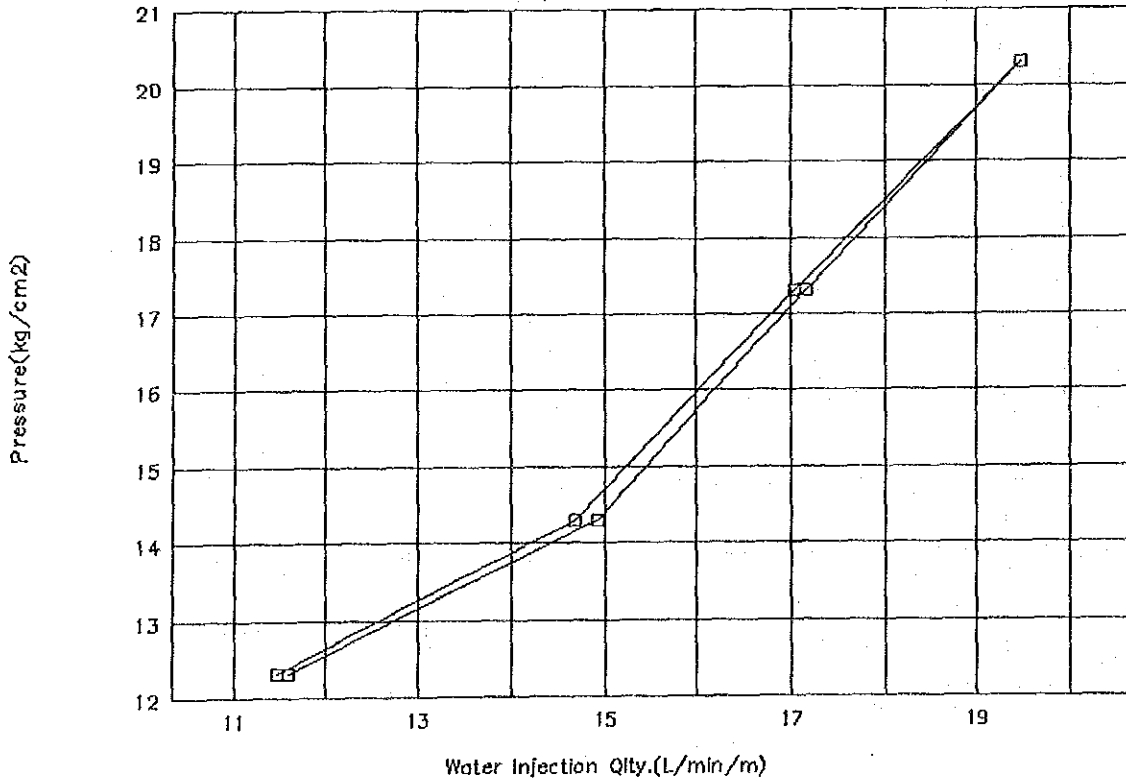
### P/Q.Curve: Hole No.JD-103

Depth:130-135m



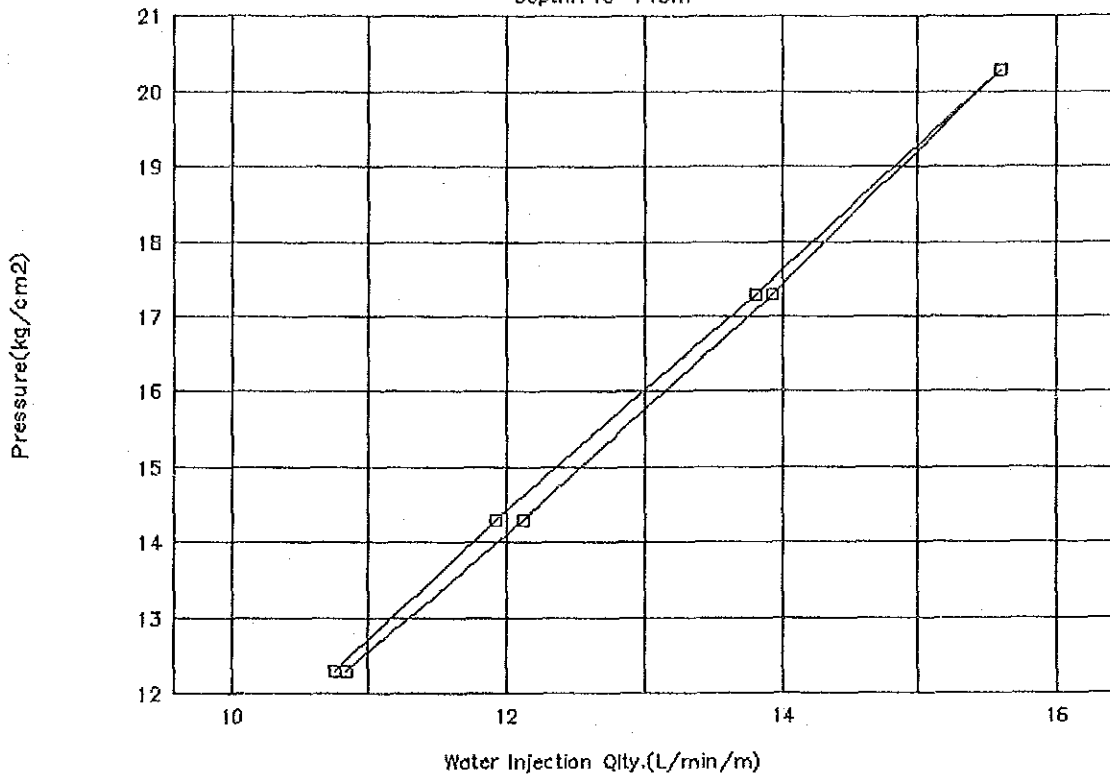
### P/Q.Curve: Hole No.JD-103

Depth:135-140m



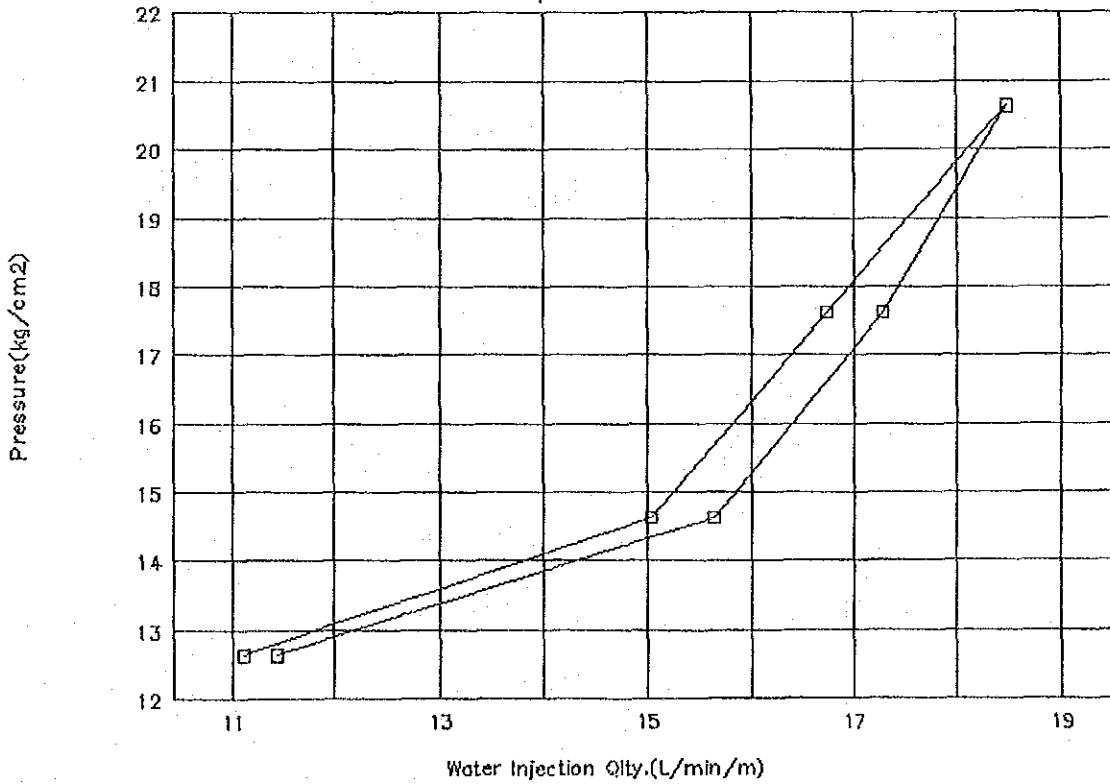
### P/Q.Curve: Hole No.JD-103

Depth:140-145m



### P/Q.Curve: Hole No.JD-103

Depth:145-150m





GROUTING TEST

0 ~5m 5 ~10m 10~15m 15~20 20 ~ 30 30~40 40~50 50~60

GT-1	xxx	71.00	2.27	12.00	16.52	2.12	24.10	0.99
	xxx	408.54	12.60	36.82	529.27	86.39	485.80	0

GT-2	xxx	189.7	102.9	4.61	4.12	2.35	29.51	1.01
	xxx	1468.76	1286.6	17.93	56.20	132.75	100.33	0

GT-3	xxx	140.2	1.13	0	3.87	0.83	5.45	0.22
	xxx	1024.72	3.88	0	112.16	0	164.97	0

GT-4	xxx	xxx	0.81	2.74	0.13	0.83	3.86	0.12
	xxx	xxx	0	12.11	0	0	26.16	0

: LUGEON VALUE

: INJECTION CEMENT (Kg)

Total Injection Cement 5,965.98Kg

27.12Kg/m for 5m~60m total 220m

10m to 60m total 200m 3,063.97Kg

15.32Kg/m

GROUTING TEST

0 ~5m 5 ~10m 10~15m 15~20 20 ~ 30 30~40 40~50 50~60

GT-1	xxx	408.54	12.60	36.82	529.27	86.39	485.80	0
	xxx	81.71	2.52	7.36	52.93	8.64	48.58	0

GT-2	xxx	1468.8	1286.6	17.93	56.20	132.75	100.33	0
	xxx	293.8	257.3	3.48	5.62	13.28	10.03	0

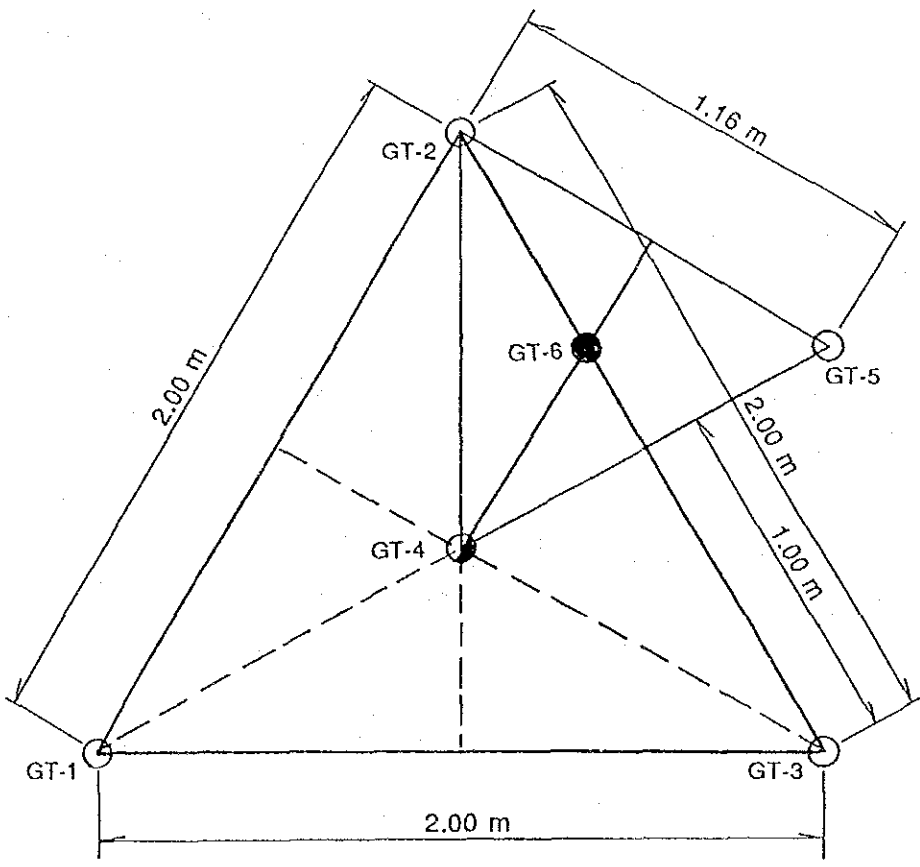
GT-3	xxx	1024.7	3.88	0	112.16	0	164.97	0
	xxx	204.9	0.78	0	11.22	0	16.50	0

GT-4	xxx	xxx	0	12.11	0	0	26.16	0
	xxx	xxx	0	2.42	0	0	2.62	0

: INJECTION CEMENT (Kg)

: INJECTION CEMENT (Kg/m)





- Grout hole
- Check hole
- ◐ Check hole cum grout hole

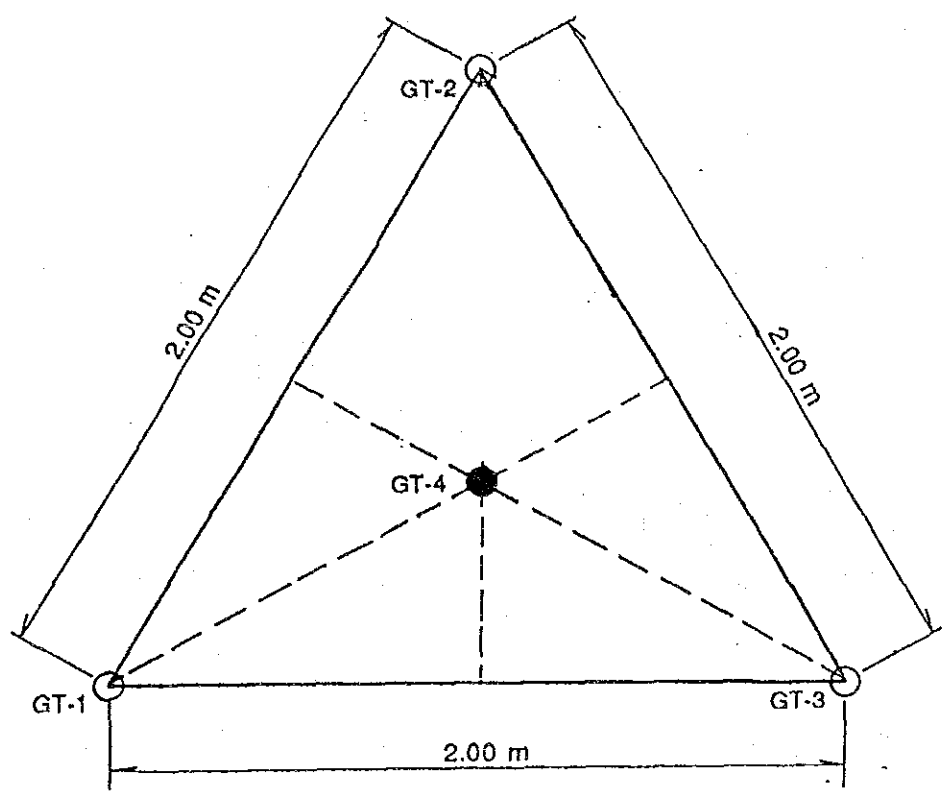
Depth of holes 80 m

### DESPOSITION OF BOREHOLES FOR TEST GROUTING

DESPOSITION OF BOREHOLES FOR TEST GROUTING (ORIGINAL)

GOVERNMENT OF MAURITIUS  
PORT LOUIS WATER SUPPLY PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY



- Grout hole
- Check hole

Depth of holes 60 m

### DESPOSITION OF BOREHOLES FOR TEST GROUTING

DESPOSITION OF BOREHOLES FOR TEST GROUTING (REVISED)

GOVERNMENT OF MAURITIUS  
PORT LOUIS WATER SUPPLY PROJECT  
JAPAN INTERNATIONAL COOPERATION AGENCY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 5-10

HOLE NO. GT-1

GUAGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GUAGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
0.5	65.0	13.00	5.0	66.0	1.20	6.90	1.3	99.2	0.001322
1.0	76.0	15.20	5.0	66.0	1.20	6.90	1.8	84.0	0.001118
1.5	82.0	16.40	5.0	66.0	1.20	6.90	2.3	71.0	0.000946
1.0	70.0	14.00	5.0	66.0	1.20	6.90	1.8	77.3	0.001030
0.5	50.0	10.00	5.0	66.0	1.20	6.90	1.3	76.3	0.001017

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 81.6 0.001086

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 10 - 15

HOLE NO. GT-1

GUAGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GUAGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
1.0	3.0	0.60	5.0	66.0	1.20	8.20	1.9	3.1	0.000041
2.0	3.6	0.72	5.0	66.0	1.20	8.20	2.9	2.4	0.000033
3.0	4.2	0.84	5.0	66.0	1.20	8.20	3.9	2.1	0.000028
4.0	5.6	1.12	5.0	66.0	1.20	8.20	4.9	2.3	0.000030
3.0	4.5	0.90	5.0	66.0	1.20	8.20	3.9	2.3	0.000030
2.0	3.5	0.70	5.0	66.0	1.20	8.20	2.9	2.4	0.000032
1.0	2.8	0.56	5.0	66.0	1.20	8.20	1.9	2.9	0.000038

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 2.5 0.000033

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 15-20

HOLE NO. GT-1

GUAGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GUAGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	19.6	3.92	5.0	66.0	1.20	8.28	2.9	13.3	0.000177
4.0	26.8	5.36	5.0	66.0	1.20	8.28	4.9	10.8	0.000144
6.0	41.8	8.36	5.0	66.0	1.20	8.28	6.9	12.0	0.000160
4.0	24.6	4.92	5.0	66.0	1.20	8.28	4.9	9.9	0.000132
2.0	17.6	3.52	5.0	66.0	1.20	8.28	2.9	11.9	0.000159

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 11.6 0.000155

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 20-30

HOLE NO. GT-1

GUAGE PRESS. kg/cm2	INJECTION Q'ty lit/min	TEST LENGTH lit/min/m	TEST LENGTH m	HOLE DIA. mm	GUAGE HEIGHT m	WATER LEVEL m	TEST PRESS. kg/cm2	LUGEON VALUE	k-VALUE cm/sec
2.0	60.0	6.00	10.0	66.0	1.20	14.20	3.5	16.9	0.000257
3.0	75.0	7.50	10.0	66.0	1.20	14.20	4.5	16.5	0.000250
2.0	60.0	6.00	10.0	66.0	1.20	14.20	3.5	16.9	0.000257

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 16.8 0.000255

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 30-40

HOLE NO. GT-1

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	7.6	0.76	10.0	66.0	1.20	15.80	3.7	2.1
4.0	12.4	1.24	10.0	66.0	1.20	15.80	5.7	2.2
7.0	15.4	1.54	10.0	66.0	1.20	15.80	8.7	1.8
10.0	24.8	2.48	10.0	66.0	1.20	15.80	11.7	2.1
7.0	15.5	1.55	10.0	66.0	1.20	15.80	8.7	1.8
4.0	10.8	1.08	10.0	66.0	1.20	15.80	5.7	1.9
2.0	7.0	0.70	10.0	66.0	1.20	15.80	3.7	1.9

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 2.0 0.000030

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 40-50

HOLE NO. GT-1

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	73.0	7.30	10.0	66.0	1.20	9.15	3.0	24.1

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 24.1 0.000365

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 50-60

HOLE NO. GT-1

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	3.0	0.30	10.0	66.0	1.20	17.80	3.9	0.8
4.0	3.2	0.32	10.0	66.0	1.20	17.80	5.9	0.5
7.0	4.1	0.41	10.0	66.0	1.20	17.80	8.9	0.5
10.0	11.8	1.18	10.0	66.0	1.20	17.80	11.9	1.0
7.0	3.3	0.33	10.0	66.0	1.20	17.80	8.9	0.4
4.0	2.3	0.23	10.0	66.0	1.20	17.80	5.9	0.4
2.0	1.8	0.18	10.0	66.0	1.20	17.80	3.9	0.4

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 0.6 0.000009

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 5-10

HOLE NO. GT-2

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
0.3	83.0	16.60	5.0	66.0	1.20	5.05	0.9	179.5
								ERR
								ERR
								ERR
								ERR
								ERR
								ERR

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY \*\*\*\*\* 0.002390

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 10-15

HOLE NO. GT-2

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
0.2	90.0	18.00	5.0	66.0	1.20	14.30	1.8 102.9	0.001370

AVERAGE 102.9 0.001370  
k-VALUE: COEFFICIENT OF PERMEABILITY  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 15-20

HOLE NO. GT-2

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	5.4	1.08	5.0	66.0	1.20	12.50	3.4 3.2	0.000043
4.0	13.4	2.68	5.0	66.0	1.20	12.50	5.4 5.0	0.000066
6.0	17.0	3.40	5.0	66.0	1.20	12.50	7.4 4.6	0.000061
4.0	13.2	2.64	5.0	66.0	1.20	12.50	5.4 4.9	0.000065
2.0	7.6	1.52	5.0	66.0	1.20	12.50	3.4 4.5	0.000060

AVERAGE 4.4 0.000059  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 20-30

HOLE NO. GT-2

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	5.8	0.58	10.0	66.0	1.20	9.50	3.1 1.9	0.000029
4.0	10.2	1.02	10.0	66.0	1.20	9.50	5.1 2.0	0.000030
7.0	18.8	1.88	10.0	66.0	1.20	9.50	8.1 2.3	0.000035
10.0	45.6	4.56	10.0	66.0	1.20	9.50	11.1 4.1	0.000062
7.0	24.5	2.45	10.0	66.0	1.20	9.50	8.1 3.0	0.000046
4.0	16.0	1.60	10.0	66.0	1.20	9.50	5.1 3.2	0.000048
2.0	11.5	1.15	10.0	66.0	1.20	9.50	3.1 3.7	0.000057

AVERAGE 2.9 0.000044  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 30-40

HOLE NO. GT-2

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	11.4	1.14	10.0	66.0	1.20	11.29	3.2 3.5	0.000053
4.0	14.0	1.40	10.0	66.0	1.20	11.29	5.2 2.7	0.000040
7.0	21.5	2.15	10.0	66.0	1.20	11.29	8.2 2.6	0.000040
10.0	26.4	2.64	10.0	66.0	1.20	11.29	11.2 2.3	0.000036
7.0	21.5	2.15	10.0	66.0	1.20	11.29	8.2 2.6	0.000040
4.0	14.5	1.45	10.0	66.0	1.20	11.29	5.2 2.8	0.000042
2.0	9.0	0.90	10.0	66.0	1.20	11.29	3.2 2.8	0.000042

AVERAGE 2.8 0.000042  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 40-50

HOLE NO. GT-2

GAUGE INJECTION PRESS. Q'ty		TEST LENGTH		HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	m	kg/cm2		cm/sec
1.0	70.0	7.00	10.0	66.0	1.20	12.52	2.4	29.5	0.000447

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 29.5 0.000447

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 50-60

HOLE NO. GT-2

GAUGE INJECTION PRESS. Q'ty		TEST LENGTH		HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	m	kg/cm2		cm/sec
2.0	2.7	0.27	10.0	66.0	1.20	17.80	3.9	0.7	0.000010
4.0	2.2	0.22	10.0	66.0	1.20	17.80	5.9	0.4	0.000006
7.0	5.6	0.56	10.0	66.0	1.20	17.80	8.9	0.6	0.000010
10.0	12.0	1.20	10.0	66.0	1.20	17.80	11.9	1.0	0.000015
7.0	3.1	0.31	10.0	66.0	1.20	17.80	8.9	0.3	0.000005
4.0	2.5	0.25	10.0	66.0	1.20	17.80	5.9	0.4	0.000006
2.0	1.1	0.11	10.0	66.0	1.20	17.80	3.9	0.3	0.000004

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 0.5 0.000008

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 5-10

HOLE NO. GT-3

GAUGE INJECTION PRESS. Q'ty		TEST LENGTH		HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	m	kg/cm2		cm/sec
0.3	75.0	15.00	5.0	66.0	1.20	6.50	1.1	140.2	0.001867

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 140.2 0.001867

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 10-15

HOLE NO. GT-3

GAUGE INJECTION PRESS. Q'ty		TEST LENGTH		HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	m	kg/cm2		cm/sec
1.0	1.6	0.32	5.0	66.0	1.20	6.40	1.8	1.8	0.000024
2.0	1.7	0.34	5.0	66.0	1.20	6.40	2.8	1.2	0.000016
3.0	2.2	0.44	5.0	66.0	1.20	6.40	3.8	1.2	0.000016
4.0	2.7	0.54	5.0	66.0	1.20	6.40	4.8	1.1	0.000015
3.0	2.0	0.40	5.0	66.0	1.20	6.40	3.8	1.1	0.000014
2.0	1.5	0.30	5.0	66.0	1.20	6.40	2.8	1.1	0.000014
1.0	1.2	0.24	5.0	66.0	1.20	6.40	1.8	1.4	0.000018

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 1.3 0.000017

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 15-20

HOLE NO. GT-3

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	0.0	0.00	5.0	66.0	1.20	8.45	3.0	0.000000
4.0	0.0	0.00	5.0	66.0	1.20	8.45	5.0	0.000000
6.0	0.0	0.00	5.0	66.0	1.20	8.45	7.0	0.000000

AVERAGE 0.0 0.000000  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 20-30

HOLE NO. GT-3

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	16.2	1.62	10.0	66.0	1.20	22.21	4.3	0.000057
4.0	22.6	2.26	10.0	66.0	1.20	22.21	6.3	0.000054
7.0	29.4	2.94	10.0	66.0	1.20	22.21	9.3	0.000048
10.0	47.8	4.78	10.0	66.0	1.20	22.21	12.3	0.000059
7.0	30.5	3.05	10.0	66.0	1.20	22.21	9.3	0.000049
4.0	17.5	1.75	10.0	66.0	1.20	22.21	6.3	0.000042
2.0	13.0	1.30	10.0	66.0	1.20	22.21	4.3	0.000045

AVERAGE 3.3 0.000051  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 30-40

HOLE NO. GT-3

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	4.5	0.45	10.0	66.0	1.20	11.55	3.3	0.000021
4.0	4.6	0.46	10.0	66.0	1.20	11.55	5.3	0.000013
7.0	7.6	0.76	10.0	66.0	1.20	11.55	8.3	0.000014
10.0	9.4	0.94	10.0	66.0	1.20	11.55	11.3	0.000013
7.0	6.8	0.68	10.0	66.0	1.20	11.55	8.3	0.000012
4.0	5.0	0.50	10.0	66.0	1.20	11.55	5.3	0.000014
2.0	3.3	0.33	10.0	66.0	1.20	11.55	3.3	0.000015

AVERAGE 1.0 0.000015  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 40-50

HOLE NO. GT-3

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	34.4	3.44	10.0	66.0	1.20	17.70	3.9	0.000134
4.0	40.0	4.00	10.0	66.0	1.20	17.70	5.9	0.000103
7.0	53.0	5.30	10.0	66.0	1.20	17.70	8.9	0.000090
10.0	64.8	6.48	10.0	66.0	1.20	17.70	11.9	0.000083
7.0	50.0	5.00	10.0	66.0	1.20	17.70	8.9	0.000085
4.0	38.0	3.80	10.0	66.0	1.20	17.70	5.9	0.000098
2.0	29.0	2.90	10.0	66.0	1.20	17.70	3.9	0.000113

AVERAGE 6.7 0.000101  
k-VALUE: COEFFICIENT OF PERMEABILITY

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 50-60

HOLE NO. GT-3

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	1.6	0.16	10.0	66.0	1.20	17.80	3.9	0.4
4.0	1.4	0.14	10.0	66.0	1.20	17.80	5.9	0.2
7.0	0.7	0.07	10.0	66.0	1.20	17.80	8.9	0.1
10.0	2.6	0.26	10.0	66.0	1.20	17.80	11.9	0.2
7.0	1.0	0.10	10.0	66.0	1.20	17.80	8.9	0.1
4.0	1.5	0.15	10.0	66.0	1.20	17.80	5.9	0.3
2.0	1.8	0.18	10.0	66.0	1.20	17.80	3.9	0.4

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 0.3 0.00004

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 10-15

HOLE NO. GT-4

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
1.0	0.8	0.16	5.0	66.0	1.20	5.84	1.7	0.9
2.0	2.3	0.45	5.0	66.0	1.20	5.84	2.7	1.7
3.0	1.6	0.32	5.0	66.0	1.20	5.84	3.7	0.9
4.0	1.9	0.38	5.0	66.0	1.20	5.84	4.7	0.8
3.0	1.4	0.28	5.0	66.0	1.20	5.84	3.7	0.8
2.0	1.5	0.30	5.0	66.0	1.20	5.84	2.7	1.1
1.0	1.4	0.28	5.0	66.0	1.20	5.84	1.7	1.6

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 1.1 0.00015

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 15-20

HOLE NO. GT-4

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
1.0	4.3	0.86	5.0	66.0	1.20	7.62	1.9	4.6
2.0	6.2	1.24	5.0	66.0	1.20	7.62	2.9	4.3
4.0	7.9	1.58	5.0	66.0	1.20	7.62	4.9	3.2
6.0	9.4	1.89	5.0	66.0	1.20	7.62	6.9	2.7
4.0	6.5	1.30	5.0	66.0	1.20	7.62	4.9	2.7
2.0	4.9	0.98	5.0	66.0	1.20	7.62	2.9	3.4
1.0	4.7	0.94	5.0	66.0	1.20	7.62	1.9	5.0

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 3.7 0.00049

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 20-30

HOLE NO. GT-4

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec
2.0	0.6	0.06	10.0	66.0	1.20	5.60	2.7	0.2
4.0	0.8	0.08	10.0	66.0	1.20	5.60	4.7	0.2
7.0	1.2	0.12	10.0	66.0	1.20	5.60	7.7	0.2
10.0	1.4	0.14	10.0	66.0	1.20	5.60	10.7	0.1
7.0	1.0	0.10	10.0	66.0	1.20	5.60	7.7	0.1
4.0	0.8	0.08	10.0	66.0	1.20	5.60	4.7	0.2
2.0	0.5	0.05	10.0	66.0	1.20	5.60	2.7	0.2

AVERAGE k-VALUE: COEFFICIENT OF PERMEABILITY 0.2 0.00003



RECORD OF WATER PRESSURE TEST  
DEPTH(m): 30-40

HOLE NO. GT-4

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec	
2.0	2.9	0.29	10.0	66.0	1.20	5.10	2.6	1.1	0.000017
4.0	3.5	0.35	10.0	66.0	1.20	5.10	4.6	0.8	0.000011
7.0	4.0	0.40	10.0	66.0	1.20	5.10	7.6	0.5	0.000008
10.0	8.8	0.88	10.0	66.0	1.20	5.10	10.6	0.8	0.000013
7.0	3.5	0.35	10.0	66.0	1.20	5.10	7.6	0.5	0.000007
4.0	3.3	0.33	10.0	66.0	1.20	5.10	4.6	0.7	0.000011
2.0	2.8	0.28	10.0	66.0	1.20	5.10	2.6	1.1	0.000016
AVERAGE								0.8	0.000012
k-VALUE: COEFFICIENT OF PERMEABILITY									

RECORD OF WATER PRESSURE TEST  
DEPTH(m): 40-50

HOLE NO. GT-4

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec	
2.0	22.6	2.26	10.0	66.0	1.20	14.25	3.5	6.4	0.000097
4.0	25.2	2.52	10.0	66.0	1.20	14.25	5.5	4.5	0.000069
7.0	32.4	3.24	10.0	66.0	1.20	14.25	8.5	3.8	0.000057
10.0	44.6	4.46	10.0	66.0	1.20	14.25	11.5	3.9	0.000059
7.0	34.0	3.40	10.0	66.0	1.20	14.25	8.5	4.0	0.000060
4.0	26.5	2.65	10.0	66.0	1.20	14.25	5.5	4.8	0.000072
2.0	21.5	2.15	10.0	66.0	1.20	14.25	3.5	6.1	0.000092
AVERAGE								4.8	0.000072
k-VALUE: COEFFICIENT OF PERMEABILITY									

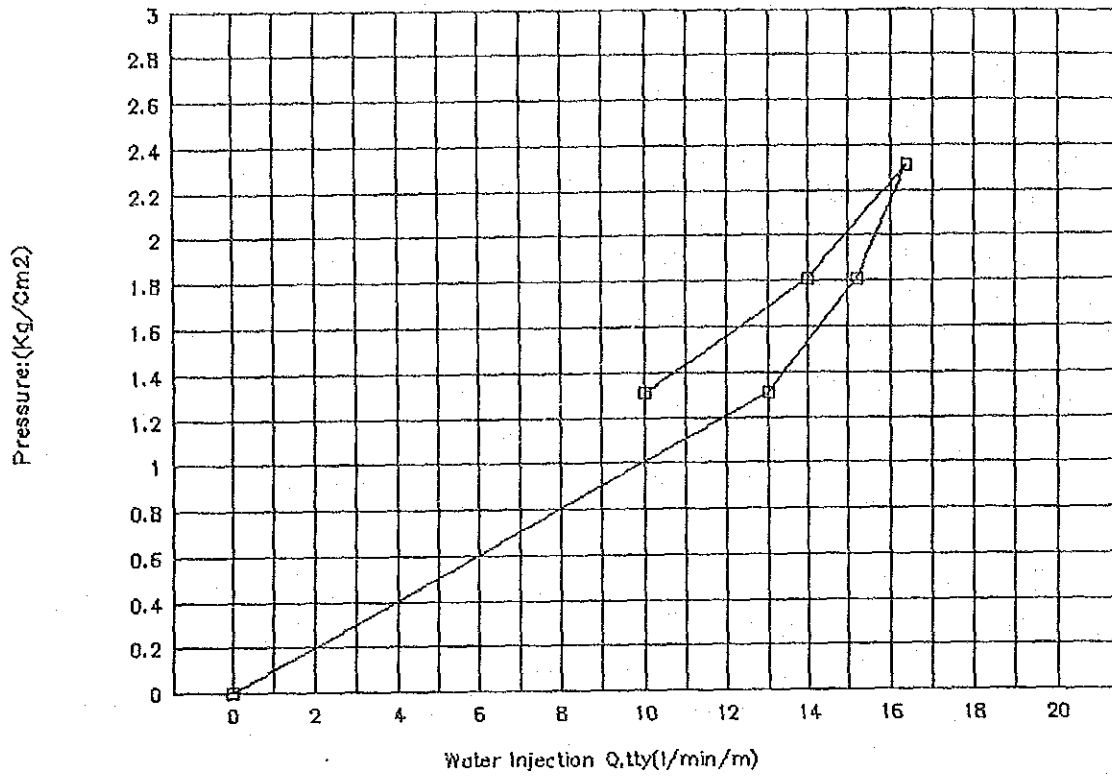
RECORD OF WATER PRESSURE TEST  
DEPTH(m): 50-60

HOLE NO. GT-4

GAUGE PRESS.	INJECTION Q'ty	TEST LENGTH	HOLE DIA.	GAUGE HEIGHT	WATER LEVEL	TEST PRESS.	LUGEON VALUE	k-VALUE	
kg/cm2	lit/min	lit/min/m	m	mm	m	kg/cm2		cm/sec	
2.0	1.4	0.14	10.0	66.0	1.20	10.29	3.1	0.4	0.000007
4.0	1.2	0.12	10.0	66.0	1.20	10.29	5.1	0.2	0.000004
7.0	1.6	0.16	10.0	66.0	1.20	10.29	8.1	0.2	0.000003
10.0	1.3	0.13	10.0	66.0	1.20	10.29	11.1	0.1	0.000002
7.0	1.9	0.19	10.0	66.0	1.20	10.29	8.1	0.2	0.000004
4.0	1.5	0.15	10.0	66.0	1.20	10.29	5.1	0.3	0.000004
2.0	1.4	0.14	10.0	66.0	1.20	10.29	3.1	0.4	0.000007
AVERAGE								0.3	0.000004
k-VALUE: COEFFICIENT OF PERMEABILITY									

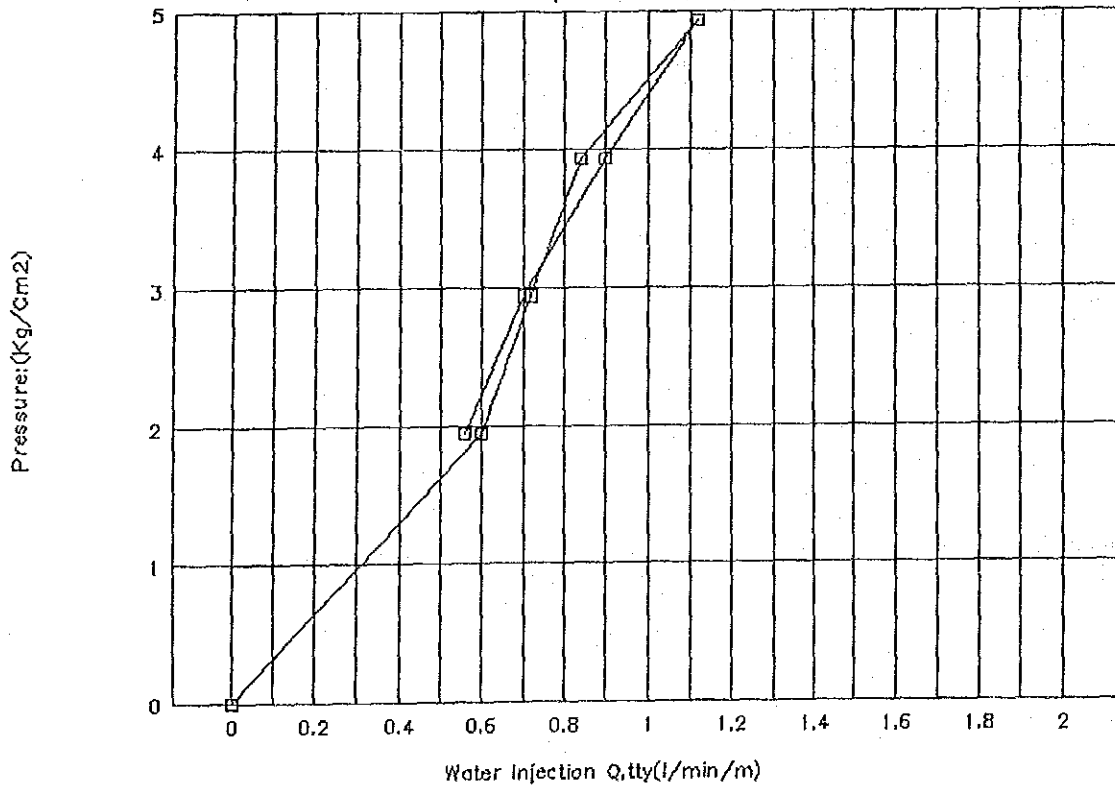
### P/Q.Curve Hole No:GT-1

Depth:5-10m



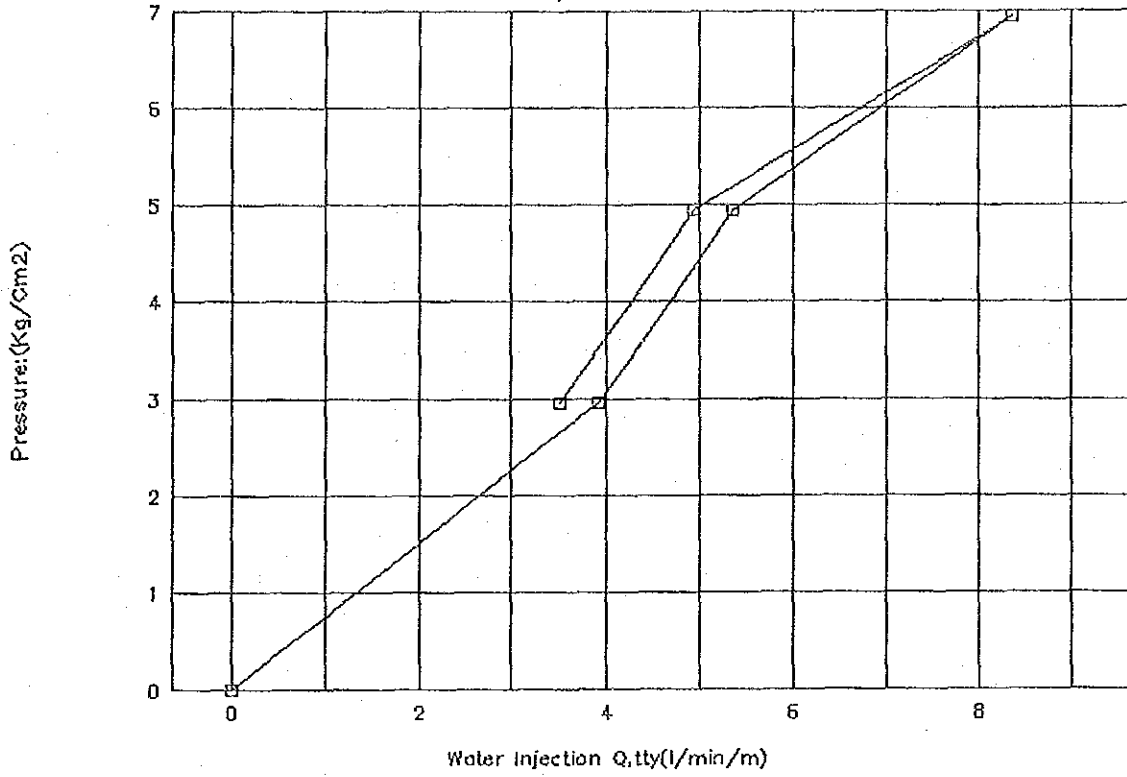
### P/Q.Curve Hole No:GT-1

Depth:10-15m



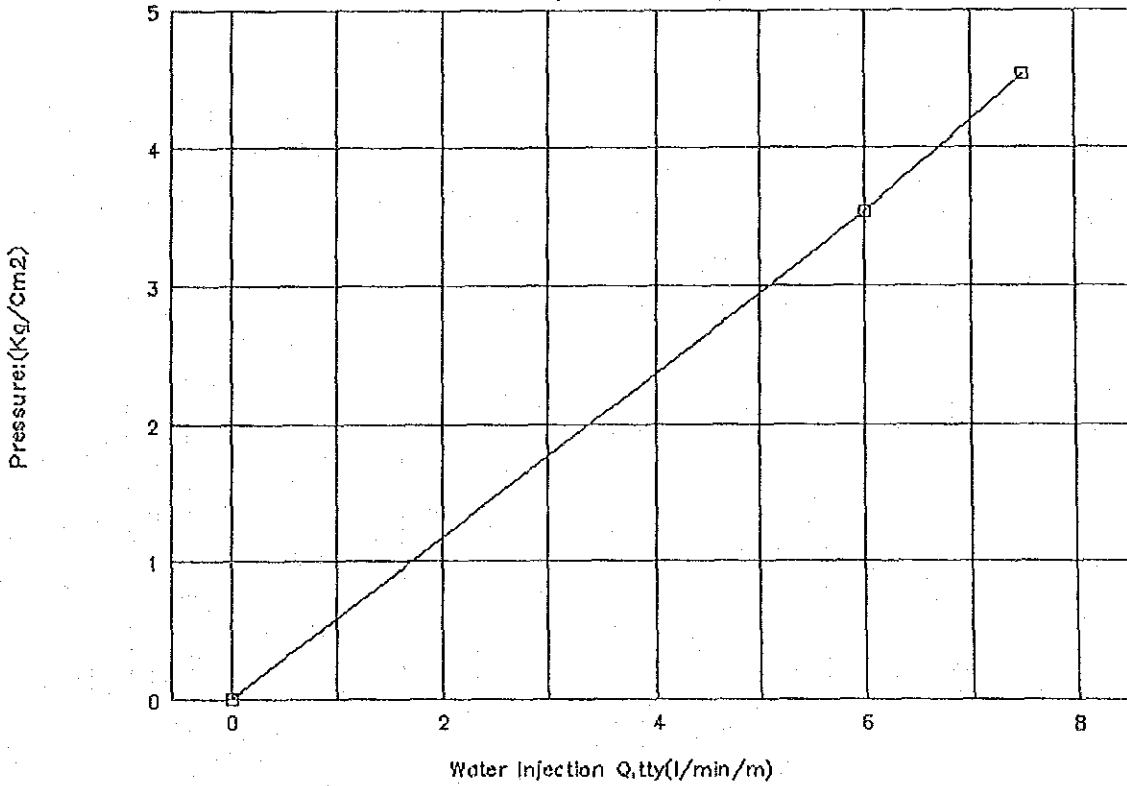
### P/Q.Curve Hole No:GT-1

Depth:15-20m



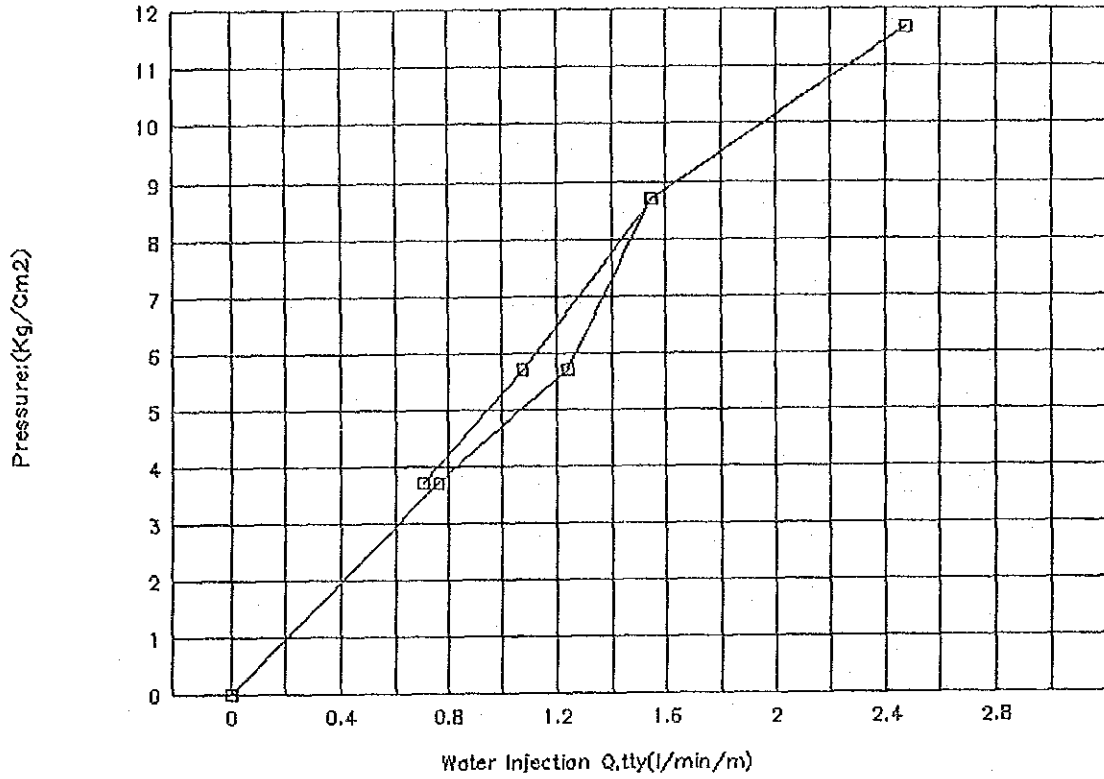
### P/Q.Curve Hole No:GT-1

Depth:20-30m



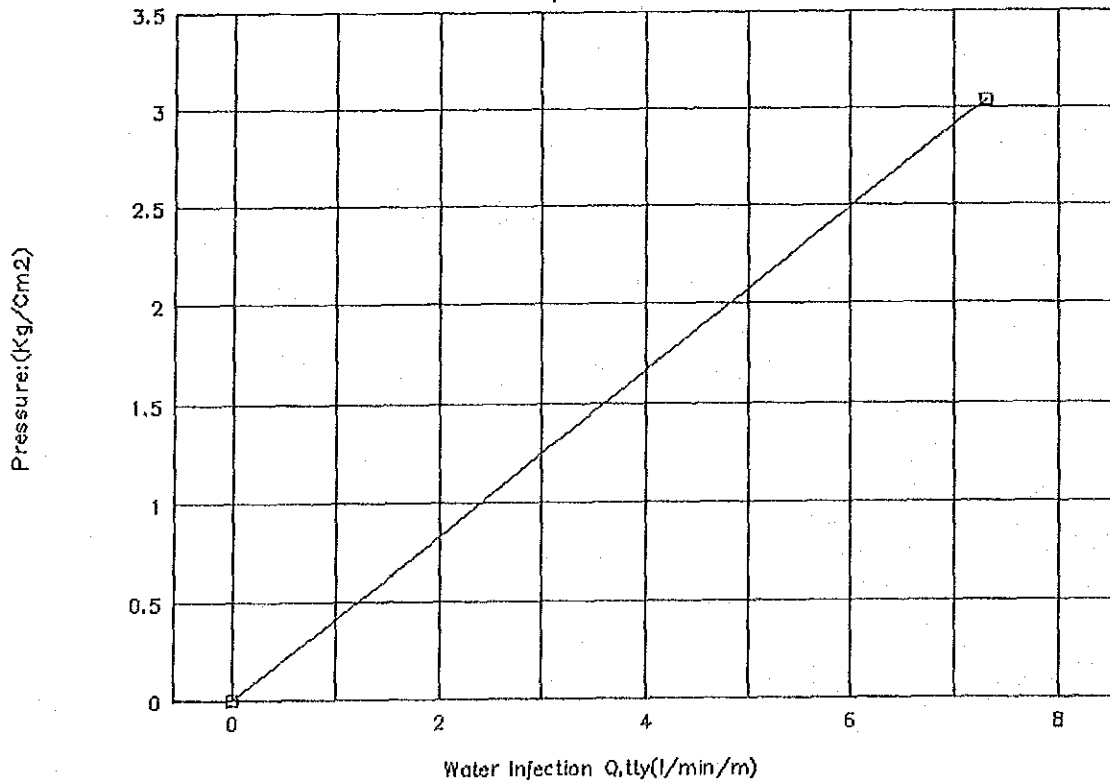
### P/Q.Curve Hole No:GT-1

Depth:30-40m



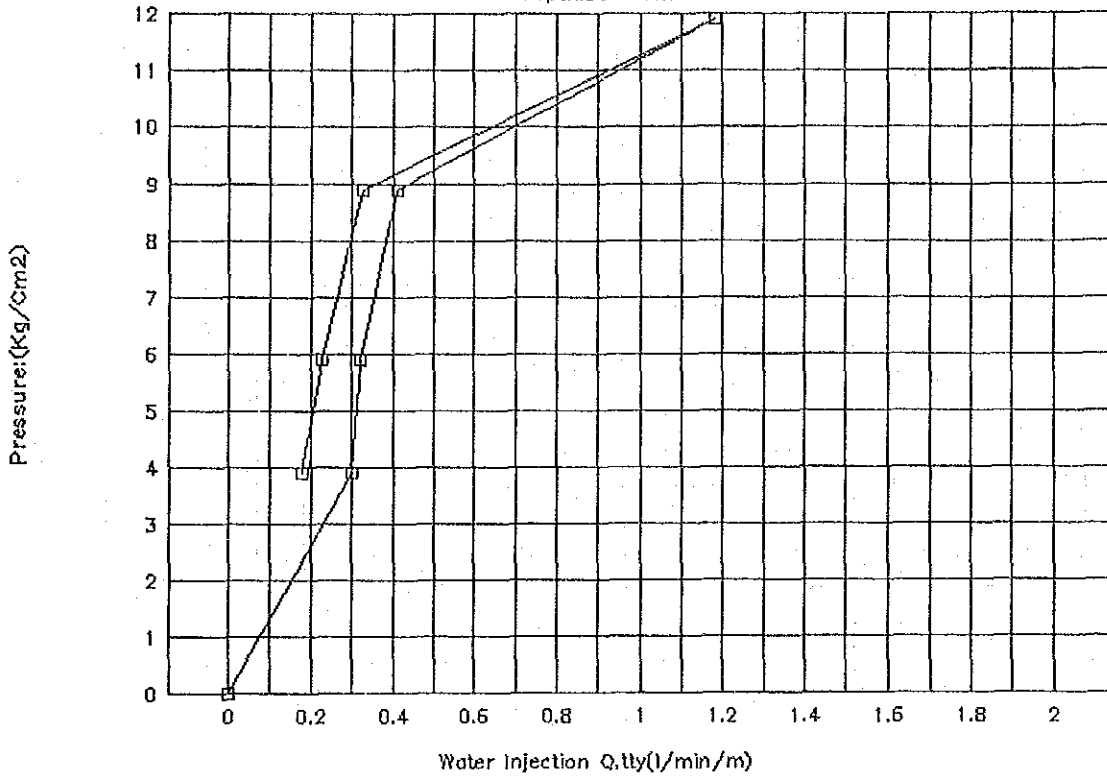
### P/Q.Curve Hole No:GT-1

Depth:40-50m



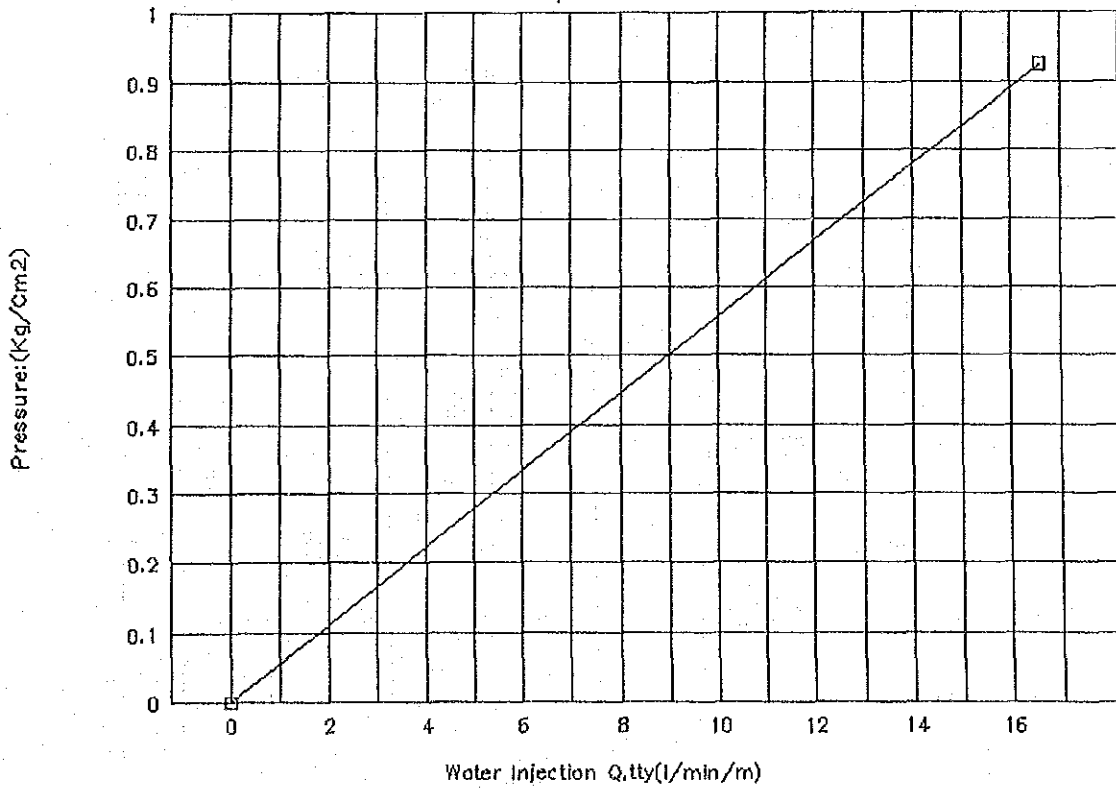
### P/Q.Curve Hole No:GT-1

Depth:50-60m



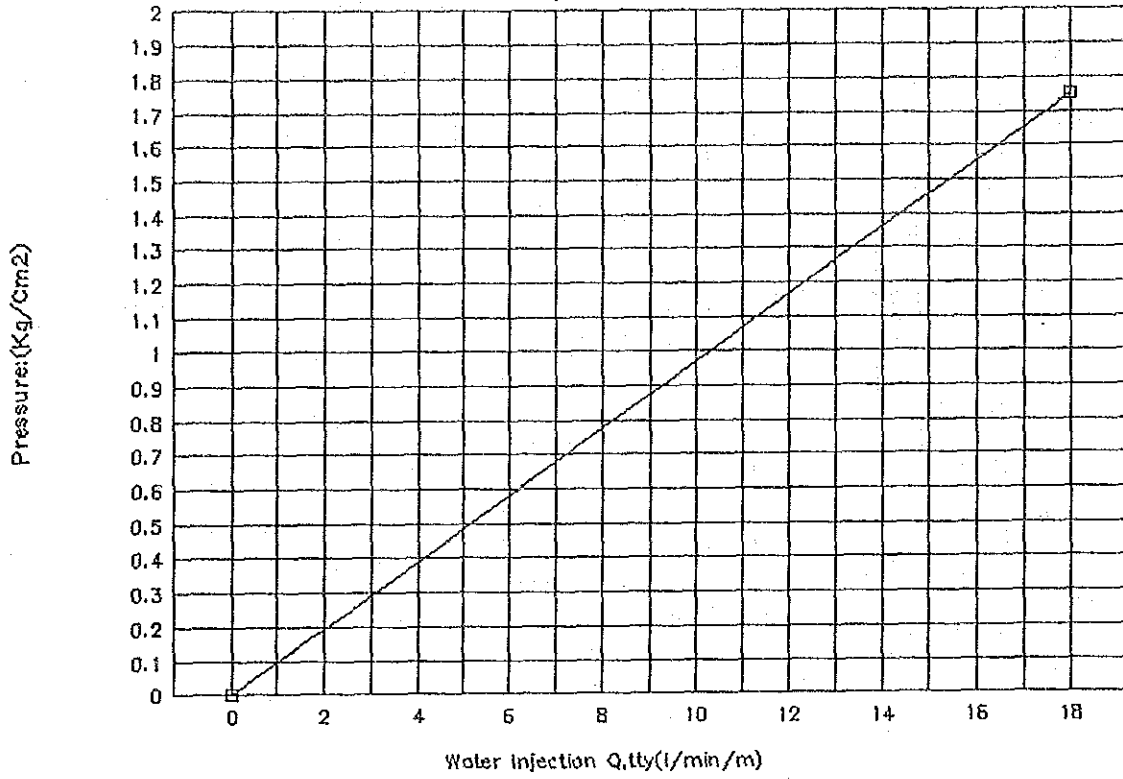
### P/Q.Curve Hole No:GT-2

Depth:5-10m



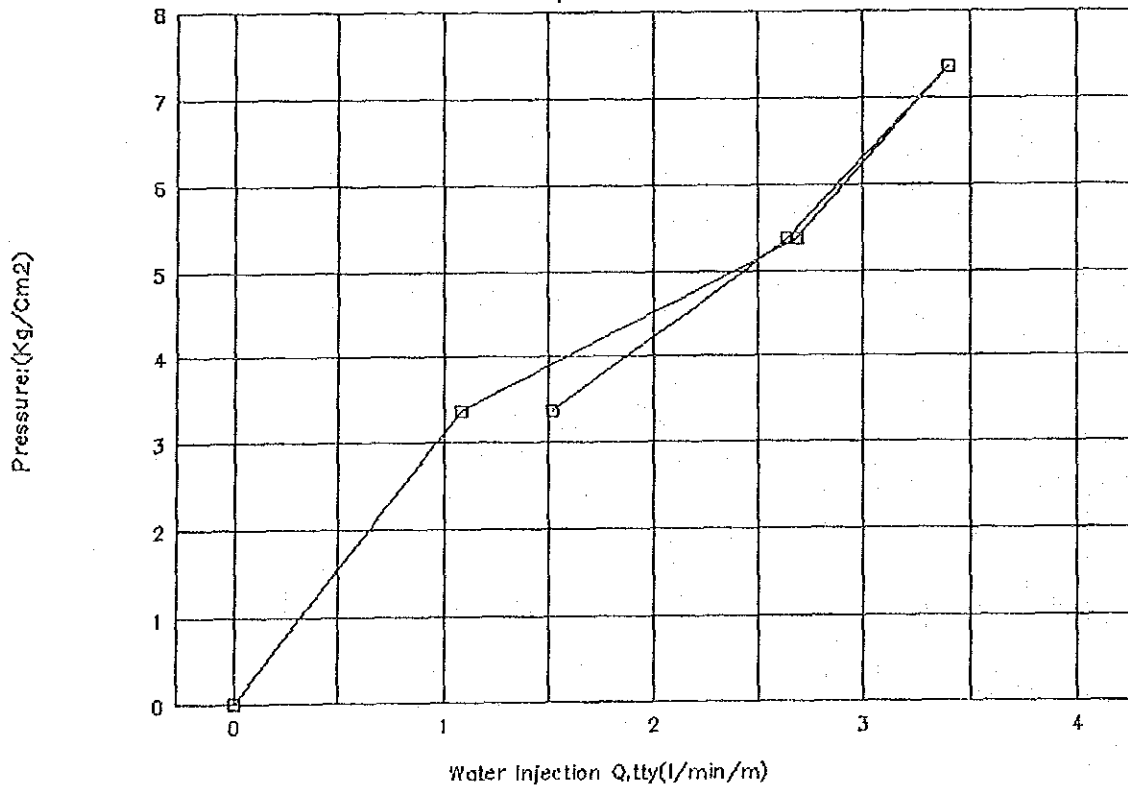
### P/Q.Curve Hole No:GT-2

Depth:10-15m



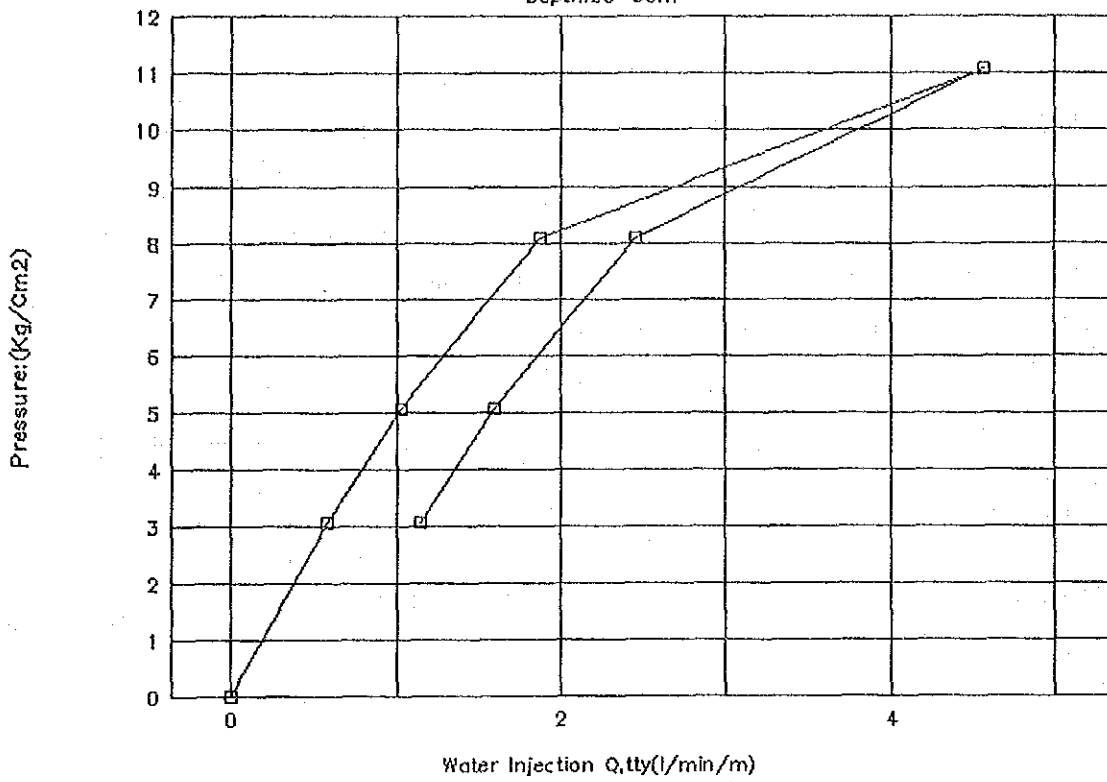
### P/Q.Curve Hole No:GT-2

Depth:15-20m



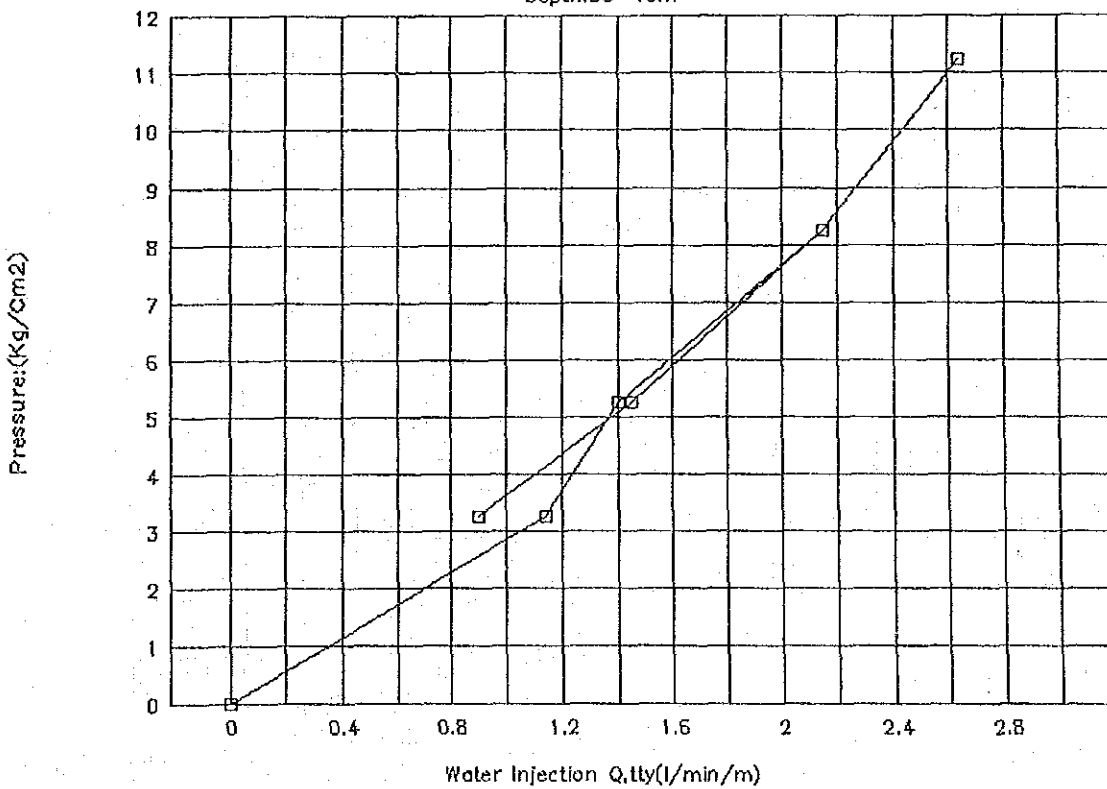
### P/Q.Curve Hole No:GT-2

Depth:20-30m



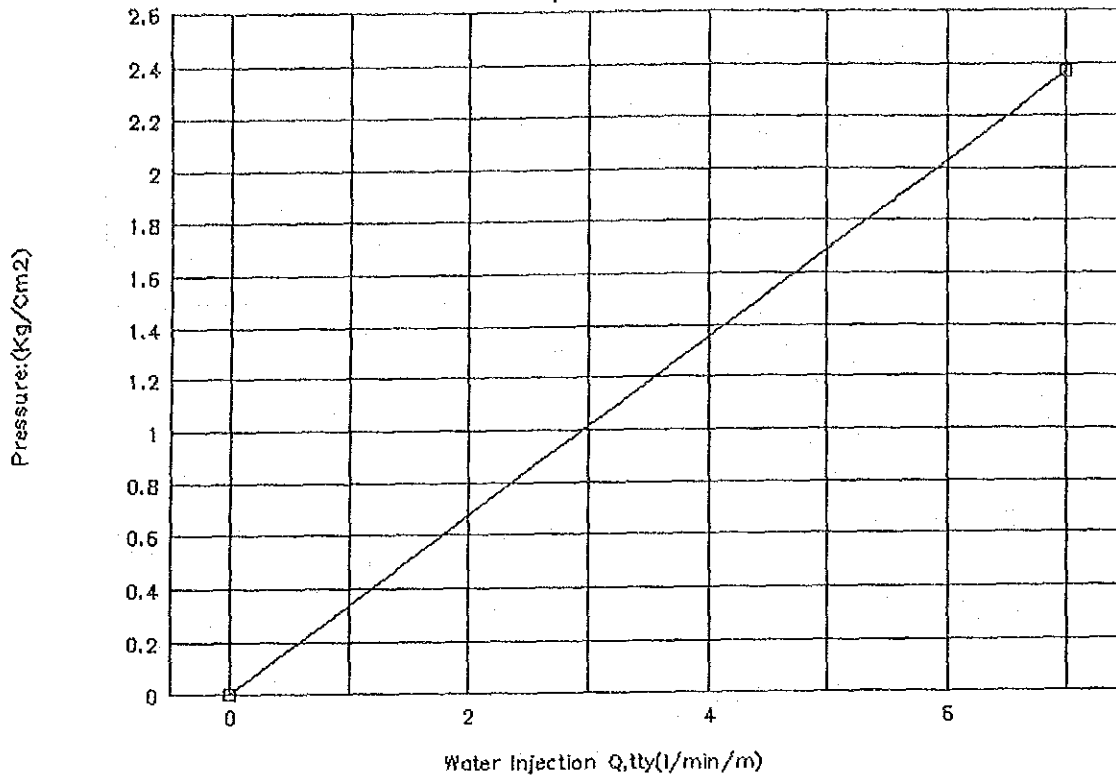
### P/Q.Curve Hole No:GT-2

Depth:30-40m



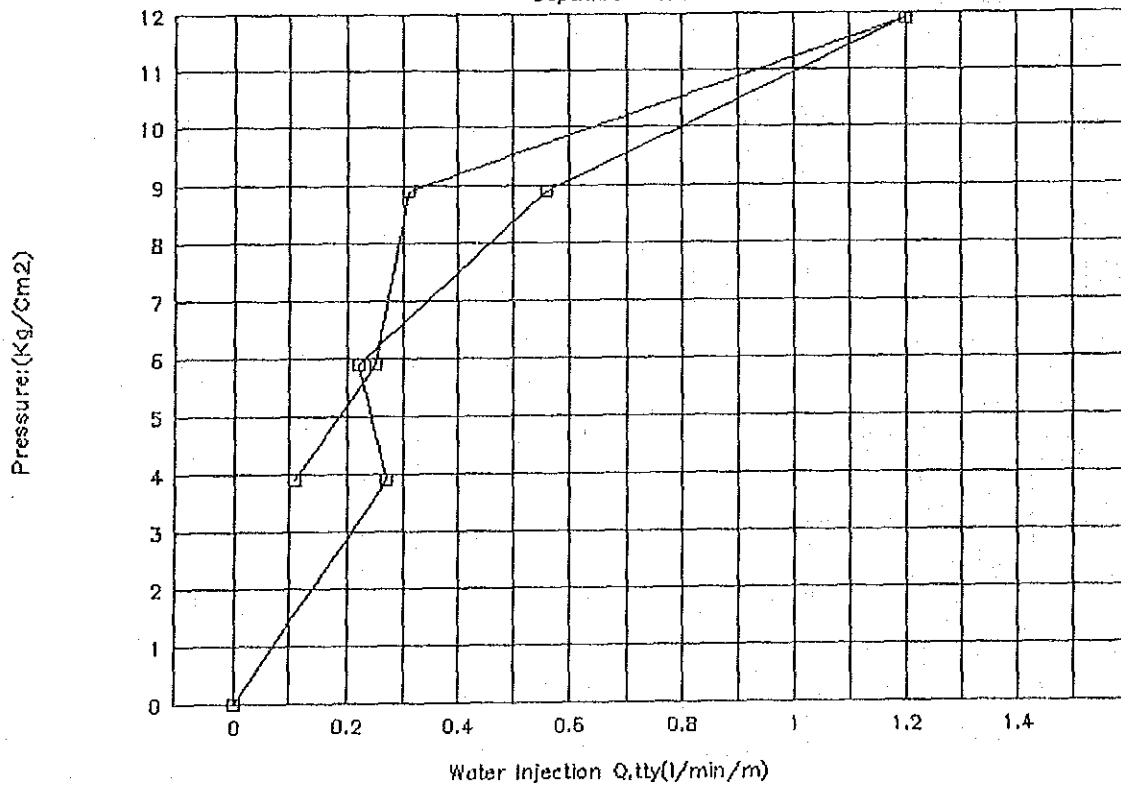
### P/Q.Curve Hole No:GT-2

Depth:40-50m



### P/Q.Curve Hole No:GT-2

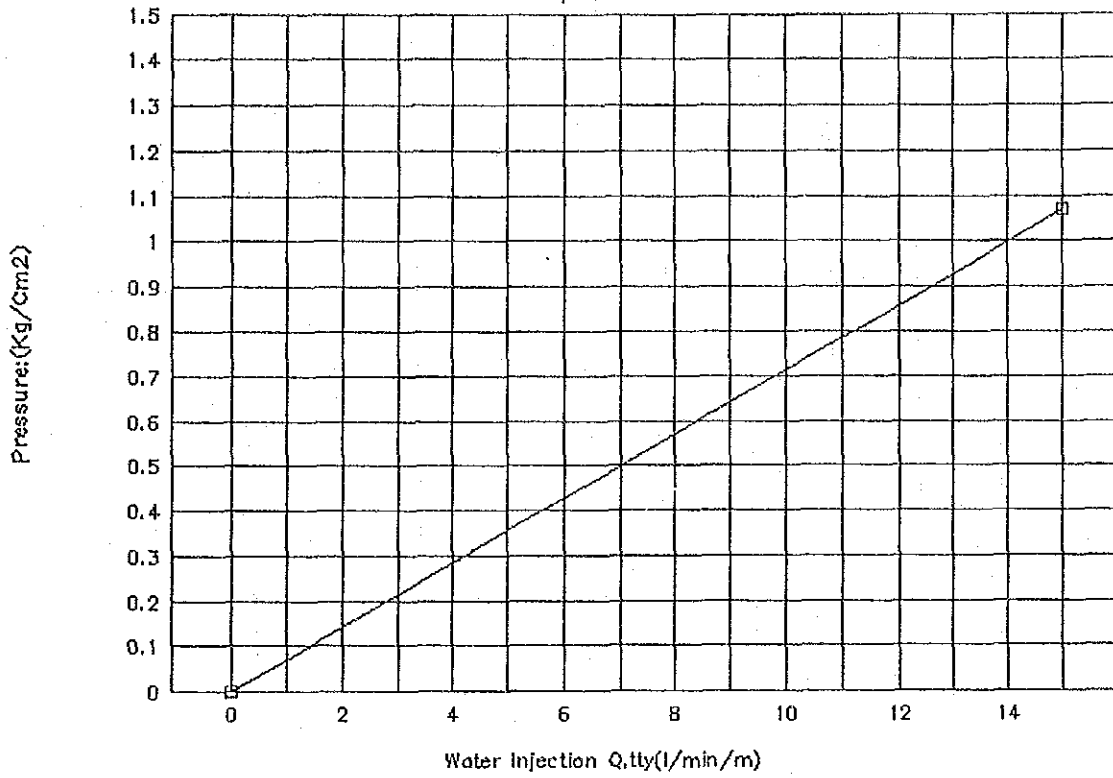
Depth:50-60m





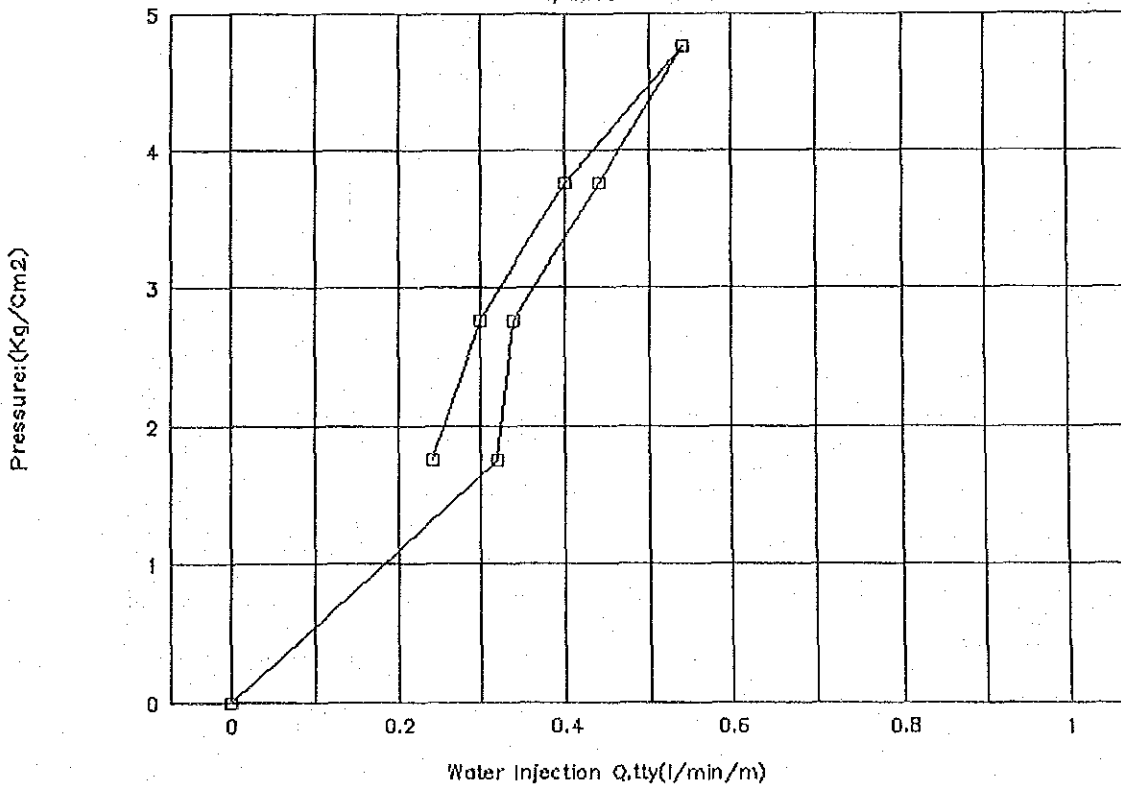
### P/Q.Curve Hole No:GT-3

Depth:5-10m



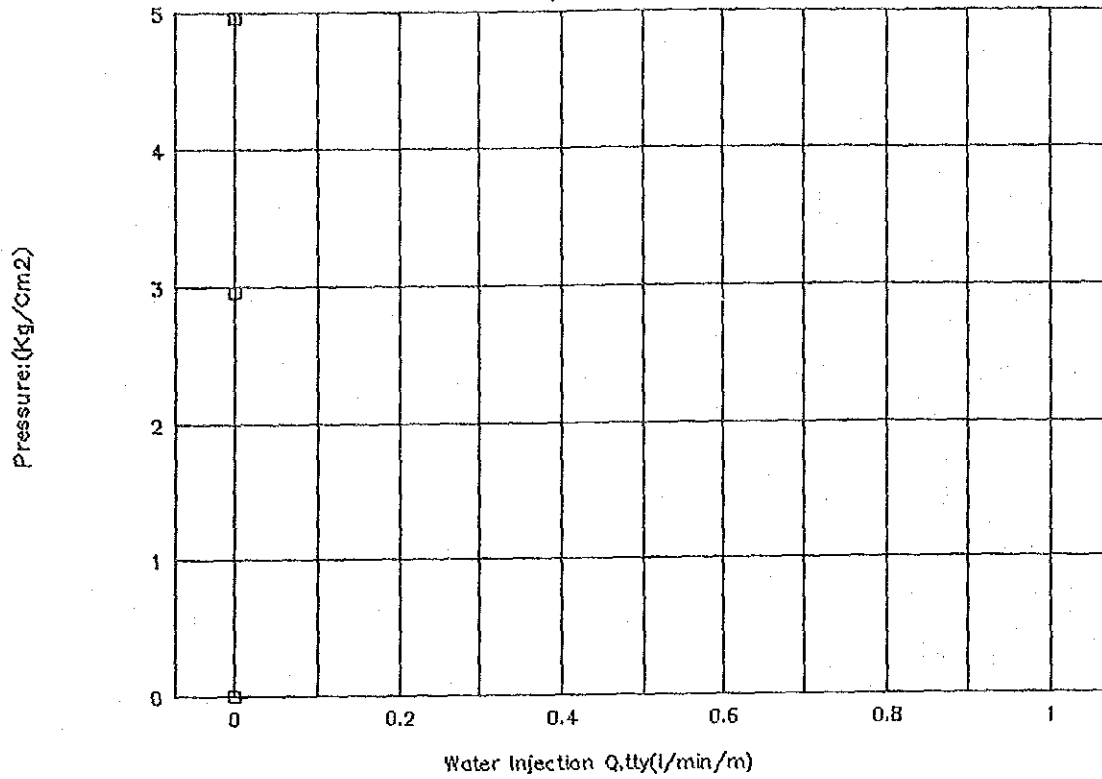
### P/Q.Curve Hole No:GT-3

Depth:10-15m



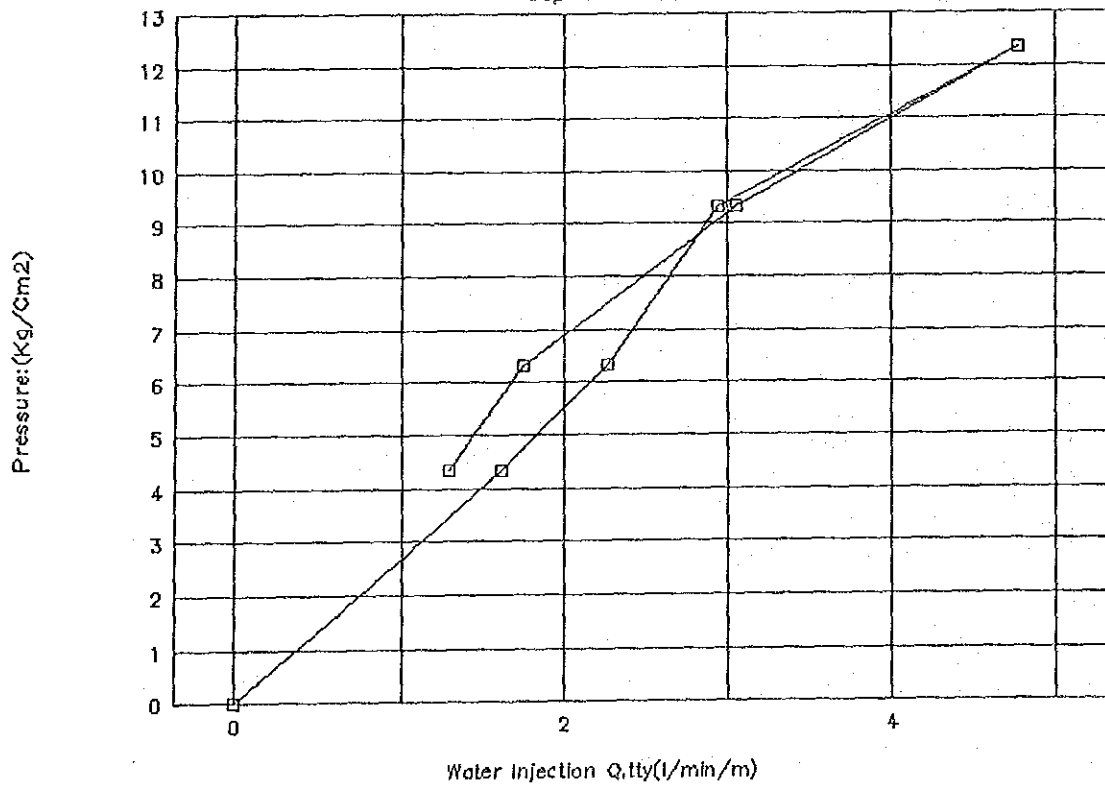
### P/Q.Curve Hole No:GT-3

Depth:15-20m



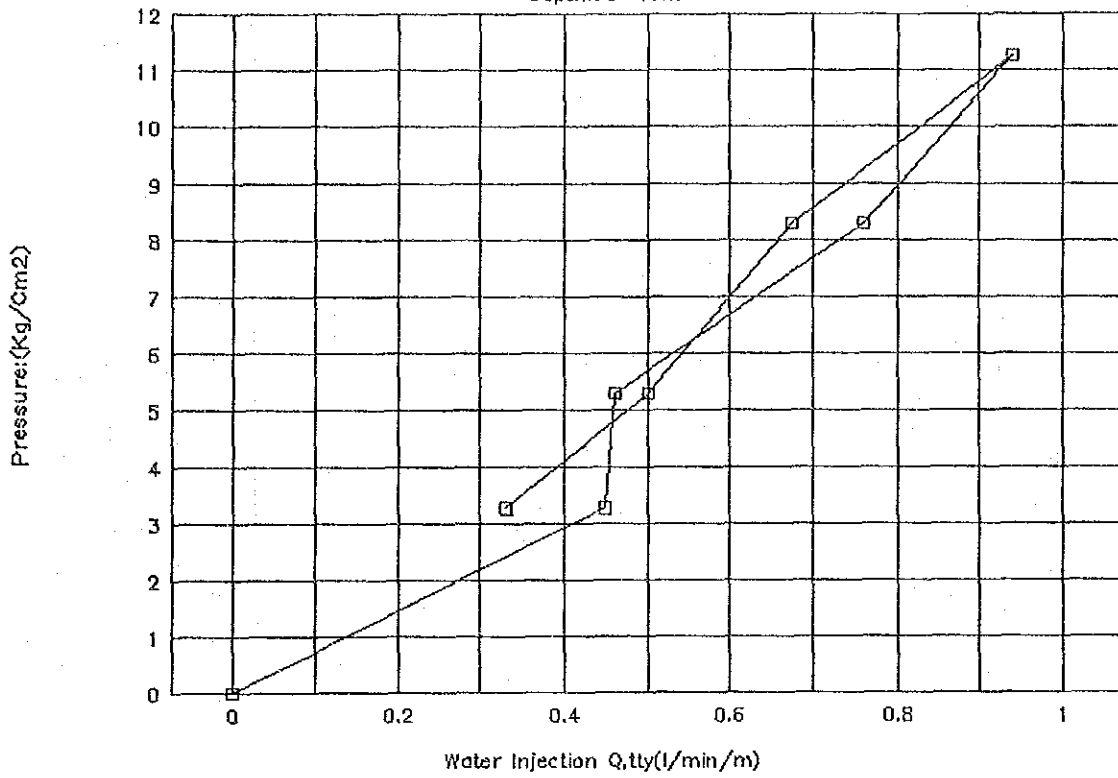
### P/Q.Curve Hole No:GT-3

Depth:20-30m



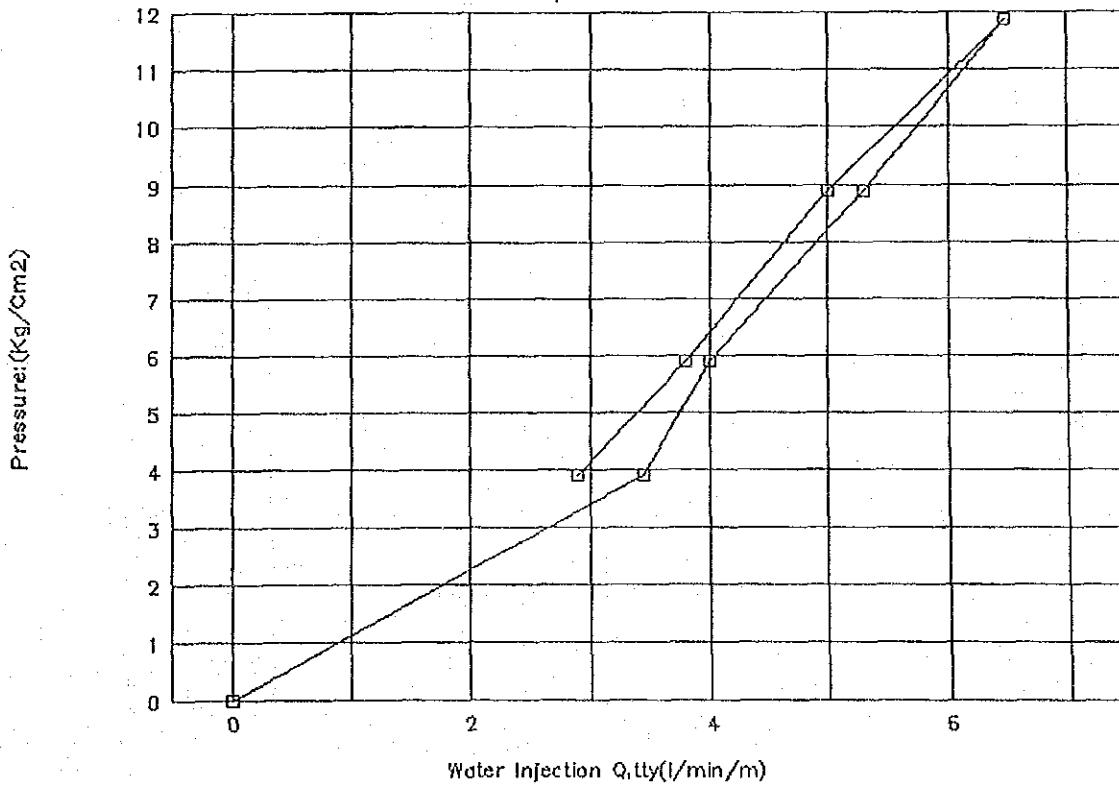
### P/Q.Curve Hole No:GT-3

Depth:30-40m



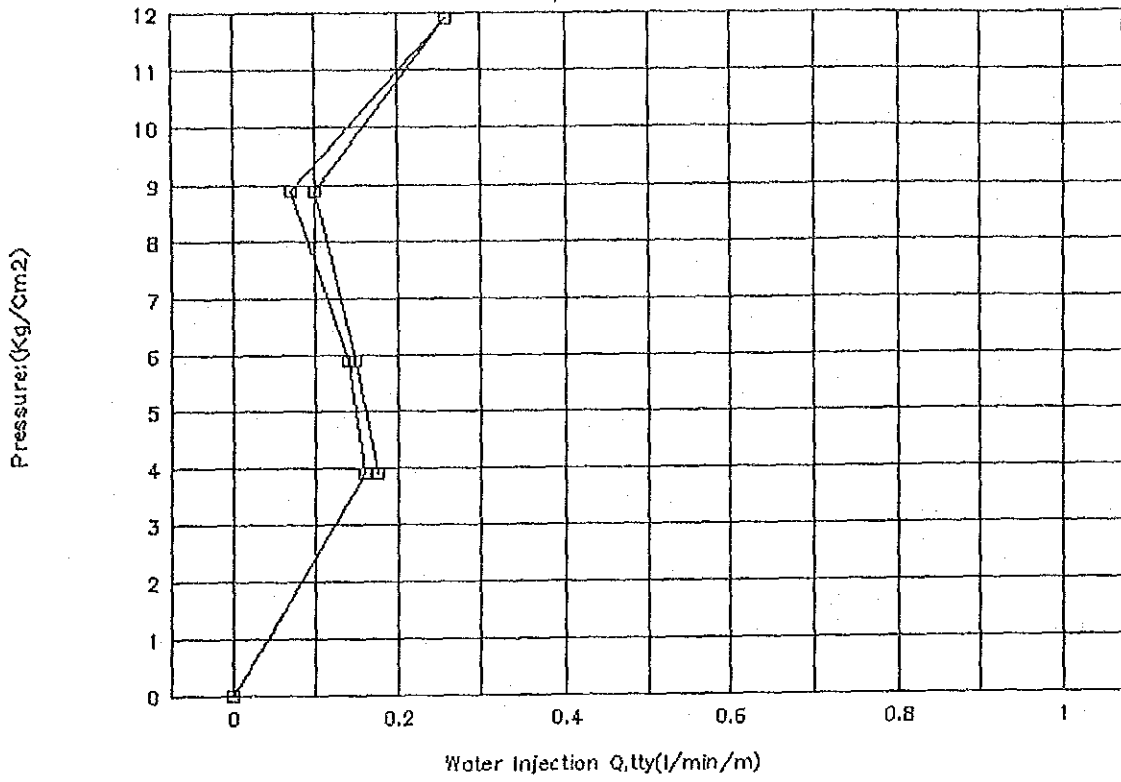
### P/Q.Curve Hole No:GT-3

Depth:40-50m



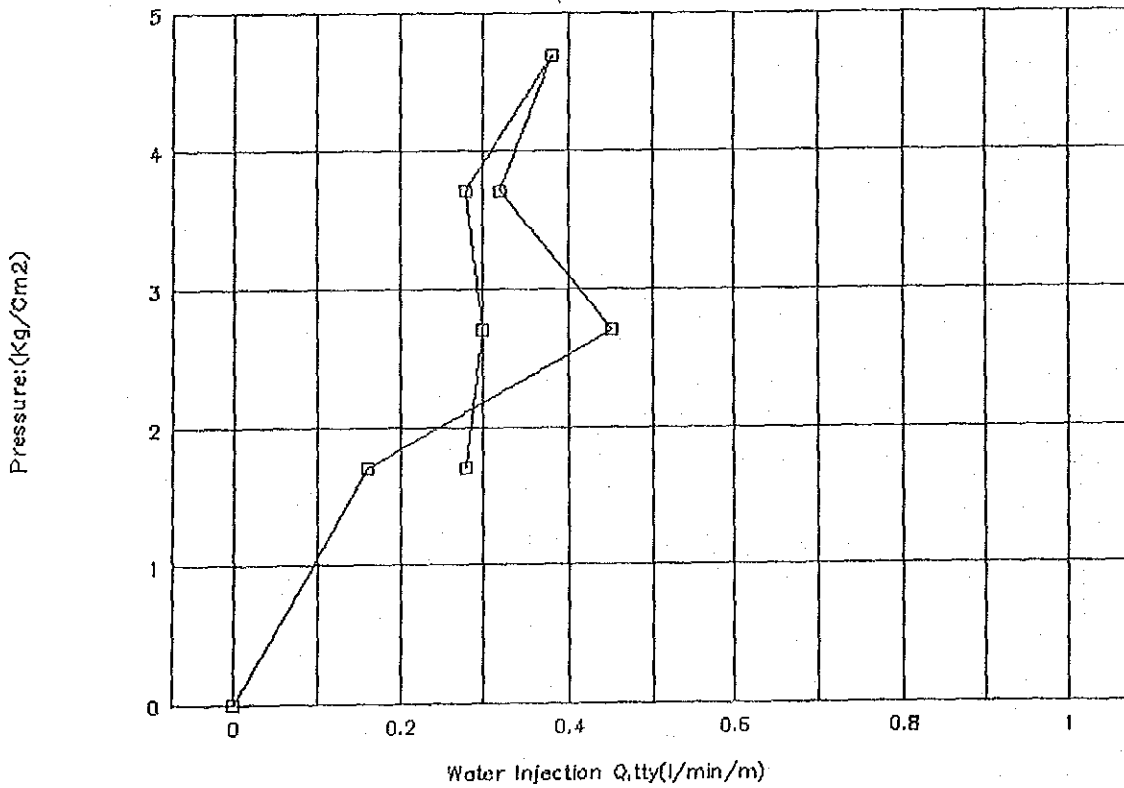
### P/Q.Curve Hole No:GT-3

Depth:50-60m



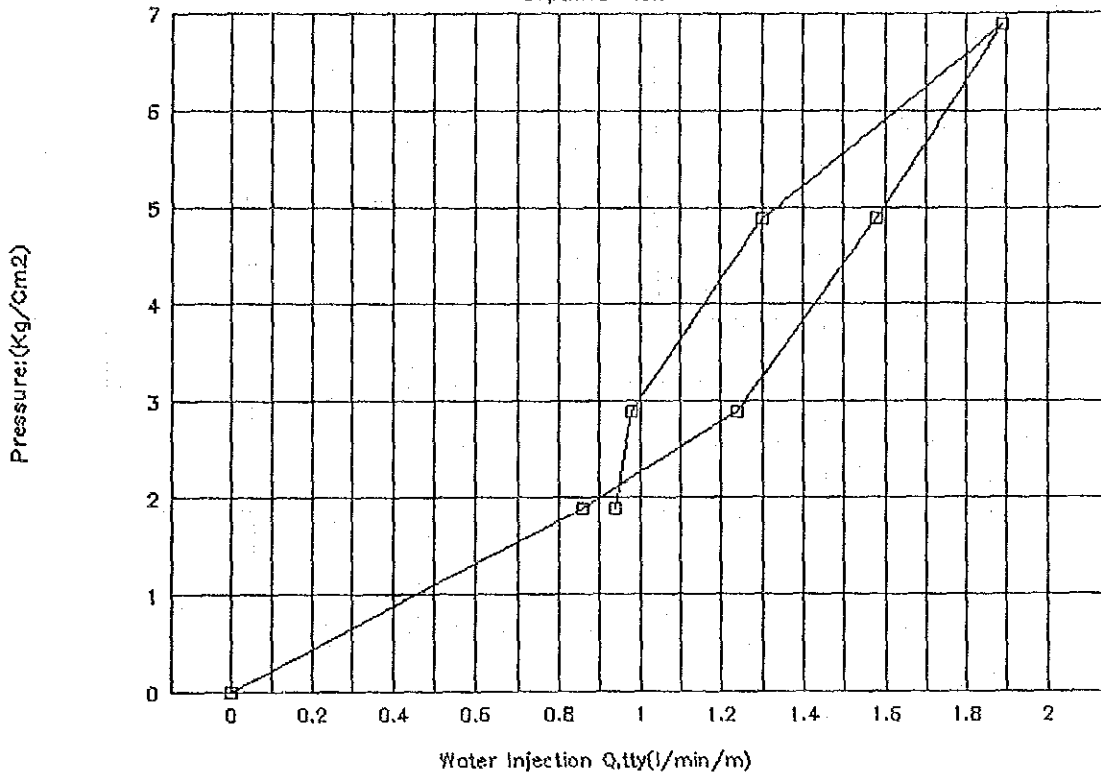
### P/Q.Curve Hole No:GT-4

Depth:10-15m



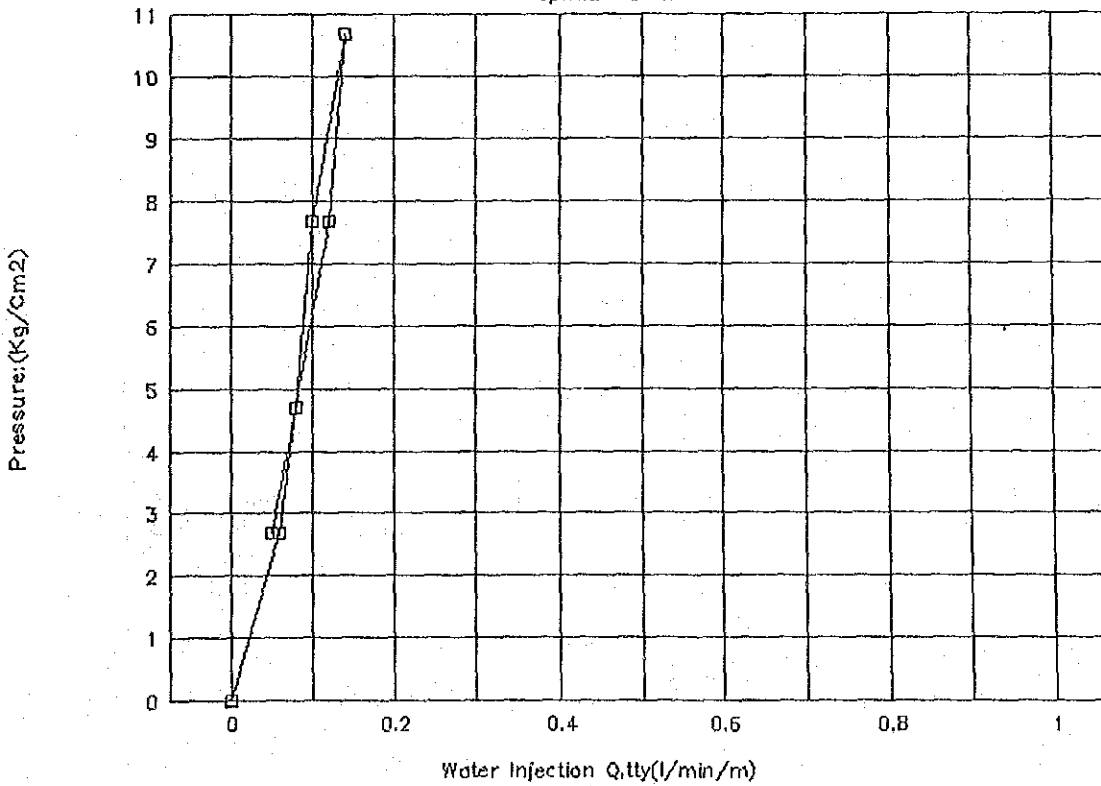
### P/Q.Curve Hole No:GT-4

Depth:15-20m



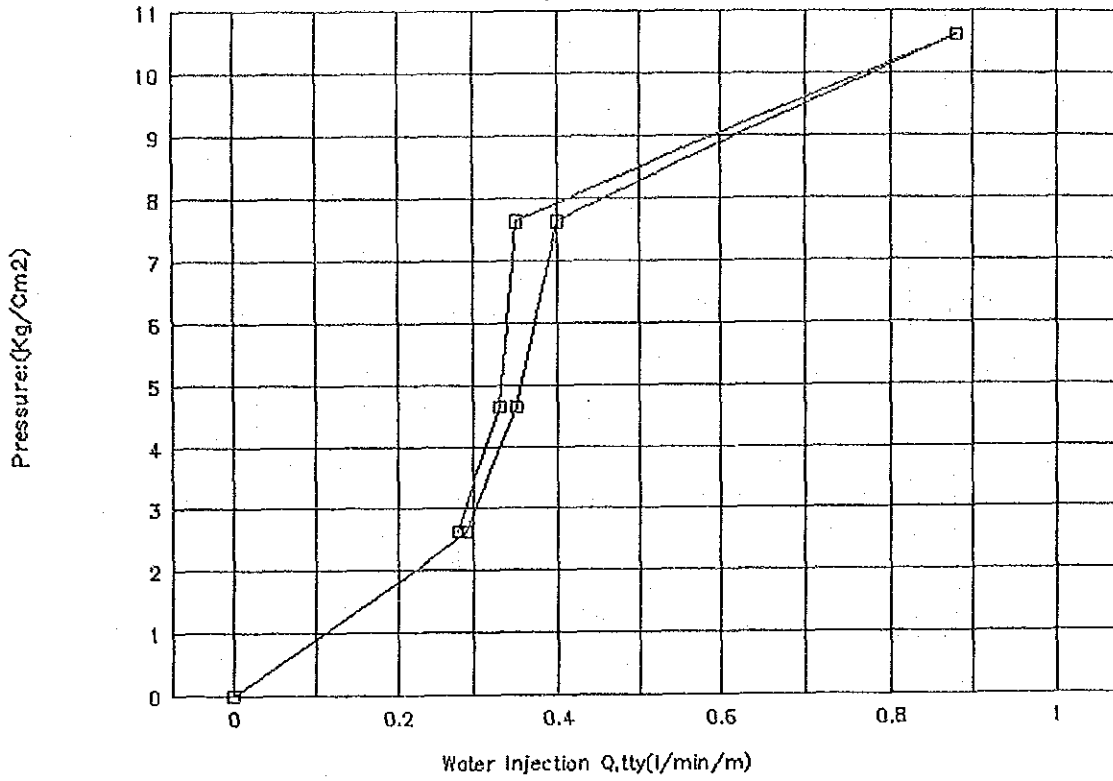
### P/Q.Curve Hole No:GT-4

Depth:20-30m



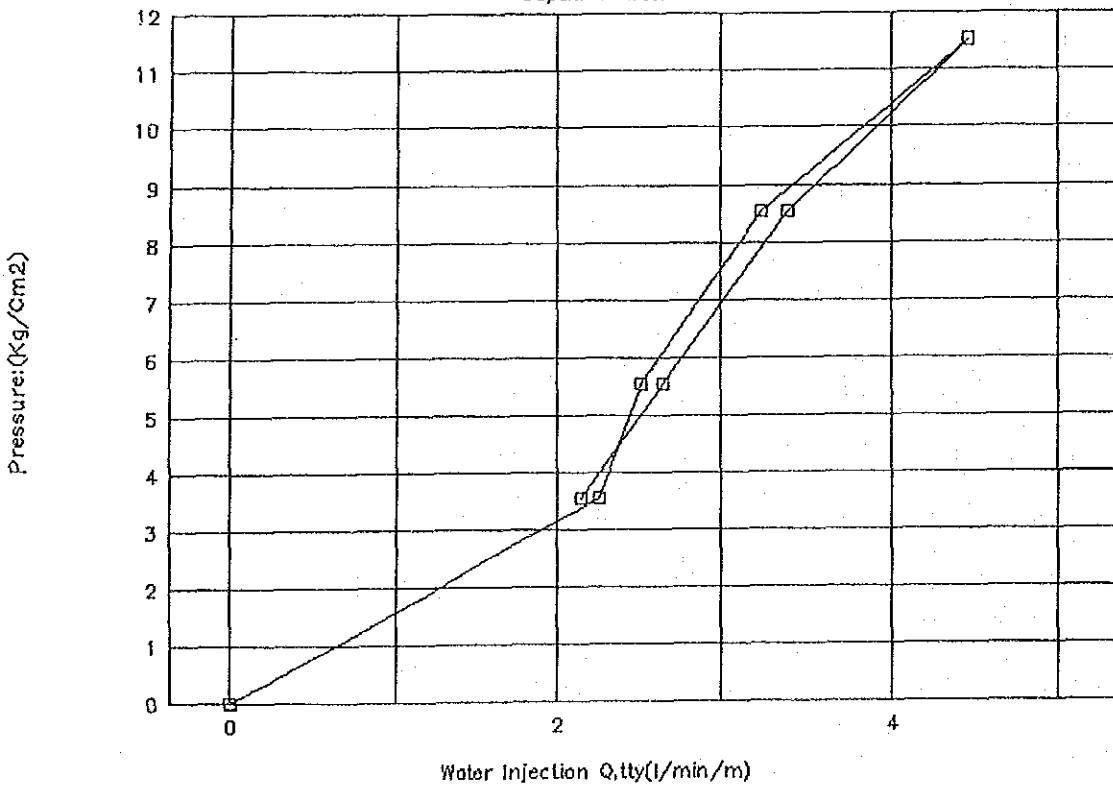
### P/Q.Curve Hole No:GT-4

Depth:30-40m



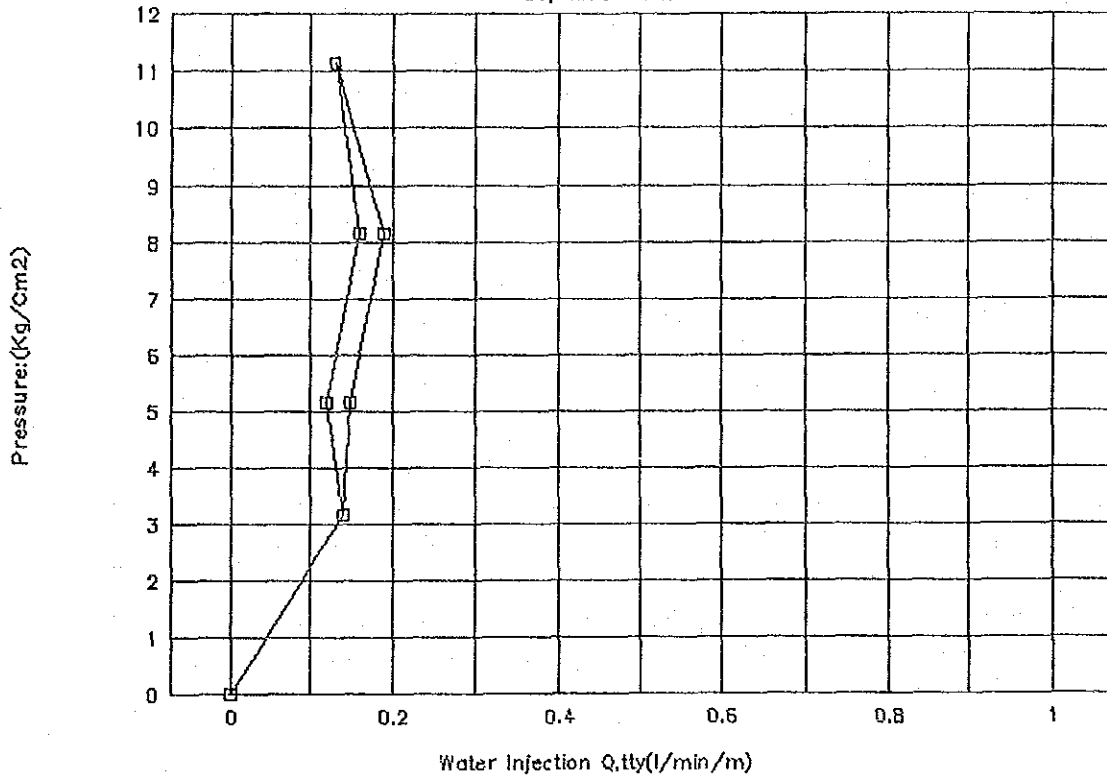
### P/Q.Curve Hole No:GT-4

Depth:40-50m



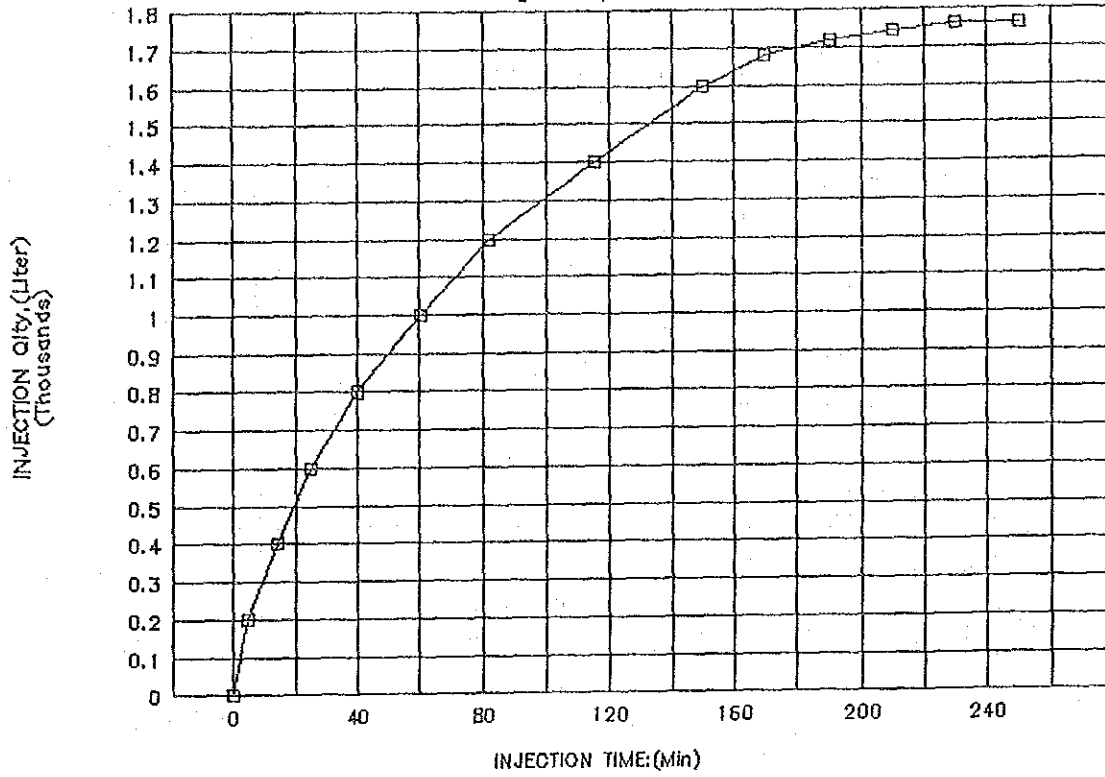
# P/Q.Curve Hole No:GT-4

Depth:50-60m



### GROUT.TEST :Hole No.GT-1

Stage:2. Depth:5-10m



### GROUT.TEST :Hole No.GT-1

Stage:3. Depth:10-15m

