
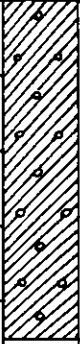



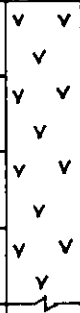



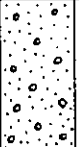





添付資料 - 4 ボーリング地質柱状図 (1) ~ (13)

Ele.	Depth (m)	Colum	Geology	Description	Groundwater	Remarks
	6.00		Gravel & sand	Brown~brownish grey, muddy, including slightly clay and silt		
	10.00		Calcreted gravel & sand	Brown~dark brownish grey, compact calcreted beds	-6.60m 	
	15.00		Basaltic pillow lava	Brownish grey~dark greenish grey, weathered strong chloritization		
	20.00		Basaltic massive lava	Dark green, strong chloritization		
	23.00		Basaltic pillow lava	Dark green, strong chloritization		
	30.00					
	32.00					
	40.00					

ボーリング地質柱状図 (1)

Ele.	Depth (m)	Colum	Geology	Description	Groundwater	Remarks
	41.00	▼ ▼	Basaltic pillow lava	Dark green, strong chloritization		
		▼ ▼	Basaltic massive lava	Dark green, strong chloritization		
	45.00	▼ ▼				
		▼ ▼	Basaltic pillow lava	Dark green, strong chloritization, calcite		
	50.00	▼	(End of hole.)			


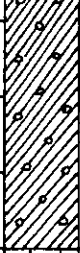
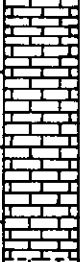

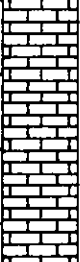


Ele.	Depth (m)	Colum	Geology	Description	Groundwater	Remarks
			Gravel & sand	Brown~brownish grey, rich in clay	-2.51m ▽	
	4.00		Calcreted gravel & sand	Light brown, loose calcreted		
	9.00		Shale	Reddish brown, slightly weathered		
	10.00		Shale	Dark reddish grey		
	16.00					
	20.00					
	30.00		(End of hole.)			

ボーリング地質柱状図 (2)

Ele.	Depth (m)	Colum	Geology	Description	Groundwater	Remarks
	1.00		Gravel & sand	loose wadi sediments		
	10.00		Calcreted gravel & sand	Light grey~brownish grey. Gravel: 0.5~8cm in diameter, round~sub-round, gravel: gabbro, dolerite, harzburgite matrix: fine~coarse sand	-4.98m	
	12.00		Basaltic pillow lava	Dark greenish grey~dark green		
	15.00		Basaltic massive lava	Dark green, coarse grained		
	20.00		Basaltic pillow lava	Light greenish grey, chloritization, calcite veinlets		
	28.00		Basaltic pillow lava	Brownish grey~greenish grey		
	30.00		Basaltic pillow lava	Light greenish grey		
	31.00		Basaltic pillow lava			
	40.00		Basaltic pillow lava			



ボーリング地質柱状図 (3)

Ele.	Depth (m)	Colum	Geology	Description	Groundwater	Remarks
		▼				
		▼ ▼				
		▼				
		▼ ▼				
		▼				
	47.00	▼ ▼	Basaltic pillow lava	Light greenish grey		
		▼				
		▼ ▼				
	50.00	▼	Basaltic massive lava	Dark green, chloritization, coarse grained		
		▼				
		▼	(End of hole.)			

Ele.	Depth (m)	Colum	Geology	Description	Groundwater	Remarks
	1.00		Gravel & sand	Light brown~brownish grey, loose calcreted, alluvial deposits.		
	8.00		Calcreted gravel & sand	Light brown~brownish grey, compact calcreted, alluvial deposits.		
	10.00		Limestone	Light brownish grey, weathered.		
	15.00		Limestone	Grey~dark grey.		
	20.00		Limestone	Grey~dark grey.		
	30.00		Limestone	Grey~dark grey.		
	40.00		Limestone	Grey~dark grey.		


-8.07m

ボーリング地質柱状図 (4)

Ele.	Depth (m)	Colum	Geology	Description	Groundwater	Remarks
			Limestone	Grey~dark grey.		
	45.00		Siliceous mudstone	Reddish brown, siliceous mudstone~chert.		
	50.00					
	60.00		(End of hole.)			


Ele.	Depth (m)	Column	Geology	Description	Groundwater	Remarks
	1.00		Gravel & sand	Light brownish grey, loose sediment.		
	5.00		Calcreted gravel & sand	Light brownish grey, weak calcreted, loose, gravel: round~sub-round gabbro, dolerite, limestone.		
	10.00		Calcreted gravel & sand	Brownish grey, calcrete, compacted.	-10.78m	
	15.00		Calcreted gravel & sand	Light brownish grey, calcrete, compacted.		
	18.00		Calcreted gravel & sand	Light brownish grey, calcrete, compacted, coarse sand.		
	20.00		Calcreted gravel & sand	Light brownish grey, calcrete, compacted, coarse sand.		
	23.00		Calcareous mudstone	Dark grey, calcareous, weathered.		
	30.00		Calcareous mudstone	Dark grey, calcareous, weathered.		
	40.00		Calcareous mudstone	Dark grey, calcareous, weathered.		

ボーリング地質柱状図 (5)

Ele.	Depth (m)	Column	Geology	Description	Groundwater	Remarks
	50.00		Calcareous mudstone	Dark grey, calcareous, weathered.		
	60.00		(End of hole.)			

Ele.	Depth (m)	Colum	Geology	Description	Groundwater	Remarks
	4.00		Gravel & sand	Brown~brownish grey, loose, clay.		
	8.00		Calcreted gravel & sand	Light brownish green, loose.		
	10.00		Calcreted gravel & sand	Whitish grey~light brownish grey, calcrete, compacted.	-9.35m	
	16.50		Mudstone	Light greenish grey~whitish grey, strongly weathered, soft, argillized		
	19.00		Mudstone	Light greenish grey~whitish grey, strongly weathered, very soft.		
	20.00		Mudstone	Light greenish grey~whitish grey, strongly weathered, very soft.		
	30.00		Mudstone	Light greenish grey~whitish grey, silty mudstone.		
	40.00		Mudstone	Light greenish grey~whitish grey, silty mudstone.		

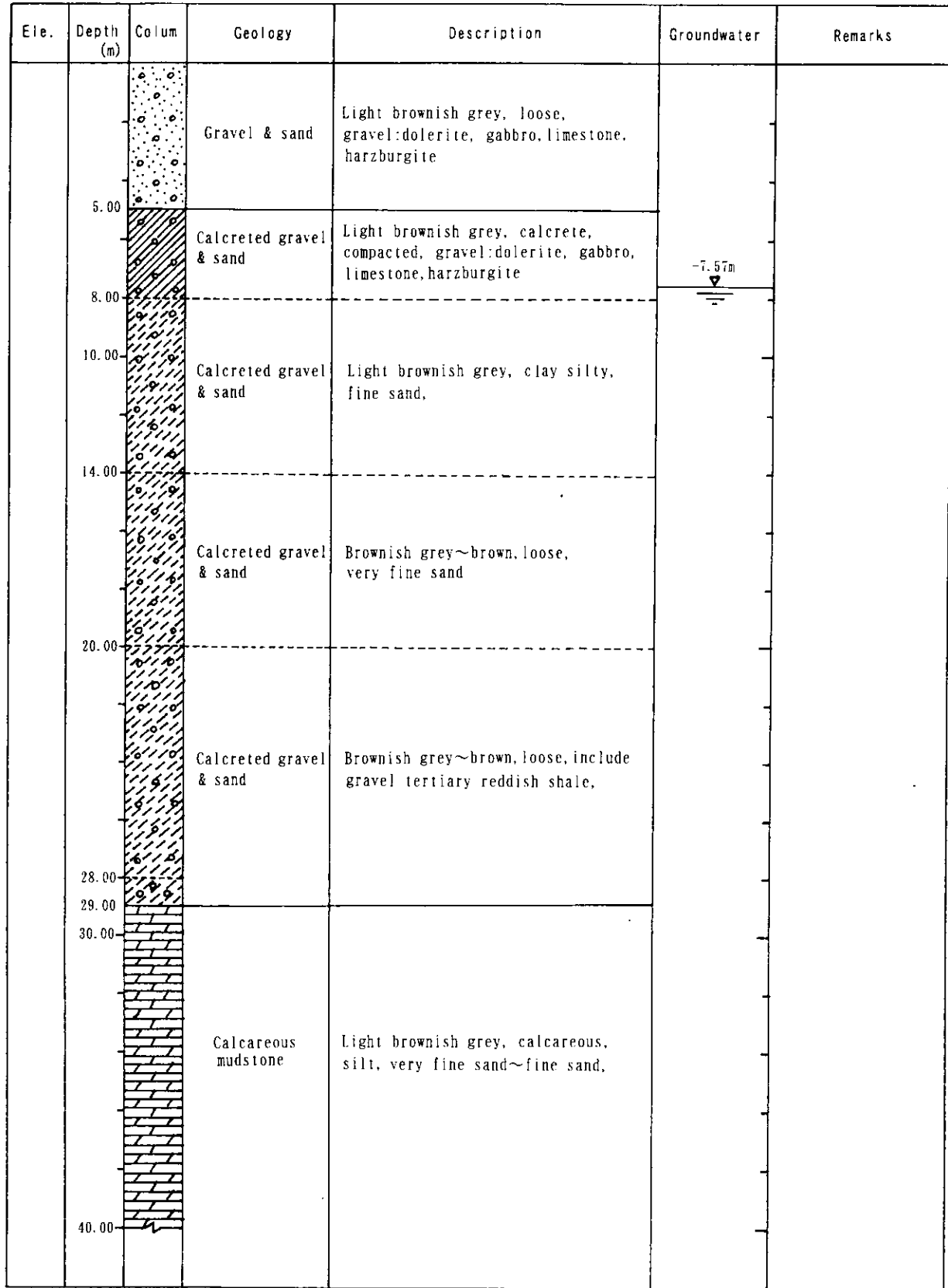
ボーリング地質柱状図 (6)

Ele.	Depth (m)	Colum	Geology	Description	Groundwater	Remarks
			Mudstone	Light greenish grey~whitish grey. weathered. soft.		
	45.00		Mudstone	Light brownish grey. a little hard. still weathered. soft. clay.		
	50.00					
	60.00		(End of hole.)			


Ele.	Depth (m)	Column	Geology	Description	Groundwater	Remarks
	8.00		Gravel & sand	Light grey, loose alluvial deposits, gravel: round~sub-round, gabbro, dolerite, harzburgite, matrix: fine~coarse sand.		
	10.00		Calcreted gravel & sand	Light brownish grey~whity grey, compact calcreted, gravel: round~sub-round, gabbro, dolerite, harzburgite, matrix: fine~coarse sand.	-15.24m	
	20.00		Calcreted gravel & sand	Light brownish grey, loose calcrete, including much gravels, gravel: round~sub-round, gabbro, dolerite, harzburgite, matrix: fine~coarse sand.		
	21.00		Calcreted gravel & sand	Light brownish grey, loose calcrete, including much gravels, gravel: round~sub-round, gabbro, dolerite, harzburgite, matrix: fine~coarse sand.		
	30.00		Tuffaceous sandstone~mudstone	Light greenish grey, argillized.		
	38.00		Conglomerate	Greenish grey, gravel: chert, gabbro, harzburgite, dolerite, silic-shale, sandstone		
	40.00		Conglomerate	Greenish grey, gravel: chert, gabbro, harzburgite, dolerite, silic-shale, sandstone		







ボーリング地質柱状図 (7)

Ele.	Depth (m)	Colum	Geology	Description	Groundwater	Remarks
	42.50		Conglomerate	Greenish grey, gravel: chert, gabbro, harzburgite, dolerite, silic-shale, sandstone		
	50.00		Tuffaceous sandstone ~ mudstone	Light greenish grey.		
	53.00		Tuffaceous sandstone ~ mudstone	Light greenish grey, including much gravels.		
	54.00		Tuffaceous sandstone ~ mudstone	Light greenish grey, larger diameter of gravel.		
	60.00		Tuffaceous sandstone ~ mudstone	Light greenish grey, including much gravels.		
	61.00		Tuffaceous sandstone ~ mudstone	Light greenish grey, including much gravels.		
	70.00		(End of hole.)			



ボーリング地質柱状図 (8)

Ele.	Depth (m)	Colum	Geology	Description	Groundwater	Remarks
			Calcareous mudstone	Light brownish grey, calcareous. silt. very fine sand~fine sand.		
	50.00		(End of hole.)			

Ele. (m)	Depth (m)	Colum.	Geology	Description	Groundwater	Remarks
	1.00		Gravel and sand	Brown, sorting bad, loose, gravel: 0.5 - 8cm Matrix: fine to coarse sand		
	4.00		Gravel and sand	Brownish grey, loose calcareted layer		
	8.00		Calcreted Gravel & sand	Light brownish grey, consolidated by calcrete, compacted	-7.62m	
	10.00		Massive lava	Dark green to greenish grey, basaltic massive lava, hard		
	15.00		Pillow lava	Dark greenish grey, basaltic pillow lava, crackly		
	20.00		Massive lava	Dark green to greenish grey, basaltic massive lava, hard		
	30.00		(End of hole.)			

ボーリング地質柱状図 (9)

D. H. No. DH-11

(1)

Ele.	Depth (m)	Colum	Geology	Description	Groundwater	Remarks
	3.00		Gravel & sand	Brown~light brownish grey, loose		
	5.00		Calcreted gravel & sand	Brown~light brownish grey loose calcreted		
	8.00		Basaltic pillow lava	Light greenish grey, weathered		
	10.00		Basaltic massive lava	Light greenish grey, weathered a little, coarse grained, hard	-9.58m 	
	14.00		Basaltic pillow lava	greenish grey, fresh light grey		
	19.00		Basaltic massive lava	Light grey, fresh hard, coarse grained, chloritization		
	27.00		Basaltic pillow lava	Light grey, fresh quartz, chloritization		
	30.00		(End of hole.)			

ボーリング地質柱状図 (10)

Ele.	Depth (m)	Colum	Geology	Description	Groundwater	Remarks
	2.00		Gravel & sand	Light grey~brownish grey, loose,		
	8.00		Calcreted gravel & sand	Light grey~brownish grey, calcreted, loose,	-5.36m ▽	
	10.00		Calcreted gravel & sand	Brown~brownish grey, calcrete, compacted,		
	14.00		Basaltic massive lava	Greenish grey, weathered, partly brownish, chlorite, epidote, calcite,		
	17.00		Basaltic pillow lava	Greenish grey, weathered, partly chlorite, epidote, calcite,		
	19.00		Basaltic pillow lava	Greenish grey, weathered, partly chlorite, epidote, calcite,		
	20.00		Basaltic massive lava	Greenish grey, weathered, partly brownish, chlorite, epidote, calcite,		
	24.00		Basaltic massive lava	Greenish grey, weathered, partly brownish, chlorite, epidote, calcite,		
	27.00		Basaltic pillow lava	Greenish grey, weathered, partly chlorite, epidote, calcite,		
	30.00		Basaltic massive lava	Light greenish grey, massive,		
	40.00		Basaltic massive lava	Light greenish grey, massive,		

ボーリング地質柱状図 (11)

D. H. No. DH-12D

(2)

Ele.	Depth (m)	Colum	Geology	Description	Groundwater	Remarks
		▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼	Basaltic massive lava	Light greenish grey, massive.		
	50.00		(End of hole.)			

Ele.	Depth (m)	Colum	Geology	Description	Groundwater	Remarks
	4.00		Gravel & sand	Grey~brownish grey, gravel:gabbro, dolerite,		
	9.00		Calcreted gravel & sand	Brownish grey, coarse sand, weak calcrete.	-7.85m	
	10.00		Basaltic pillow lava	Greenish grey.		
	14.00		Basaltic pillow lava	Greenish grey.		
	15.00		Basaltic pillow lava (altered zone)	Basaltic pillow lava (altered zone)		
	20.00		Basaltic massive lava	Greenish grey~dark greenish grey.		
	21.00		Basaltic massive lava	Greenish grey~dark greenish grey.		
	24.00		Basaltic pillow lava	Greenish grey.		
	28.00		Basaltic massive lava	Dark greenish grey, coarse grained.		
	30.00		Basaltic pillow lava	Light greenish grey, altered.		
	39.00		Basaltic massive lava	Dark greenish grey.		
	40.00		Basaltic massive lava	Dark greenish grey.		

ボーリング地質柱状図 (12)

Ele.	Depth (m)	Colum	Geology	Description	Groundwater	Remarks
		▼ ▼	Basaltic massive lava	Dark greenish grey.		
	44.00	▼ ▼				
		▼	Basaltic pillow lava	Light greenish grey.		
	47.00	▼ ▼				
		▼ ▼	Basaltic massive lava	Dark greenish grey~dark green. fresh. coarse grained.		
	50.00	▼ ▼				
			(End of hole.)			

Ele.	Depth (m)	Colum	Geology	Description	Groundwater	Remarks
	3.00		Gravel & sand	Grey~brownish grey, loose, gravel:gabbro, dolerite.		
	5.00		Calcreted gravel & sand	Grey~brownish grey, loose calcrete, gravel:gabbro, dolerite.		
	9.00		Basaltic pillow lava	Dark grey, weathered a little, wealth chlorite, epidote,	-8.70m	
	12.00		Basaltic massive lava	Light greenish grey~grey.		
	18.00		Basaltic pillow lava	Greenish grey~dark grey, wealth chlorite, epidote,		
	20.00		Basaltic massive lava	Dark grey.		
	25.00		Basaltic pillow lava	Greenish grey~dark grey,		
	27.00		Basaltic massive lava	Dark grey~greenish grey,		
	33.00		Basaltic pillow lava	Grey~greenish grey,		
	40.00		Basaltic massive lava	Greenish grey~dark grey,		
			(End of hole.)			

ボーリング地質柱状図 (13)

添付資料 - 5 揚水試験解析図 (1) ~ (22)

Based on JGS 1314

Permeability Test using drill hole (Unstationary Method)

Subject: The Feasibility Study on Mine Pollution Control in Sohar Mine Area, Sultanate of Oman

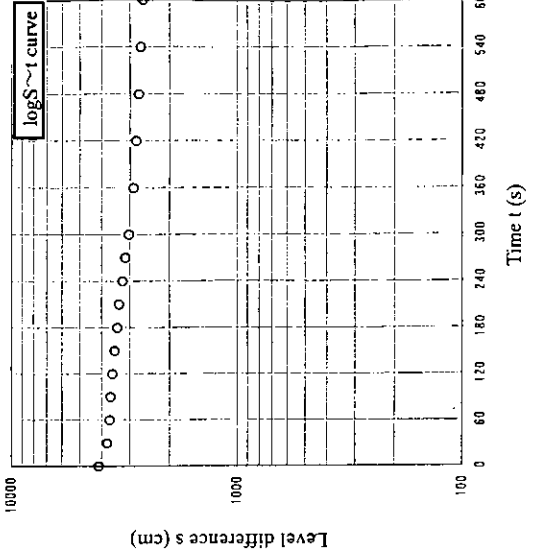
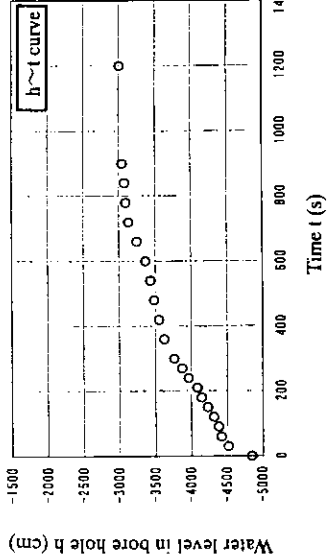
Date tested: 21/07/2000

Name of drill hole : DH-2

Measured by: mrc

Test method	Recovery test	Sectional length : L (cm)	4251	Classification of aquifer	Unconfined
Section tested (m)	7.49~50.00	Groundwater level : h ₀ (cm)	-749.0	Ground level (m)	211.49
Pipe inner diameter : d (cm)	20	Diameter of drill hole : D (cm)	30.6	Weather	Fine
Slope of linear part of log~t curve : m (S ⁻¹)	3.54E-04	Permeability Coefficient : k (cm/s)	5.38E-05		

Elapsed time : t(s)	Water level in hole : h (cm)	Level difference between original GWL: S (cm)
0	-4850.0	4101.0
30	-4520.0	3771.0
60	-4421.0	3672.0
90	-4385.0	3636.0
120	-4316.0	3567.0
150	-4235.0	3486.0
180	-4149.0	3400.0
210	-4090.0	3341.0
240	-3968.0	3219.0
270	-3878.0	3129.0
300	-3768.0	3019.0
360	-3631.0	2882.0
420	-3555.0	2806.0
480	-3485.0	2736.0
540	-3436.0	2687.0
600	-3370.0	2621.0
660	-3250.0	2501.0
720	-3137.0	2388.0
780	-3100.0	2351.0
840	-3085.0	2336.0
900	-3050.0	2301.0
1200	-3010.0	2261.0



Remarks :

Equations used for permeability test

$$k = \frac{0.66d^2 \log(2L / D)}{L} \cdot m$$

$$m = \frac{\log(s_1 / s_2)}{t_2 - t_1}$$

Based on JGS 1314

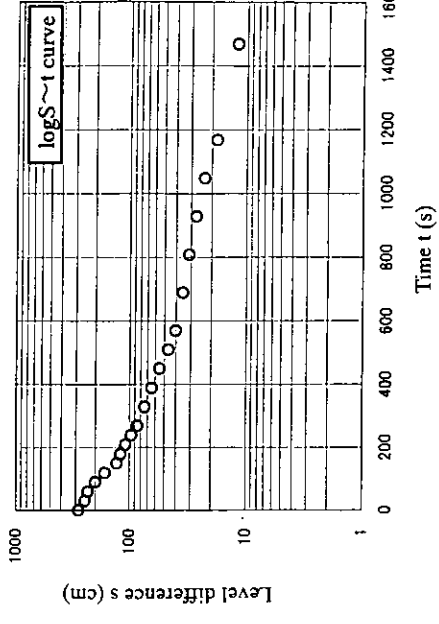
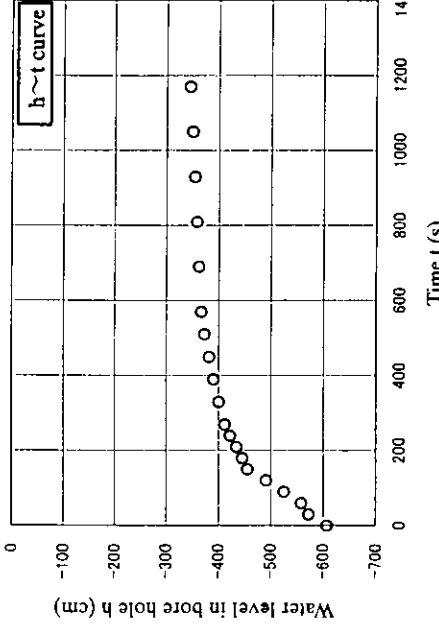
Permeability Test using drill hole (Unstationary Method)

Subject: The Feasibility Study on Mine Pollution Control in Sohar Mine Area, Sultanate of Oman

Date tested: 01/08/2000

Name of drill hole : DH-3		Measured by: mrc	
Test method	Recovery test	2673	Unconfined
Section tested (m)	3.27~30.00	-327.0	
Pipe inner diameter : d (cm)	20	30.6	162.24
Slope of linear part of log~t curve : m (S ⁻¹)	2.83E-03	6.28E-04	Fine

Elapsed time : t(s)	Water level in hole : h (cm)	Level difference between original GWL: S (cm)
0	-608.0	281.0
30	-573.2	246.2
60	-559.1	232.1
90	-526.0	199.0
120	-491.0	164.0
150	-456.0	129.0
180	-446.4	119.4
210	-435.0	108.0
240	-423.0	96.0
270	-412.5	85.5
330	-401.0	74.0
390	-391.0	64.0
450	-382.0	55.0
510	-373.0	46.0
570	-367.0	40.0
690	-362.0	35.0
810	-358.0	31.0
930	-354.0	27.0
1050	-350.0	23.0
1170	-345.0	18.0
1470	-339.0	12.0



Remarks :

Equations used for permeability test

$$k = \frac{0.66d^2 \log(2L/D)}{L} \cdot m$$

$$m = \frac{\log\left(\frac{s_1}{s_2}\right)}{t_2 - t_1}$$

揚水試験解析図 (4)

Based on JGS 1314		Permeability Test using drill hole (Unstationary Method)			
Subject: The Feasibility Study on Mine Pollution Control in Sohar Mine Area, Sultanate of Oman					
Date tested: 10/10/2000					
Name of drill hole : DH-4S					
Test method		Recovery test		1140	Unconfined
Section tested (m)		6.60~18.00		-660.0	
Pipe inner diameter : d (cm)		20		30.6	
Slope of linear part of log~t curve : m (S ⁻¹)		1.79E-03		7.76E-04	
Sectional length : L (cm)		Groundwater level : h ₀ (cm)		Classification of aquifer	
Diameter of drill hole : D (cm)		Permeability Coefficient : k (cm/s)		Ground level (m)	
Weather		7.76E-04		145.32	
Level difference between original GWL: S (cm)		Fine		Weather	
Elapsed time : t(s)		Water level in hole : h (cm)		Level difference s (cm)	
0	-938.0	278.0		logS~t curve	
60	-866.5	206.5		h~t curve	
90	-816.0	156.0		Time t (s)	
120	-780.0	120.0		Time t (s)	
180	-757.0	97.0		Time t (s)	
240	-736.0	76.0		Time t (s)	
360	-720.0	60.0		Time t (s)	
480	-712.0	52.0		Time t (s)	
600	-698.0	38.0		Time t (s)	
900	-681.0	21.0		Time t (s)	
1800	-677.0	17.0		Time t (s)	
3600	-670.0	10.0		Time t (s)	
Remarks :					
Equations used for permeability test					
$k = \frac{0.666d^2 \log(2L/D)}{L} \cdot m$ $m = \frac{\log\left(\frac{s_1}{s_2}\right)}{t_2 - t_1}$					

揚水試験解析図 (6)

Permeability Test using drill hole (Unstationary Method)

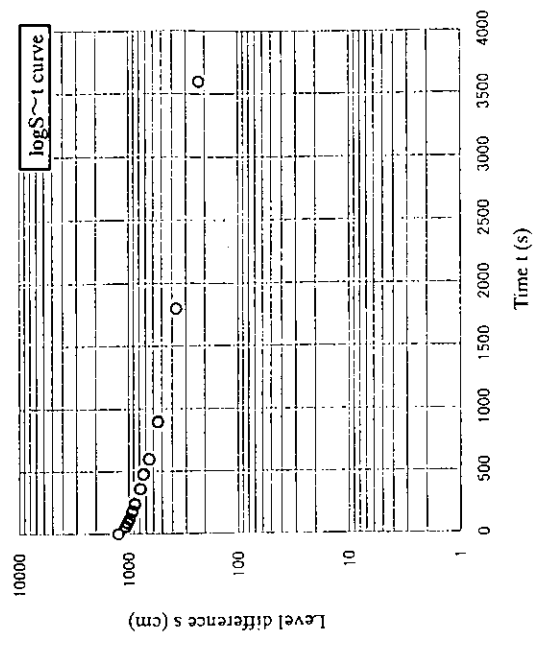
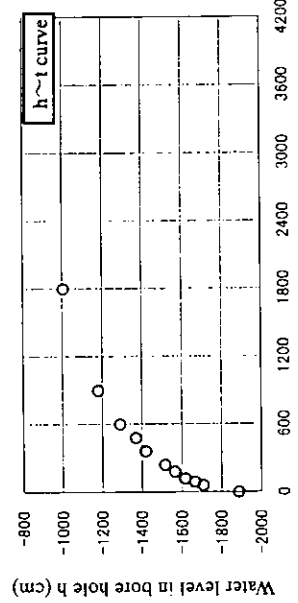
Based on JGS 1314

Subject: The Feasibility Study on Mine Pollution Control in Sohar Mine Area, Sultanate of Oman

Date tested: 10/10/2000

Name of drill hole : DH-4D		Measured by: mrc	
Test method	Recovery test	4356	Unconfined
Section tested (m)	6.44~50.00	-644.0	aquifer
Pipe inner diameter : d (cm)	7.5	15.6	Ground level (m)
Slope of linear part of log~t curve : m (S ⁻¹)	4.60E-04	1.08E-05	Weather
			Fine

Elapsed time : t(s)	Water level in hole : h (cm)	Level difference between original GWL: S (cm)
0	-1888.0	1244.0
60	-1710.0	1066.0
90	-1666.0	1022.0
120	-1617.0	973.0
180	-1567.0	923.0
240	-1516.0	872.0
360	-1420.0	776.0
480	-1372.0	728.0
600	-1291.0	647.0
900	-1181.0	537.0
1800	-1007.0	363.0
3600	-870.0	226.0



Remarks :

Equations used for permeability test

$$k = \frac{0.66d^2 \log(2L/D)}{L} \cdot m$$

$$m = \frac{\log\left(\frac{s_1}{s_2}\right)}{t_2 - t_1}$$

Based on JGS 1314

Permeability Test using drill hole (Unstationary Method)

Subject: The Feasibility Study on Mine Pollution Control in Sohar Mine Area, Sultanate of Oman

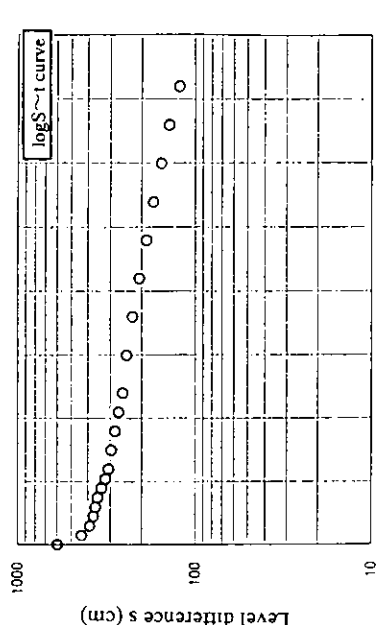
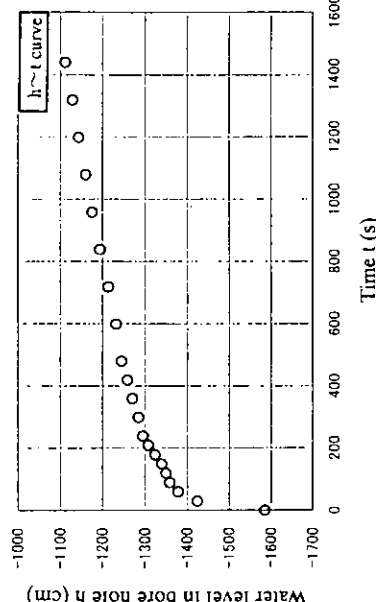
Date tested: 18/07/2000

Name of drill hole : DH-5D

Measured by: mrc

Test method	Recovery test	Sectional length : L (cm)	5010	Classification of aquifer	Unconfined
Section tested (m)	9.90~60.00	Groundwater level : h ₀ (cm)	-990.0	Ground level (m)	107.04
Pipe inner diameter : d (cm)	7.5	Diameter of drill hole : D (cm)	15.6	Weather	Fine
Slope of linear part of log~t curve : m (S ⁻¹)	3.64E-04	Permeability Coefficient : k (cm/s)	7.57E-06		

Elapsed time : t(s)	Water level in hole : h (cm)	Level difference between original GWL: S (cm)
0	-1585.0	595.0
30	-1424.0	434.0
60	-1379.5	389.5
90	-1360.0	370.0
120	-1351.0	361.0
150	-1340.0	350.0
180	-1324.0	334.0
210	-1308.0	318.0
240	-1296.0	306.0
300	-1285.0	295.0
360	-1271.0	281.0
420	-1259.0	269.0
480	-1245.0	255.0
600	-1232.0	242.0
720	-1214.0	224.0
840	-1195.0	205.0
960	-1177.0	187.0
1080	-1161.0	171.0
1200	-1144.0	154.0
1320	-1129.0	139.0
1440	-1112.0	122.0



Remarks :

Equations used for permeability test

$$k = \frac{0.66d^2 \log(2L / D)}{L} \cdot m$$

$$m = \frac{\log(s_1 / s_2)}{t_2 - t_1}$$

揚水試験解析図 (9)

Based on JGS 1314

Permeability Test using drill hole (Unstationary Method)

Subject: The Feasibility Study on Mine Pollution Control in Sohar Mine Area, Sultanate of Oman

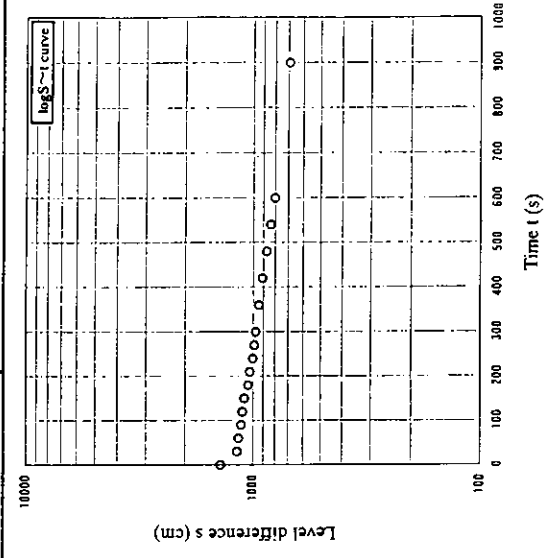
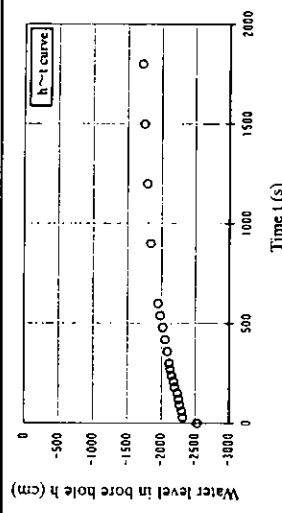
Date tested: 18/07/2000

Name of drill hole : DH-6S

Measured by: mrc

Test method	Recovery test	Sectional length : L (cm)	750	Classification of aquifer	Unconfined
Section tested (m)	10.50~18.00	Groundwater level : h ₀ (cm)	-1050.0	Ground level (m)	101.80
Pipe inner diameter : d (cm)	20	Diameter of drill hole : D (cm)	30.6	Weather	Fine
Slope of linear part of log~t curve : m (S ⁻¹)	8.47E-04	Permeability Coefficient : k (cm/s)	5.04E-04		

Elapsed time : t(s)	Water level in hole : h (cm)	Level difference between original GWL: S (cm)
0	-1095.0	45.0
0.5	-1254.0	204.0
1	-1247.0	197.0
1.5	-1241.0	191.0
2	-1237.0	187.0
2.5	-1234.0	184.0
3	-1231.0	181.0
3.5	-1229.0	179.0
4	-1228.0	178.0
4.5	-1228.0	178.0
5	-1227.0	177.0
6	-1227.0	177.0
7	-1226.0	176.0
8	-1225.0	175.0
9	-1225.0	175.0
10	-1224.0	174.0
12	-1223.0	173.0
14	-1223.0	173.0
16	-1223.0	173.0
18	-1222.0	172.0
20	-1222.0	172.0
25	-1221.0	171.0
30	-1221.0	171.0
35	-1220.0	170.0
40	-1220.0	170.0
45	-1219.0	169.0
50	-1218.0	168.0
55	-1217.0	167.0
60	-1217.0	167.0



Remarks :

Equations used for permeability test

$$k = \frac{0.66d^2 \log(2L / D)}{L} \cdot m$$

$$m = \frac{\log\left(\frac{s_1}{s_2}\right)}{t_2 - t_1}$$

Based on JGS 1314

Permeability Test using drill hole (Unstationary Method)

Subject: The Feasibility Study on Mine Pollution Control in Sohar Mine Area, Sultanate of Oman

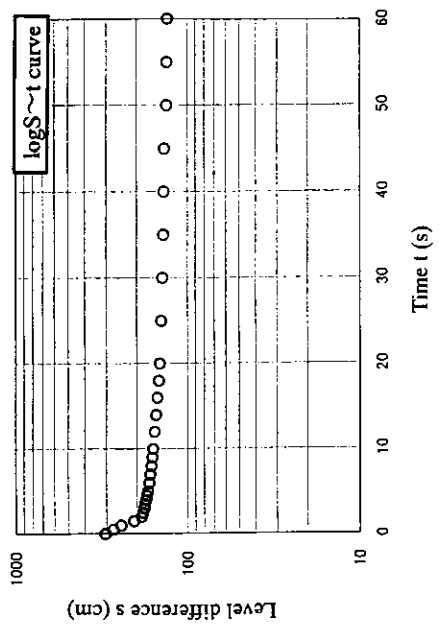
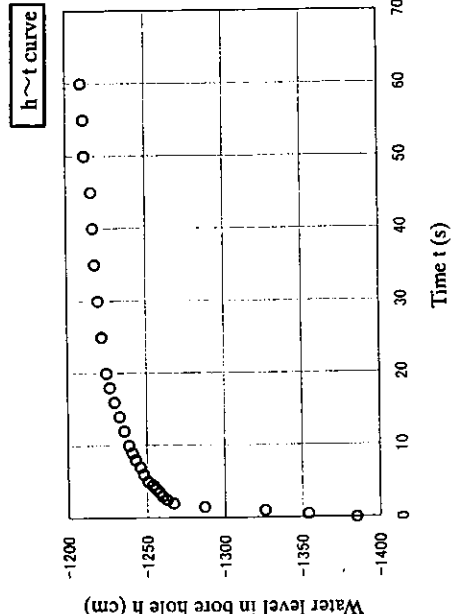
Date tested: 18/07/2000

Name of drill hole : DH-6D

Measured by: mrc

Test method	Recovery test	Sectional length : L (cm)	4820	Classification of aquifer	Unconfined
Section tested (m)	10.80~60.00	Groundwater level : h ₀ (cm)	-1080.0	Ground level (m)	101.37
Pipe inner diameter : d (cm)	7.5	Diameter of drill hole : D (cm)	15.6	Weather	Fine
Slope of linear part of log~t curve : m (S ⁻¹)	2.72E-03	Permeability Coefficient : k (cm/s)	5.85E-05		

Elapsed time : t(s)	Water level in hole : h (cm)	Level difference between original GWL: S (cm)
0	-1385.0	305.0
0.5	-1354.0	274.0
1	-1326.0	246.0
1.5	-1287.0	207.0
2	-1267.0	187.0
2.5	-1263.0	183.0
3	-1260.0	180.0
3.5	-1258.0	178.0
4	-1256.0	176.0
4.5	-1254.0	174.0
5	-1251.0	171.0
6	-1248.0	168.0
7	-1246.0	166.0
8	-1243.0	163.0
9	-1241.0	161.0
10	-1239.0	159.0
12	-1236.0	156.0
14	-1233.0	153.0
16	-1230.0	150.0
18	-1227.0	147.0
20	-1225.0	145.0
25	-1222.0	142.0
30	-1220.0	140.0
35	-1218.0	138.0
40	-1217.0	137.0
45	-1216.0	136.0
50	-1212.0	132.0
55	-1211.5	131.5
60	-1210.0	130.0



Remarks :

Equations used for permeability test

$$k = \frac{0.66d^2 \log(2L / D)}{L} \cdot m$$

$$m = \frac{\log(s_1 / s_2)}{t_2 - t_1}$$

Based on JGS 1314		Permeability Test using drill hole (Unstationary Method)	
Subject: The Feasibility Study on Mine Pollution Control in Sohar Mine Area, Sultanate of Oman			
Name of drill hole : DH-10		Date tested: 23/07/2000	
Measured by: mrc			
Test method	Recovery test	3229	Unconfined
Section tested (m)	7.71~40.00	-771.0	aquifer
Pipe inner diameter : d (cm)	20	30.6	Ground level (m)
Slope of linear part of log~t curve : m (S ⁻¹)		2.69E-05	
Sectional length : L (cm)		3229	
Groundwater level : h ₀ (cm)		-771.0	
Diameter of drill hole : D (cm)		30.6	
Permeability Coefficient : k (cm/s)		2.69E-05	
Weather		Fine	
Elapsed time : t(s)	Water level in hole : h (cm)	Level difference between original GWL: S (cm)	
0	-3510.0	2739.0	
30	-3380.0	2609.0	
60	-3352.0	2581.0	
90	-3324.0	2553.0	
120	-3299.0	2528.0	
150	-3280.0	2509.0	
180	-3268.0	2497.0	
240	-3242.0	2471.0	
360	-3166.0	2395.0	
480	-3105.0	2334.0	
600	-3088.0	2317.0	
960	-3042.0	2271.0	
1800	-2989.0	2218.0	
3600	-2875.0	2104.0	
Remarks :			
Equations used for permeability test			
$k = \frac{0.66d^2 \log(2L/D)}{L} \cdot m$			
$m = \frac{\log\left(\frac{s_1}{s_2}\right)}{t_2 - t_1}$			

Based on JGS 1314

Permeability Test using drill hole (Unstationary Method)

Subject: The Feasibility Study on Mine Pollution Control in Sohar Mine Area, Sultanate of Oman

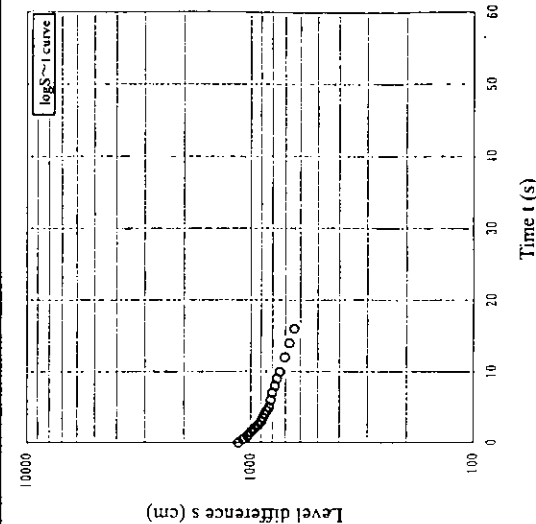
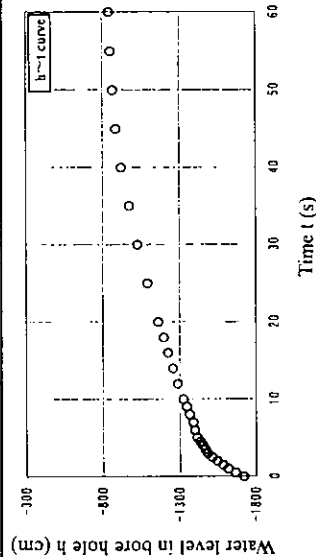
Date tested: 27/07/2000

Name of drill hole : DH-12S

Measured by: mrc

Test method	Recovery test	1213	Classification of aquifer	Unconfined
Section tested (m)	5.87~18.00	-587.0	Ground level (m)	200.10
Pipe inner diameter : d (cm)	20	30.6	Weather	Fine
Slope of linear part of log~t curve : m (S ⁻¹)	9.83E-03	4.06E-03		

Elapsed time : t(s)	Water level in hole : h (cm)	Level difference between original GWL: S (cm)
0	-1720.0	1133.0
0.5	-1665.0	1078.0
1	-1617.0	1030.0
1.5	-1582.0	995.0
2	-1546.0	959.0
2.5	-1510.0	923.0
3	-1482.0	895.0
3.5	-1467.0	880.0
4	-1451.0	864.0
4.5	-1434.0	847.0
5	-1415.0	828.0
6	-1399.0	812.0
7	-1388.0	801.0
8	-1365.0	778.0
9	-1347.0	760.0
10	-1326.0	739.0
12	-1289.0	702.0
14	-1257.0	670.0
16	-1225.0	638.0
18	-1197.0	610.0
20	-1161.0	574.0
25	-1092.0	505.0
30	-1027.0	440.0
35	-974.0	387.0
40	-921.0	334.0
45	-888.0	301.0
50	-868.0	281.0
55	-853.0	266.0
60	-845.0	258.0



Remarks :

Equations used for permeability test

$$k = \frac{0.66d^2 \log(2L/D)}{L} \cdot m$$

$$m = \frac{\log(s_1/s_2)}{t_2 - t_1}$$

Based on JGS 1314

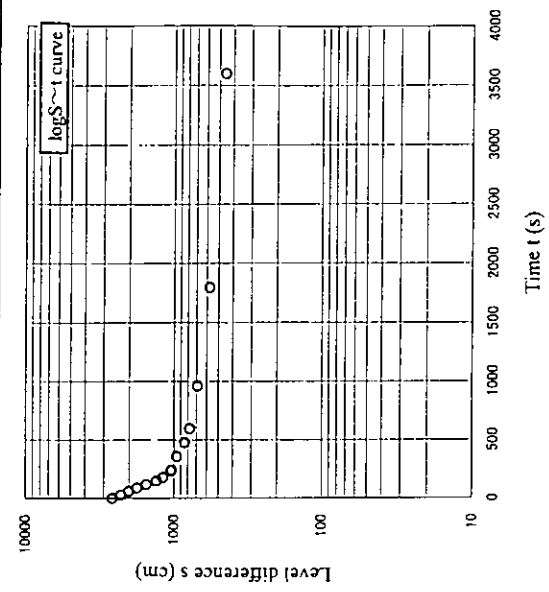
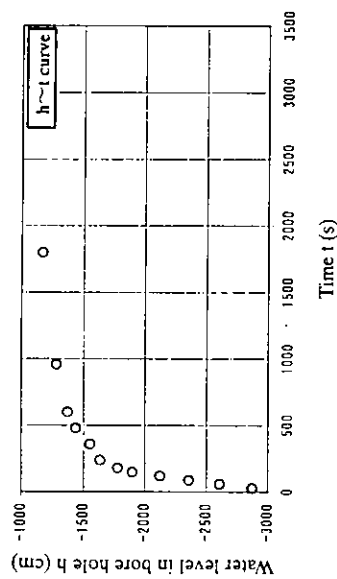
Permeability Test using drill hole (Unstationary Method)

Subject: The Feasibility Study on Mine Pollution Control in Sohar Mine Area, Sultanate of Oman

Date tested: 23/07/2000

Name of drill hole : DH-12D		Measured by: mrc	
Test method	Recovery test	Sectional length : L (cm)	Classification of aquifer
Section tested (m)	5.98~50.00	Groundwater level : h ₀ (cm)	Unconfined
Pipe inner diameter : d (cm)	7.5	Diameter of drill hole : D (cm)	Ground level (m)
Slope of linear part of log~t curve : m (S ⁻¹)	2.01E-03	Permeability Coefficient : k (cm/s)	Weather
		4.67E-05	199.99
			Fine

Elapsed time : t(s)	Water level in hole : h (cm)	Level difference between original GWL: S (cm)
0	-3198.0	2600.0
30	-2871.0	2273.0
60	-2610.0	2012.0
90	-2360.0	1762.0
120	-2125.0	1527.0
150	-1901.0	1303.0
180	-1780.0	1182.0
240	-1636.0	1038.0
360	-1555.0	957.0
480	-1441.0	843.0
600	-1375.0	777.0
960	-1285.0	687.0
1800	-1170.0	572.0
3600	-1051.0	453.0



Remarks :

Equations used for permeability test

$$k = \frac{0.66d^2 \log(2L/D)}{L} \cdot m$$

$$m = \frac{\log\left(\frac{s_1}{s_2}\right)}{t_2 - t_1}$$

