

# Pumping Test Report Sheets

Governorate  
of  
Dahmar



## Pumping Test Report Sheet

Well code: D-01 Site code: D-01 Site name: Elow Al Mikhlaf

District: Jabal Al Sharq Governorate: Dahmar

Target water source: New projected deep well Well depth: 273 m

Contractor: Mabkhout Al-Abraki

Hydrogeologist in charge Abudul Salam Sallam

Operator: Hosein Jammel

Date of start of the test: 30/7/2006 Date of end of the test: 3/8/2006

Pump type: Vertical pump Engine: Iveco aifo

Pump installation depth: 207 m Datum level: 0.55 m S.W.L.: G.L.-184.13 m

### Step drawdown test

Date/hour started: 31/7/2006 4:40pm Date/hour finished: 1/8/2006 8:55am Total hours: 16:15

Yield (l/sec) 1<sup>st</sup> step 1.50 2<sup>nd</sup> step 3.00 3<sup>rd</sup> step 4.50 4<sup>th</sup> step 6.00 5<sup>th</sup> step 7.50

Water level before start the test (G.L.-m): 184.13

Water level after end of 5<sup>th</sup> step (G.L.-m): 187.57

Water level after recovery (G.L.-m): 184.13 Recovery hours 6:15

### Constant discharge test

Date/hour started: 1/8/2006 9:54am Date/hour finished: 3/8/2006 5:54am Total hours: 43:00

Yield (l/sec) 2.40

Water level before start of the test (G.L.-m): 184.13

Water level after end of test (G.L.-m): 185.83

Water level after recovery (G.L.-m): 184.13 Recovery hours 19:00

Drawdown (m): 1.70

Revised by:

Name :

Date:

## Provisional Step Drawdown Test (1/2)

Well Code: D-01      Site code: D-01      Pump on date/hour: 30/7/2006 11:28pm  
 Site name: Elow Al Mikhlaf      Pump off date/hour: 31/7/2006 1:58am  
 District: Jabal Al Sharq      End of recovery hour: 31/7/2006 9:10am  
 Governorate Dahmar      S.W.L ( m ): 184.68

Contractor: Mabkhout Al-Abraki  
 Hydrogeologist: Abudul Salam Sallam  
 Operator: Hosein Jammel

Duration ( min )	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery ( m )
	W.L. ( m )	Yield ( l/sec)	W.L. ( m )	Yield ( l/sec)	W.L. ( m )	Yield ( l/sec)	W.L. ( m )	Yield ( l/sec)	W.L. ( m )	Yield ( l/sec)	
0.0	184.68	1.30	184.88	2.60	185.18	3.90	185.48	5.20	185.86	6.50	186.32
0.5	185.00		184.88		185.24		185.51		186.97		186.00
1.0	184.90		184.89		185.26		185.50		186.02		184.91
1.5	184.86		185.15		185.27		185.52		186.03		184.53
2.0	184.87		185.20		185.33		185.57		186.04		185.23
2.5	184.87		185.21		185.29		185.56		186.05		185.35
3.0	184.84		185.22		185.31		185.60		186.05		185.37
3.5	184.81		185.19		185.34		185.68		186.06		185.43
4.0	184.78		185.20		185.36		185.69		186.05		185.38
4.5	184.81		185.15		185.35		185.70		186.06		185.36
5.0	184.78		185.13		185.36		185.70		186.11		185.40
6.0	184.79		185.10		185.41		185.71		186.14		185.36
7.0	184.77		185.12		185.42		185.73		186.17		185.35
8.0	184.80		185.10		185.40		185.74		186.16		185.34
9.0	184.78		185.08		185.39		185.75		186.14		185.34
10.0	184.77		185.12		185.39		185.75		186.17		185.33
12.0	184.78		185.13		185.41		185.76		186.18		185.31
14.0	184.78		185.17		185.41		185.79		186.21		185.30
16.0	184.82		185.18		185.40		185.81		186.22		185.29
18.0	184.85		185.19		185.41		185.80		186.23		185.28
20.0	184.84		185.19		185.42		185.82		186.25		185.27
22.0	184.86		185.15		185.43		185.81		186.26		185.26
24.0	184.86		185.16		185.43		185.85		186.28		185.25
26.0	184.85		185.16		185.45		185.85		186.29		185.24
28.0	184.88		185.18		185.46		185.85		186.30		185.23
30.0	184.88		185.18		185.48		185.86		186.32		185.22
60.0											185.14
90.0											185.06
120.0											185.00
150.0											184.96
180.0											184.93
210.0											184.90
240.0											184.88
270.0											184.85
300.0											184.83
330.0											184.80
360.0											184.77
390.0											184.74
420.0											184.70
432.0											184.68

## Provisional Step Drawdown Test (2/2)

Well Code:   D-01                        Site code:   D-01    
 Site name:   Elow Al Mikhlaf    
 District:   Jabal Al Sharq    
 Governorate   Dahmar  

Pump on date/hour:   31/7/2006 9:40am    
 Pump off date/hour:   31/7/2006 12:10pm    
 End of recovery hour:   31/7/2006 4:40pm    
 S.W.L ( m ):       184.68      

Contractor:   Mabkhout Al-Abraki    
 Hydrogeologist:   Abudul Salam Sallam    
 Operator:   Hosein Jammel  

Duration ( min )	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery ( m )
	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	
0.0	184.68	1.50	185.03	3.00	185.33	4.50	185.76	6.00	186.21	7.50	186.95
0.5	185.25		185.20		185.35		185.76		186.67		184.12
1.0	185.09		185.22		185.37		185.92		186.68		184.88
1.5	185.17		185.23		185.54		185.95		186.69		185.00
2.0	185.15		185.23		185.56		185.96		186.67		185.72
2.5	185.16		185.22		185.57		185.97		186.68		185.69
3.0	185.10		185.22		185.58		185.98		186.69		185.67
3.5	185.06		185.23		185.56		185.98		186.69		185.67
4.0	185.08		185.19		185.58		185.99		186.69		185.66
4.5	185.00		185.22		185.58		186.00		186.69		185.66
5.0	185.00		185.21		185.60		186.00		186.69		185.65
6.0	185.02		185.24		185.62		186.01		186.70		185.63
7.0	185.02		185.23		185.64		186.02		186.75		185.60
8.0	185.00		185.24		185.63		186.03		186.74		185.60
9.0	185.00		185.23		185.63		186.04		186.74		185.60
10.0	184.98		185.25		185.64		186.04		186.75		185.58
12.0	184.98		185.27		185.65		186.05		186.77		185.56
14.0	185.00		185.28		185.66		186.06		186.79		185.55
16.0	185.03		185.28		185.67		186.08		186.82		185.53
18.0	185.00		185.30		185.68		186.10		186.84		185.52
20.0	185.05		185.29		185.68		186.12		186.85		185.50
22.0	185.06		185.30		185.71		186.14		186.88		185.49
24.0	185.00		185.31		185.72		186.14		186.89		185.47
26.0	185.03		185.30		185.74		186.16		186.91		185.45
28.0	185.03		185.32		185.75		186.18		186.92		185.31
30.0	185.03		185.33		185.76		186.21		186.95		185.19
60.0											185.09
90.0											184.98
120.0											184.88
180.0											184.79
210.0											184.73
240.0											184.68
270.0											184.68

## Step Drawdown Test (1/2)

Well Code:   D-01                        Site code:   D-01    
 Site name:   Elow Al Mikhlaf    
 District:   Jabal Al Sharq    
 Governorate   Dahmar  

Pump on date/hour:   31/7/2006 4:40pm    
 Pump off date/hour:   1/8/2006 2:40am    
 End of recovery hour:   1/8/2006 8:55am    
 S.W.L ( m ):   184.68  

Contractor:   Mabkhout Al-Abraki    
 Hydrogeologist:   Abudul Salam Sallam    
 Operator:   Hosein Jammel  

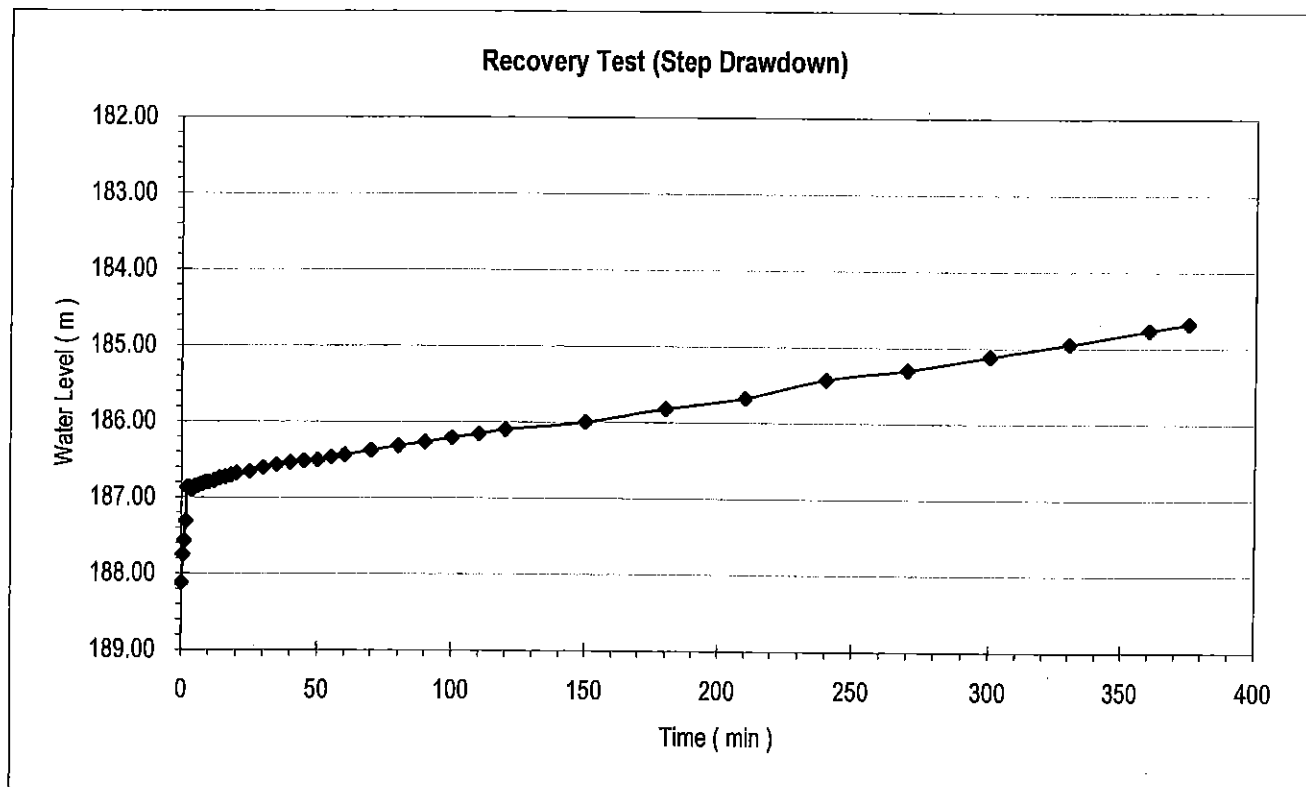
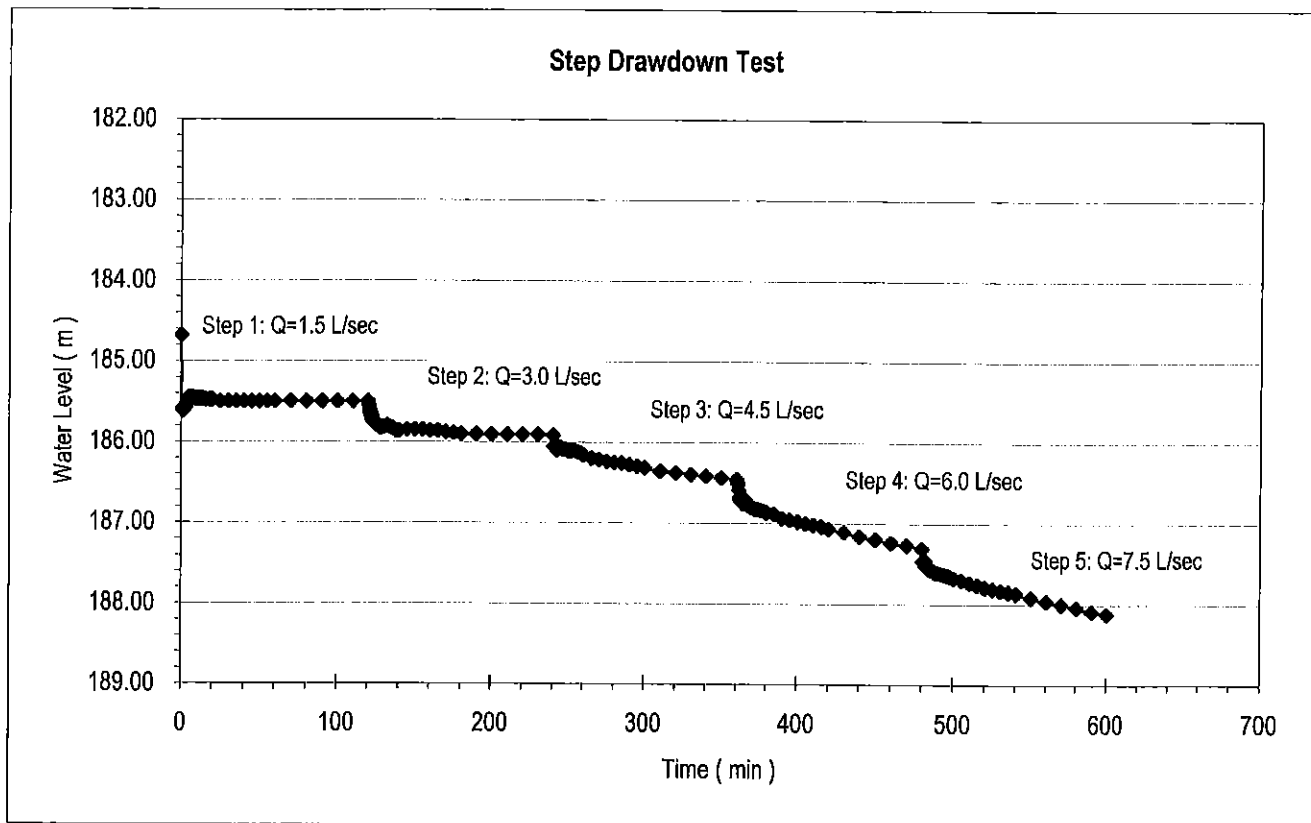
Duration ( min )	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery ( m )
	W.L. ( m )	Yield ( l/sec)	W.L. ( m )	Yield ( l/sec)	W.L. ( m )	Yield ( l/sec)	W.L. ( m )	Yield ( l/sec)	W.L. ( m )	Yield ( l/sec)	
0.0	184.68	1.50	185.50	3.00	185.92	4.50	186.46	6.00	187.31	7.50	188.12
0.5	185.60		185.55		186.05		186.48		187.47		187.75
1.0	185.62		185.61		186.06		186.52		187.47		187.57
1.5	185.59		185.64		186.06		186.59		187.47		187.31
2.0	185.58		185.68		186.08		186.68		187.47		186.87
2.5	185.57		185.70		186.10		186.72		187.52		186.86
3.0	185.54		185.74		186.08		186.72		187.54		186.87
3.5	185.53		185.76		186.07		186.74		187.55		186.89
4.0	185.50		185.76		186.08		186.75		187.56		186.89
4.5	185.47		185.78		186.07		186.76		187.56		186.88
5.0	185.45		185.79		186.08		186.75		187.57		186.85
6.0	185.46		185.80		186.09		186.71		187.58		186.85
7.0	185.45		185.81		186.09		186.77		187.59		186.83
8.0	185.47		185.83		186.09		186.78		187.60		186.82
9.0	185.47		185.82		186.10		186.79		187.61		186.80
10.0	185.47		185.82		186.11		186.80		187.61		186.80
12.0	185.47		185.80		186.11		186.82		187.63		186.78
14.0	185.47		185.82		186.11		186.83		187.63		186.75
16.0	185.48		185.84		186.12		186.84		187.64		186.73
18.0	185.48		185.86		186.14		186.85		187.66		186.71
20.0	185.48		185.86		186.16		186.87		187.68		186.68
25.0	185.50		185.85		186.20		186.89		187.70		186.66
30.0	185.50		185.85		186.22		186.94		187.73		186.61
35.0	185.50		185.85		186.24		186.96		187.76		186.57
40.0	185.50		185.86		186.25		186.98		187.79		186.54
45.0	185.50		185.86		186.26		187.00		187.81		186.52
50.0	185.50		185.88		186.28		187.02		187.83		186.51
55.0	185.50		185.89		186.30		187.04		187.85		186.47
60.0	185.50		185.90		186.32		187.07		187.87		186.44
70.0	185.50		185.90		186.36		187.11		187.92		186.38
80.0	185.50		185.91		186.38		187.16		187.96		186.32
90.0	185.50		185.91		186.40		187.20		188.00		186.27
100.0	185.50		185.91		186.42		187.24		188.04		186.21
110.0	185.50		185.91		186.44		187.27		188.09		186.16
120.0	185.50		185.92		186.46		187.31		188.12		186.10
150.0											186.00
180.0											185.82
210.0											185.68
240.0											185.43
270.0											185.30



# Step Drawdown Test

Well Code: D-01  
Site Code: D-01  
S.W.L. : 184.68 m

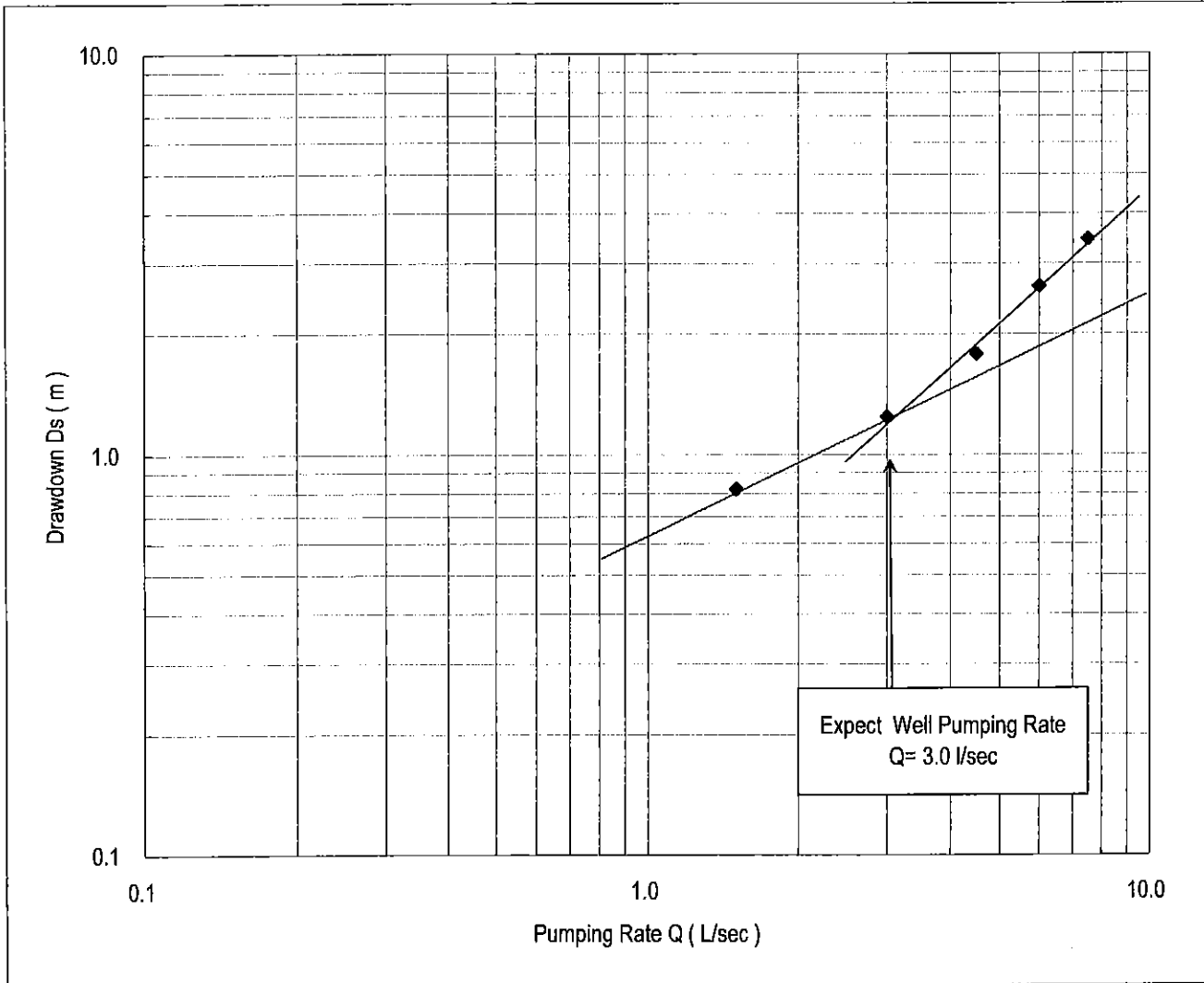
Site Name: Elow Al Mikhlaf



## Step Drawdown Test

Well Code: D-01  
 Site Code: D-01  
 S.W.L. : 184.68 m

Site Name: Elow Al Mikhlaf



Step	$Q$ (l/sec)	D.W.L. (m)	$D_s$ (m)
1	1.5	185.50	0.82
2	3.0	185.92	1.24
3	4.5	186.46	1.78
4	6.0	187.31	2.63
5	7.5	188.12	3.44



## Constant Discharge & Recovery Test (1/2)

Well Code:   D-01                        Site code:   D-01  

Site name:   Elow Al Mikhlaf  

District:   Jabal Al Sharq  

Governorate:   Dahmar  

Pump on date/hour:   1/8/2006 9:54am  

Pump off date/hour:   2/8/2006 9:54am  

End of recovery hour:   3/8/2006 5:54am  

Contractor:   Mabkhout Al-Abraki  

Hydrogeologist:   Abudul Salam Sallam  

Operator:   Hosein Jammel  

S.W.L ( m ):   184.68  

D.W.L ( m ):   186.38  

Yield (l/sec):   2.4  

Duration ( min )	Constant Discharge Test			Recovery Test		Water Analysis	Remarks
	Water level (m)	Drawdown (m)	Pumping rate (l/sec)	Water level (m)	Residual (m)	Conductivity (µS/cm)	
0.0	184.68	0.00		186.38	1.70		
0.5	185.93	1.25		186.30	1.61		
1.0	185.82	1.14		186.21	1.53		
1.5	185.81	1.13		186.13	1.44		
2.0	185.79	1.11		186.04	1.36		
2.5	185.72	1.04		186.03	1.35		
3.0	185.68	1.00		186.02	1.34		
3.5	185.59	0.91		186.02	1.34		
4.0	185.57	0.89		186.05	1.37		
4.5	185.59	0.91		186.07	1.39		
5.0	185.60	0.92		186.06	1.38		
6.0	185.59	0.91		186.08	1.40		
7.0	185.68	1.00		186.04	1.36		
8.0	185.69	1.01		186.03	1.35		
9.0	185.61	0.93		186.01	1.33		
10.0	185.62	0.94		186.03	1.35		
12.0	185.63	0.95		186.02	1.34		
14.0	185.65	0.97		186.02	1.34		
16.0	185.63	0.95		186.00	1.32		
18.0	185.68	1.00		185.99	1.31		
20.0	185.66	0.98		185.97	1.29		
25.0	185.64	0.96		185.96	1.28		
30.0	185.65	0.97		185.95	1.27		
35.0	185.66	0.98		185.94	1.26		
40.0	185.68	1.00		185.93	1.25		
45.0	185.70	1.02		185.92	1.24		
50.0	185.71	1.03		185.91	1.23		
55.0	185.73	1.05		185.90	1.22		
60.0	185.73	1.05		185.88	1.20	1030	

## Constant Discharge & Recovery Test (2/2)

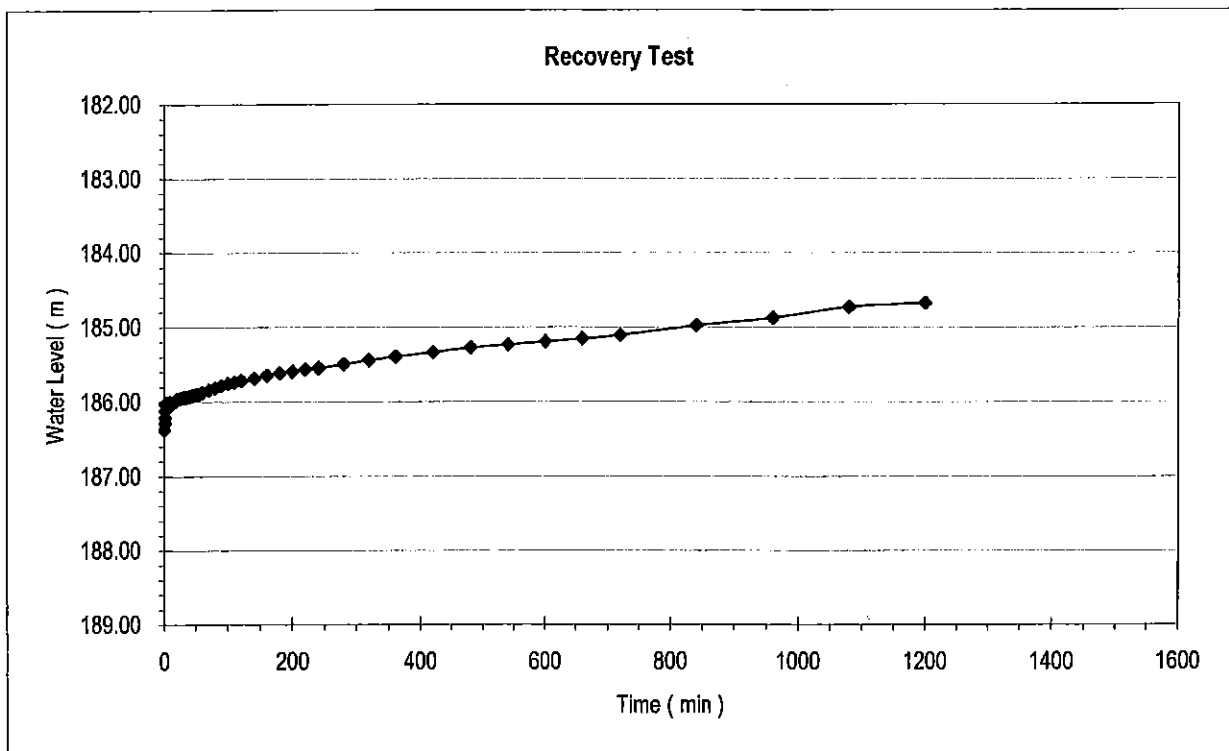
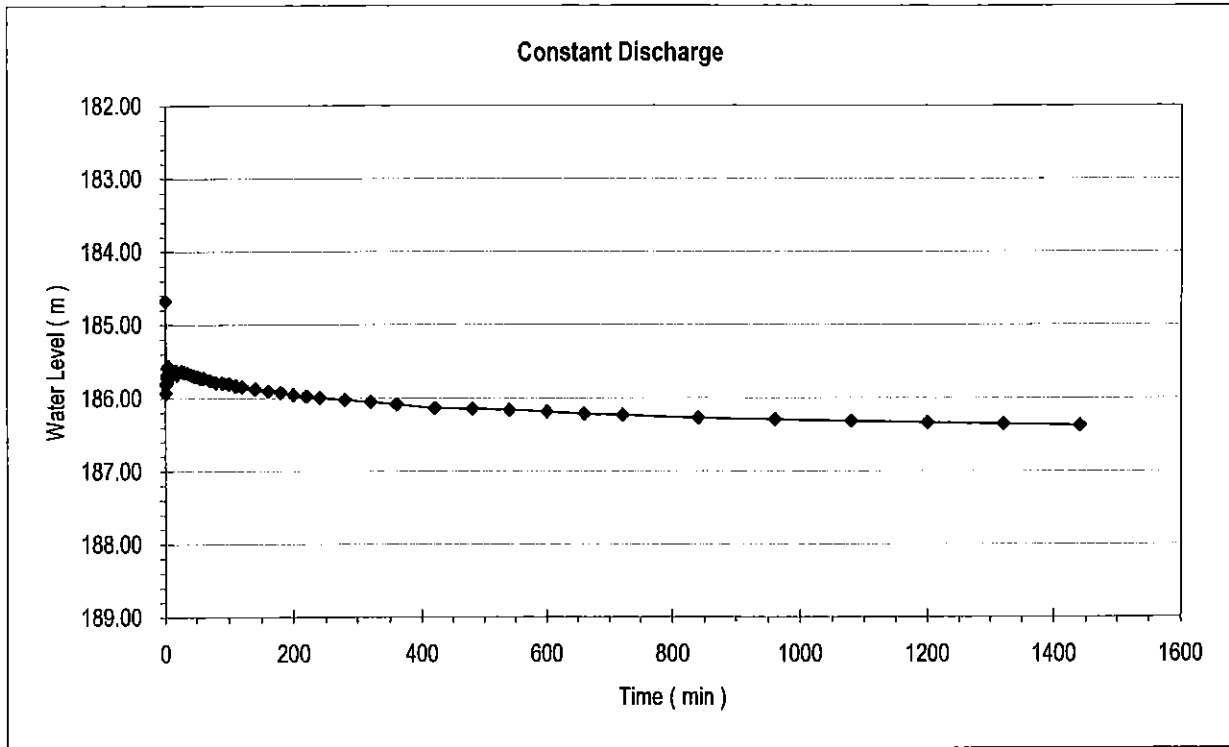
Well Code:   D-01        Site code:   D-01        Site name:   Elow Al Mikhlaf    
 District:   Jabal Al Sharq        Governorate:   Dahmar  

Duration ( min )	Constant Discharge Test			Recovery Test		Water Analysis	Remarks
	Water level (m)	Drawdown (m)	Pumping rate (l/sec)	Water level (m)	Residual (m)	Conductivity (µS/cm)	
70.0	185.76	1.08		185.85	1.17		
80.0	185.79	1.11		185.82	1.14		
90.0	185.80	1.12		185.79	1.11		
100.0	185.81	1.13		185.76	1.08		
110.0	185.84	1.16		185.74	1.06		
120.0	185.85	1.17		185.72	1.04	1030	
140.0	185.88	1.20		185.69	1.01		
160.0	185.91	1.23		185.65	0.97		
180.0	185.93	1.25		185.62	0.94	1030	
200.0	185.96	1.28		185.60	0.92		
220.0	185.98	1.30		185.57	0.89		
240.0	186.00	1.32		185.55	0.87		
280.0	186.03	1.35		185.50	0.82		
320.0	186.06	1.38		185.45	0.77		
360.0	186.09	1.41		185.40	0.72	1030	
420.0	186.14	1.46		185.34	0.66		
480.0	186.15	1.47		185.28	0.60		
540.0	186.17	1.49		185.24	0.56		
600.0	186.19	1.51		185.20	0.52	1030	
660.0	186.22	1.54		185.16	0.48		
720.0	186.24	1.56		185.11	0.43		
840.0	186.28	1.60		184.98	0.30	1030	
960.0	186.30	1.62		184.88	0.20		
1080.0	186.32	1.64		184.73	0.05	1030	
1200.0	186.34	1.66		184.68	0.00		
1320.0	186.36	1.68				1030	
1440.0	186.38	1.70					

# Constant Discharge Test

Well Code: D-01  
Site Code: D-01  
S.W.L. (m): 184.68  
Yield (L/sec): 2.4

Site Name Elow Al Mikhlaf  
D.W.L (m): 186.38 Drawdown (m): 1.70



## Pumping Test Report Sheet

Well code: D-02 Site code: D-02 Site name: Hamal Bait Al Jabar

District: Jabal Al Sharq Governorate: Dahmar

Target water source: Existing projected deep well Well depth: 310 m

Contractor: Mabkhout Al-Abraki

Hydrogeologist in charge: Abudul Salam Sallam

Operator: Hezan Jameel

Date of start of the test: 27/7/2006 Date of end of the test: 30/7/2006

Pump type: Vertical pump Engine: Iveco aifo

Pump installation depth: 220 m Datum level: 0.80 m S.W.L.: G.L.-185.80 m

### Step drawdown test

Date/hour started: 28/7/2006 10:00am Date/hour finished: 29/7/2006 3:30am Total hours: 17:30

Yield (l/sec) 1<sup>st</sup> step 0.90 2<sup>nd</sup> step 1.80 3<sup>rd</sup> step 2.70 4<sup>th</sup> step 3.60 5<sup>th</sup> step 4.50

Water level before start the test (G.L.-m): 185.80

Water level after end of 5<sup>th</sup> step (G.L.-m): 215.20

Water level after recovery (G.L.-m): 185.80 Recovery hours 7:30

### Constant discharge test

Date/hour started: 29/7/2006 9:00am Date/hour finished: 30/7/2006 7:00pm Total hours: 30:00

Yield (l/sec) 3.50

Water level before start of the test (G.L.-m): 185.80

Water level after end of test (G.L.-m): 209.30

Water level after recovery (G.L.-m): 185.80 Recovery hours 10:00

Drawdown (m): 23.50

Revised by:

\_\_\_\_\_  
Name :

Date:

# Provisional Step Drawdown Test

Well Code:   D-02   Site code:   D-02    
 Site name:   Hamal Bait Al Jabar    
 District:   Jabal Al Sharq    
 Governorate   Dahmar  

Pump on date/hour:   27/7/2006 11:15pm    
 Pump off date/hour:   28/7/2006 1:45am    
 End of recovery hour:   28/7/2006 2:45am    
 S.W.L ( m ):       186.60      

Contractor:   Mabkhout Al-Abraki    
 Hydrogeologist:   Abudul Salam Sallam    
 Operator:   Hezan Jameel  

Duration ( min )	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery ( m )
	W.L. ( m )	Yield ( l/sec)	W.L. ( m )	Yield ( l/sec)	W.L. ( m )	Yield ( l/sec)	W.L. ( m )	Yield ( l/sec)	W.L. ( m )	Yield ( l/sec)	
0.0	186.60	0.90	189.70	1.80	190.90	2.70	194.14	3.60	195.50	4.50	200.20
0.5	197.10		190.00		190.95		194.15		196.70		189.60
1.0	195.90		190.20		191.00		194.16		196.00		186.90
1.5	195.40		190.40		191.04		194.24		195.80		186.91
2.0	195.05		190.55		191.05		194.30		196.80		187.95
2.5	194.95		190.80		191.10		194.40		196.95		187.94
3.0	194.70		190.86		191.14		194.65		197.20		187.95
3.5	194.45		191.00		191.15		194.70		197.40		187.93
4.0	194.20		191.10		191.27		194.73		197.55		187.94
4.5	194.00		191.20		191.40		194.80		197.70		187.90
5.0	193.99		191.30		191.90		194.85		197.90		187.90
6.0	193.40		191.35		192.30		194.90		198.20		187.77
7.0	193.25		191.50		192.50		194.95		198.50		187.67
8.0	193.15		191.65		192.75		195.00		198.80		187.55
9.0	193.75		191.70		193.00		195.10		199.00		187.50
10.0	193.50		191.72		193.25		195.15		199.10		187.47
12.0	192.20		191.75		193.50		195.20		199.30		187.41
14.0	192.00		191.50		193.60		195.25		199.41		187.35
16.0	191.60		191.25		193.70		195.30		199.52		187.30
18.0	190.92		191.20		193.82		195.35		199.60		187.24
20.0	190.50		191.15		193.91		195.37		199.69		187.19
22.0	190.15		191.05		193.94		195.40		199.81		187.14
24.0	190.00		191.05		193.96		195.43		199.90		187.09
26.0	189.70		191.00		193.98		195.45		199.99		187.03
28.0	189.70		190.95		194.00		195.47		200.10		186.99
30.0	189.70		190.90		194.14		195.50		200.20		186.95
60.0											186.60

## Step Drawdown Test (1/2)

Well Code:   D-02                        Site code:   D-02    
 Site name:   Hamal Bait Al Jabar    
 District:   Jabal Al Sharq    
 Governorate   Dahmar  

Pump on date/hour:   28/7/2006 10:00am    
 Pump off date/hour:   28/7/2006 8:00pm    
 End of recovery hour:   29/7/2006 3:30am    
 S.W.L ( m ):   186.60  

Contractor:   Mabkhout Al-Abraki    
 Hydrogeologist:   Abudul Salam Sallam    
 Operator:   Hezan Jameel  

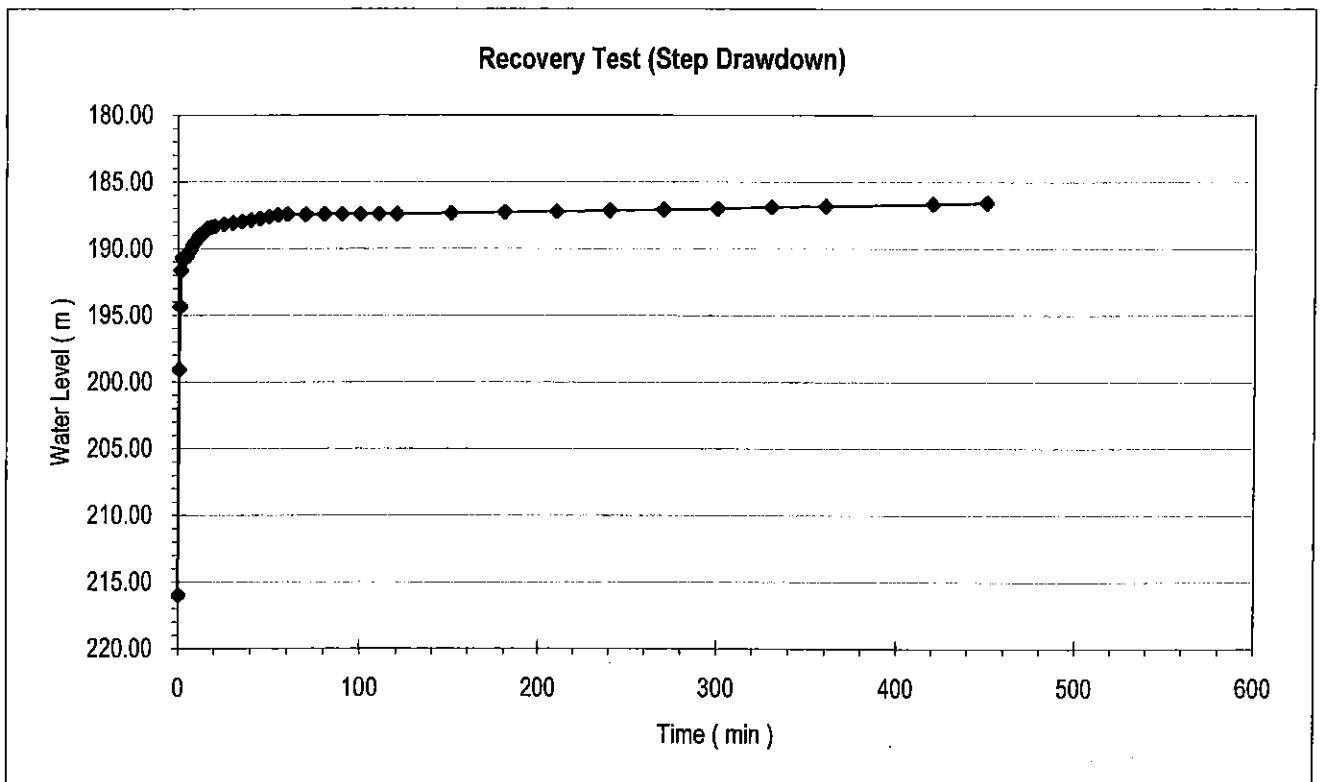
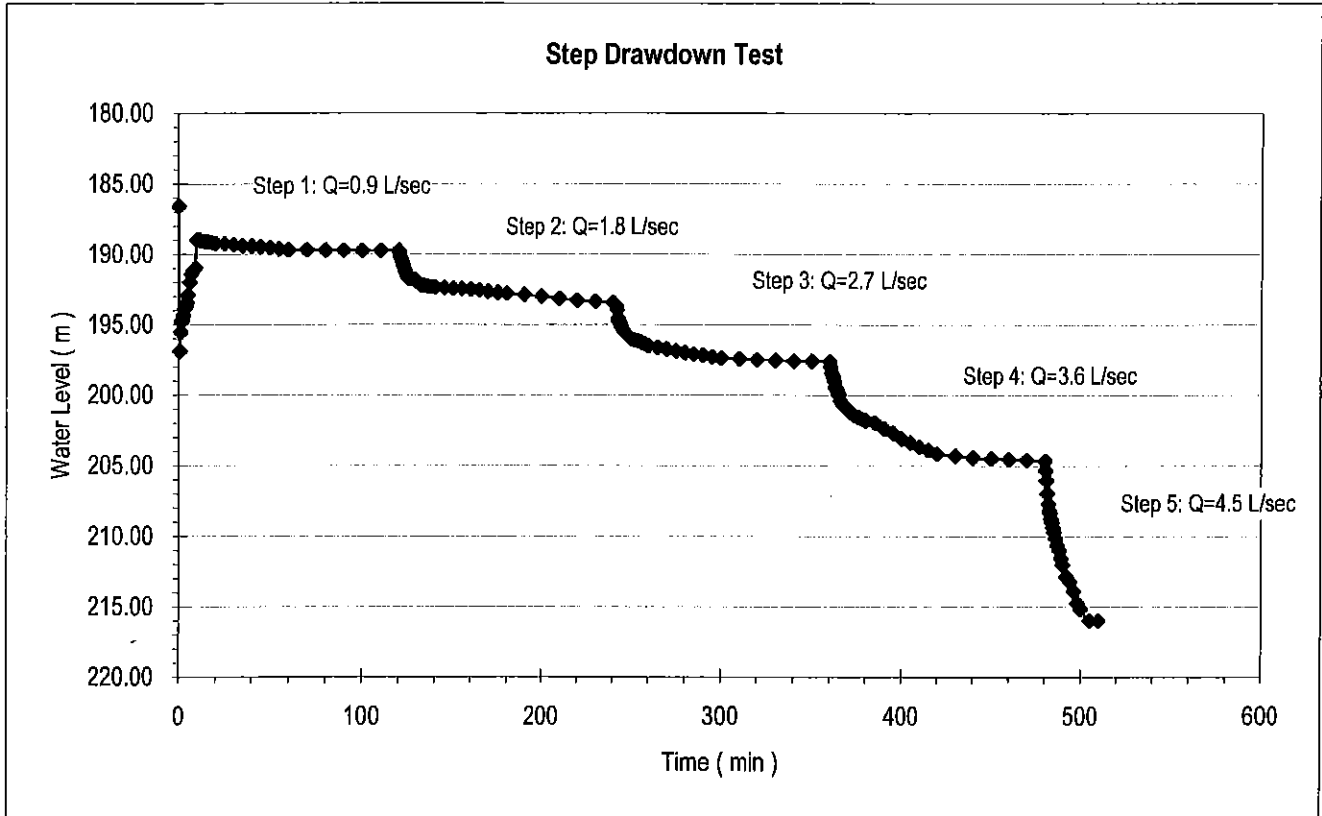
Duration ( min )	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery ( m )
	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	
0.0	186.60	0.90	189.75	1.80	193.45	2.70	197.62	3.60	204.66	4.50	216.00
0.5	196.90		189.88		193.50		198.00		205.35		199.10
1.0	195.55		190.23		193.53		198.40		206.05		194.35
1.5	194.80		190.39		193.60		198.55		206.96		191.65
2.0	194.65		190.59		193.68		198.75		207.70		190.70
2.5	194.35		190.80		193.98		199.02		208.16		190.80
3.0	193.91		190.98		194.55		199.43		208.35		190.81
3.5	193.81		191.18		194.80		199.52		208.75		190.75
4.0	193.68		191.38		194.82		199.63		208.99		190.70
4.5	193.44		191.50		195.00		199.77		209.37		190.65
5.0	192.90		191.70		195.20		199.98		209.71		190.52
6.0	192.00		191.74		195.40		200.40		210.15		190.28
7.0	191.40		191.75		195.60		200.65		210.65		190.05
8.0	191.17		191.80		195.70		200.80		211.00		189.70
9.0	190.97		191.83		195.85		200.85		211.54		189.55
10.0	189.00		191.97		196.00		200.94		212.03		189.35
12.0	189.03		192.20		196.10		201.30		212.87		189.00
14.0	189.08		192.25		196.17		201.46		213.23		188.80
16.0	189.13		192.30		196.28		201.57		213.88		188.50
18.0	189.18		192.35		196.39		201.68		214.74		188.43
20.0	189.23		192.37		196.52		201.79		215.17		188.35
25.0	189.24		192.40		196.63		201.95		215.97		188.21
30.0	189.33		192.45		196.75		202.35		216.00		188.10
35.0	189.39		192.48		196.88		202.68				188.00
40.0	189.43		192.52		197.00		203.08				187.90
45.0	189.47		192.56		197.11		203.37				187.78
50.0	189.55		192.67		197.19		203.66				187.66
55.0	189.63		192.74		197.29		203.88				187.50
60.0	189.70		192.79		197.39		204.17				187.46
70.0	189.71		192.89		197.44		204.30				187.45
80.0	189.72		193.00		197.48		204.43				187.45
90.0	189.73		193.17		197.55		204.50				187.44
100.0	189.74		193.29		197.59		204.55				187.44
110.0	189.74		193.37		197.60		204.60				187.43
120.0	189.75		193.45		197.62		204.66				187.43
150.0											187.36
180.0											187.30
210.0											187.23
240.0											187.16
270.0											187.09



# Step Drawdown Test

Well Code: D-02  
Site Code: D-02  
S.W.L. : 186.60 m

Site Name: Hamal Bait Al Jabar

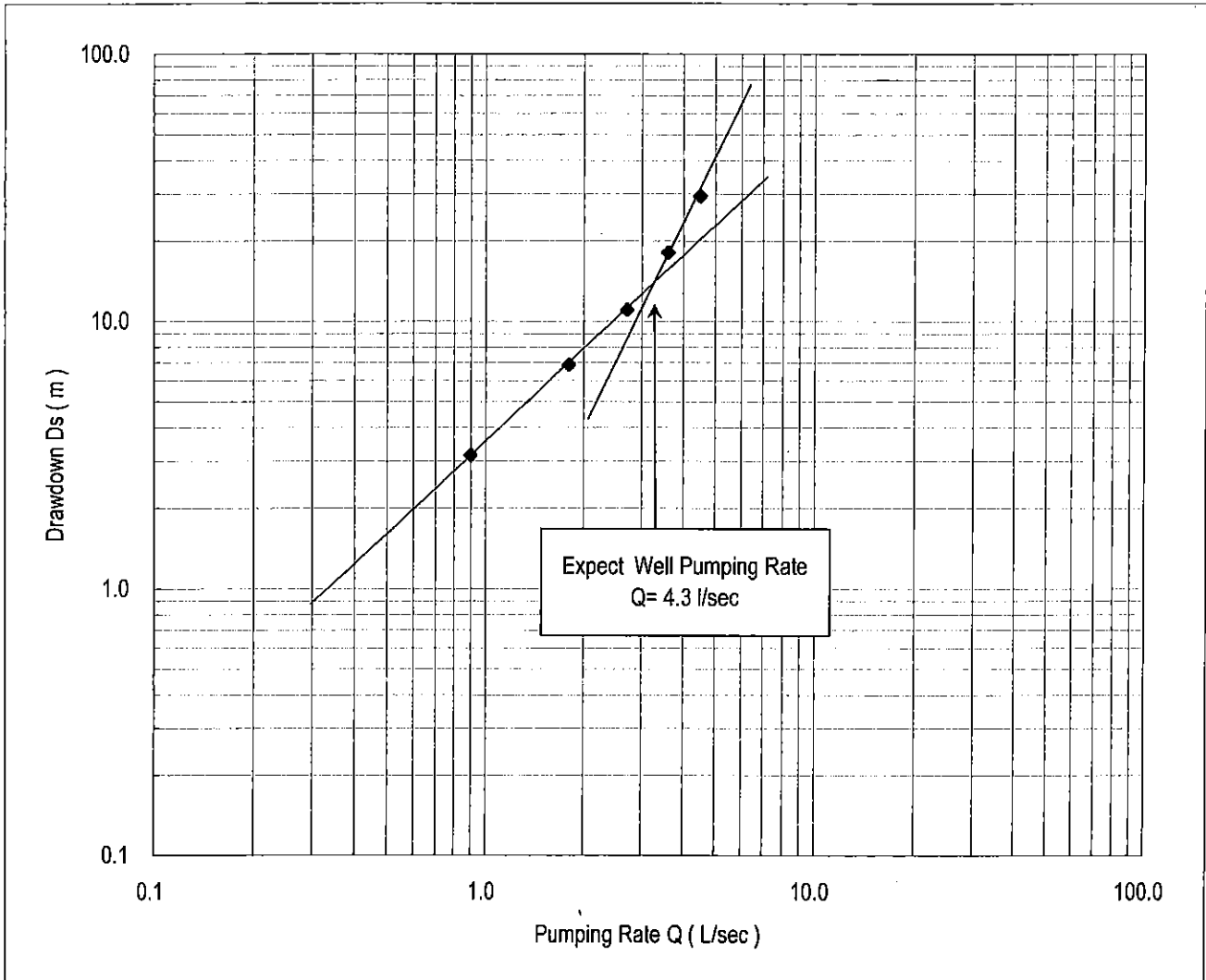




## Step Drawdown Test

Well Code: D-02  
 Site Code: D-02  
 S.W.L. : 186.60 m

Site Name: Hamal Bait Al Jabar



Step	Q (l/sec)	D.W.L.(m)	Ds (m)
1	0.9	189.75	3.15
2	1.8	193.45	6.85
3	2.7	197.62	11.02
4	3.6	204.66	18.06
5	4.5	216.00	29.40

## Constant Discharge & Recovery Test (1/2)

Well Code:   D-02                        Site code:   D-02  

Site name:   Hamal Bait Al Jabar  

Pump on date/hour:   29/7/2006 9:00am  

District:   Jabal Al Sharq  

Pump off date/hour:   30/7/2006 9:00am  

Governorate:   Dahmar  

End of recovery hour:   30/7/2006 7:00pm  

Contractor:   Mabkhout Al-Abraki  

S.W.L ( m ):   186.60  

Hydrogeologist:   Abudul Salam Sallam  

D.W.L ( m ):   210.10  

Operator:   Hezan Jameel  

Yield (l/sec):   3.5  

Duration ( min )	Constant Discharge Test			Recovery Test		Water Analysis	Remarks
	Water level (m)	Drawdown (m)	Pumping rate (l/sec)	Water level (m)	Residual (m)	Conductivity ( $\mu$ S/cm)	
0.0	186.60	0.00		210.10	23.50		
0.5	194.50	7.90		197.50	10.90		
1.0	196.80	10.20		190.00	3.40		
1.5	196.68	10.08		189.57	2.97		
2.0	196.50	9.90		189.17	2.57		
2.5	196.52	9.92		189.09	2.49		
3.0	196.54	9.94		189.05	2.45		
3.5	196.56	9.96		189.03	2.43		
4.0	196.58	9.98		189.03	2.43		
4.5	196.60	10.00		189.00	2.40		
5.0	196.55	9.95		188.98	2.38		
6.0	196.70	10.10		187.94	1.34		
7.0	197.00	10.40		187.90	1.30		
8.0	197.20	10.60		187.87	1.27		
9.0	197.35	10.75		187.84	1.24		
10.0	197.65	11.05		187.80	1.20		
12.0	198.15	11.55		187.77	1.17		
14.0	198.55	11.95		187.73	1.13		
16.0	199.60	13.00		187.70	1.10		
18.0	200.80	14.20		187.67	1.07		
20.0	201.30	14.70		187.63	1.03		
25.0	201.90	15.30		187.61	1.01		
30.0	202.50	15.90		187.57	0.97		
35.0	202.90	16.30		187.54	0.94		
40.0	203.15	16.55		187.50	0.90		
45.0	203.50	16.90		187.47	0.87		
50.0	203.69	17.09		187.44	0.84		
55.0	203.77	17.17		187.41	0.81		
60.0	203.80	17.20		187.39	0.79	626	

## Constant Discharge & Recovery Test (2/2)

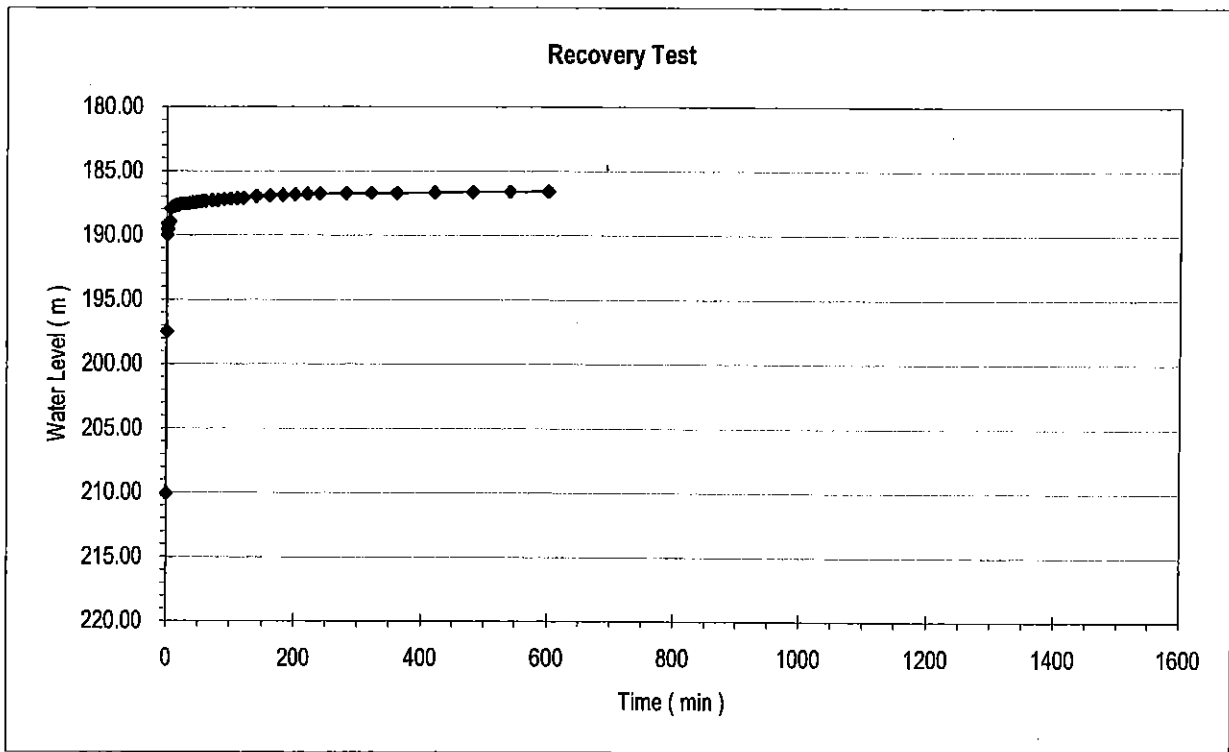
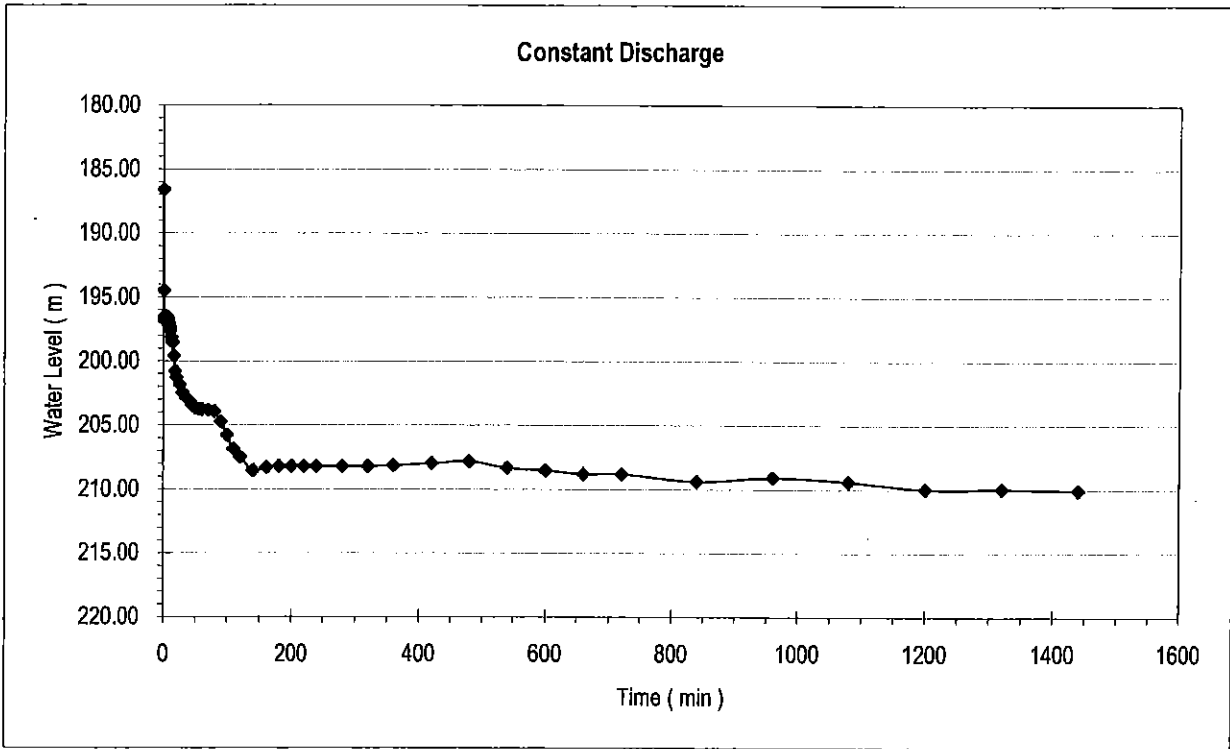
Well Code: D-02      Site code: D-02      Site name: Hamal Bait Al Jabar  
 District: Jabal Al Sharq      Governorate: Dahmar

Duration ( min )	Constant Discharge Test			Recovery Test		Water Analysis	Remarks
	Water level (m)	Drawdown (m)	Pumping rate (l/sec)	Water level (m)	Residual (m)	Conductivity (µS/cm)	
70.0	203.85	17.25		187.34	0.74		
80.0	203.95	17.35		187.30	0.70		
90.0	204.75	18.15		187.25	0.65		
100.0	205.80	19.20		187.21	0.61		
110.0	206.88	20.28		187.17	0.57		
120.0	207.50	20.90		187.13	0.53	626	
140.0	208.55	21.95		187.00	0.40		
160.0	208.33	21.73		186.95	0.35		
180.0	208.20	21.60		186.91	0.31	626	
200.0	208.21	21.61		186.87	0.27		
220.0	208.22	21.62		186.83	0.23		
240.0	208.23	21.63		186.80	0.20		
280.0	208.24	21.64		186.79	0.19		
320.0	208.22	21.62		186.77	0.17		
360.0	208.15	21.55		186.75	0.15	626	
420.0	208.00	21.40		186.72	0.12		
480.0	207.85	21.25		186.67	0.07		
540.0	208.35	21.75		186.63	0.03		
600.0	208.55	21.95		186.60	0.00	626	
660.0	208.83	22.23					
720.0	208.84	22.24					
840.0	209.41	22.81				626	
960.0	209.10	22.50					
1080.0	209.41	22.81				626	
1200.0	210.00	23.40					
1320.0	209.97	23.37				626	
1440.0	210.10	23.50					

# Constant Discharge Test

Well Code: D-02  
Site Code: D-02  
S.W.L. (m): 186.60  
Yield (L/sec): 3.5

Site Name Hamal Bait Al Jabar  
D.W.L (m): 210.10 Drawdown (m): 23.50



## Pumping Test Report Sheet

Well code: D-03 Site code: D-03 Site name: Hegrat Al A'asham

District: Jabal Al Sharq Governorate: Dahmar

Target water source: New projected deep well Well depth: 320 m

Contractor: Mabkhout Al-Abraki

Hydrogeologist in charge: Abudul Salam Sallam

Operator: Al Raboi

Date of start of the test: 30/7/2006 Date of end of the test: 3/8/2006

Pump type: Vertical pump Engine: Iveco aifo

Pump installation depth: 249 m Datum level: 0.55 m S.W.L.: G.L.-163.05 m

### Step drawdown test

Date/hour started: 31/7/2006 8:30am Date/hour finished: 1/8/2006 7:30am Total hours: 13:00

Yield (l/sec) 1<sup>st</sup> step 1.30 2<sup>nd</sup> step 2.60 3<sup>rd</sup> step 3.90 4<sup>th</sup> step 5.20 5<sup>th</sup> step 6.50

Water level before start the test (G.L.-m): 163.05

Water level after end of 5<sup>th</sup> step (G.L.-m): 181.31

Water level after recovery (G.L.-m): 163.05 Recovery hours 13:00

### Constant discharge test

Date/hour started: 1/8/2006 8:00am Date/hour finished: 3/8/2006 9:00am Total hours: 49:00

Yield (l/sec) 5.00

Water level before start of the test (G.L.-m): 163.05

Water level after end of test (G.L.-m): 183.95

Water level after recovery (G.L.-m): 163.05 Recovery hours 25:00

Drawdown (m): 20.90

Revised by:

Name :

Date:

## Provisional Step Drawdown Test

Well Code:   D-03        Site code:   D-03        Pump on date/hour:   30/7/2006 7:00pm    
 Site name:   Hegrat Al A'asham        Pump off date/hour:   30/7/2006 9:30 pm    
 District:   Jabal Al Sharq        End of recovery hour:   31/7/2006 2:30am    
 Governorate:   Dahmar        S.W.L ( m ):   163.60  

Contractor:   Mabkhout Al-Abraki    
 Hydrogeologist:   Abudul Salam Sallam    
 Operator:   Al Raboi  

Duration ( min )	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery ( m )
	W.L. ( m )	Yield ( l/sec)	W.L. ( m )	Yield ( l/sec)	W.L. ( m )	Yield ( l/sec)	W.L. ( m )	Yield ( l/sec)	W.L. ( m )	Yield ( l/sec)	
0.0	163.60	1.30	169.00	2.60	170.27	3.90	173.03	5.20	176.32	6.50	178.40
0.5	170.77		169.10		170.47		173.20		176.42		171.43
1.0	169.65		169.12		170.65		173.35		176.63		168.20
1.5	168.42		169.15		170.82		173.54		176.80		167.18
2.0	169.00		169.17		171.08		173.65		177.00		167.72
2.5	168.82		169.30		171.34		173.80		177.15		168.73
3.0	168.70		169.38		171.66		173.97		177.28		169.35
3.5	168.65		169.44		171.80		174.21		177.47		196.65
4.0	168.65		169.47		171.96		174.44		177.58		169.93
4.5	168.67		169.48		172.12		174.62		177.60		170.10
5.0	168.72		169.60		172.28		174.77		177.65		170.13
6.0	168.70		169.80		172.37		175.13		177.77		170.24
7.0	168.75		169.88		172.44		175.39		178.02		170.32
8.0	168.78		169.95		172.53		175.56		178.17		170.31
9.0	168.82		170.00		172.61		175.65		178.23		170.27
10.0	168.87		170.02		172.64		175.67		178.24		170.23
12.0	168.76		170.03		172.66		175.76		178.26		170.20
14.0	168.54		170.15		172.72		175.80		178.28		170.13
16.0	168.71		170.12		172.80		175.82		178.30		170.10
18.0	168.80		170.12		172.82		175.80		178.32		170.07
20.0	168.86		170.20		172.84		175.85		178.34		170.00
22.0	168.85		170.13		172.85		175.87		178.37		169.93
24.0	168.87		170.16		172.88		175.93		178.40		169.90
26.0	169.00		170.20		172.99		176.08		178.40		169.88
28.0	169.05		170.26		173.01		176.20		178.40		169.87
30.0	169.00		170.27		173.03		176.32		178.40		169.85
35.0											169.79
40.0											169.72
45.0											169.70
50.0											169.65
55.0											169.61
60.0											169.57
120.0											167.08
180.0											164.60
240.0											163.88
300.0											163.60

## Step Drawdown Test (1/2)

Well Code: D-03      Site code: D-03      Pump on date/hour: 31/7/2006 8:30am  
 Site name: Hegrat Al A'asham      Pump off date/hour: 31/7/2006 6:30pm  
 District: Jabal Al Sharq      End of recovery hour: 1/8/2006 7:30am  
 Governorate Dahmar      S.W.L ( m ): 163.60

Contractor: Mabkhout Al-Abraki  
 Hydrogeologist: Abudul Salam Sallam  
 Operator: Al Raboi

Duration ( min )	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery ( m )
	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	
0.0	163.60	1.30	169.35	2.60	171.30	3.90	174.58	5.20	177.98	6.50	181.86
0.5	170.60		169.44		171.92		174.60		178.15		179.10
1.0	171.51		169.57		172.10		174.63		178.33		179.03
1.5	170.30		169.60		172.45		174.83		178.65		177.03
2.0	169.48		169.63		172.56		175.06		178.84		176.08
2.5	169.60		169.63		172.71		175.25		179.09		176.06
3.0	168.82		169.65		172.74		175.40		179.21		176.09
3.5	168.83		169.73		172.84		175.51		179.23		176.10
4.0	168.76		169.90		172.90		175.60		179.25		176.13
4.5	168.90		170.05		172.95		175.67		179.26		176.10
5.0	168.90		170.12		173.00		175.73		179.27		176.02
6.0	168.85		170.25		173.03		175.89		179.30		176.04
7.0	168.88		170.26		173.06		176.02		179.33		176.00
8.0	169.00		170.31		173.09		176.13		179.35		175.95
9.0	168.90		170.30		173.16		176.14		179.40		175.90
10.0	168.95		170.33		173.17		176.20		179.44		175.85
12.0	168.75		170.35		173.20		176.27		179.46		175.80
14.0	168.84		170.39		173.33		176.30		179.51		175.75
16.0	168.90		170.40		173.34		176.33		179.52		175.69
18.0	168.80		170.43		173.30		176.36		179.55		175.59
20.0	168.80		170.45		173.30		176.38		179.62		175.54
25.0	168.88		170.48		173.40		176.53		179.70		175.43
30.0	168.95		170.51		173.44		176.58		179.81		175.28
35.0	168.98		170.60		173.52		176.75		180.01		175.19
40.0	168.90		170.62		173.59		176.78		180.25		175.00
45.0	168.93		170.61		173.64		176.88		180.48		174.90
50.0	169.10		170.60		173.70		176.94		180.60		174.82
55.0	169.12		170.70		173.80		177.00		180.70		174.75
60.0	169.08		170.80		173.85		177.08		180.79		174.67
70.0	169.08		170.90		173.96		177.18		181.02		174.54
80.0	169.10		171.00		174.05		177.37		181.17		174.35
90.0	169.14		171.10		174.20		177.52		181.35		174.22
100.0	169.20		171.17		174.35		177.61		181.54		174.10
110.0	169.25		171.21		174.44		177.73		181.70		174.00
120.0	169.35		171.30		174.58		177.98		181.86		173.80
150.0											173.42
180.0											172.92
210.0											172.40
240.0											171.82
270.0											171.66

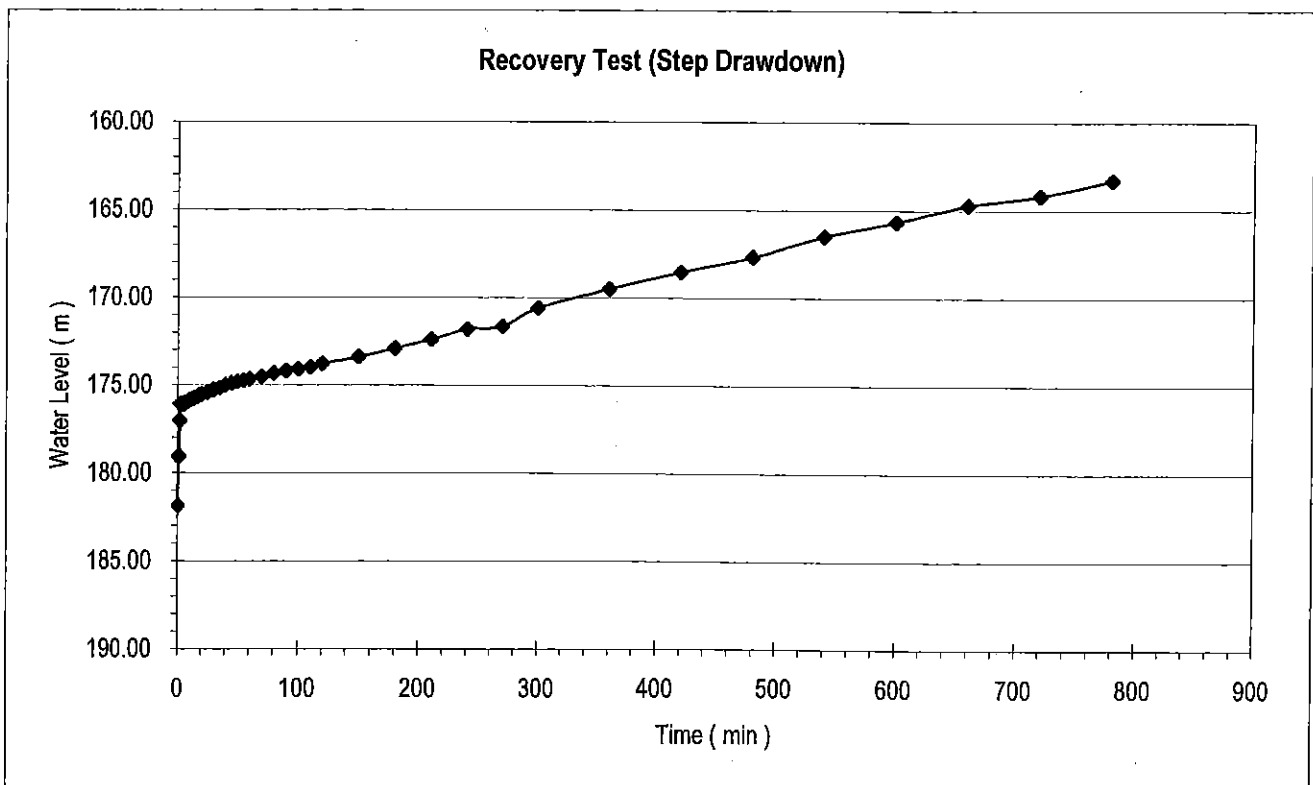
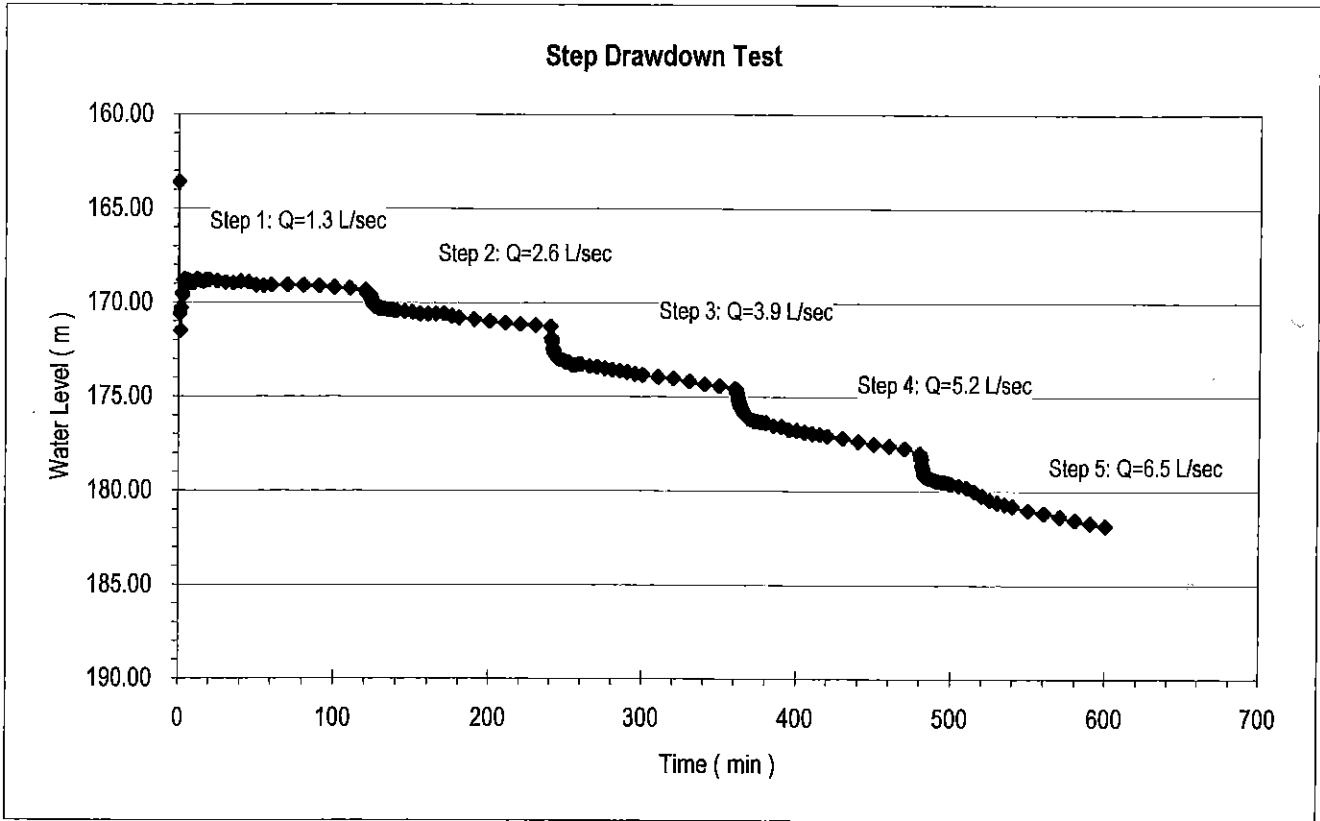




# Step Drawdown Test

Well Code: D-03  
Site Code: D-03  
S.W.L. : 163.60 m

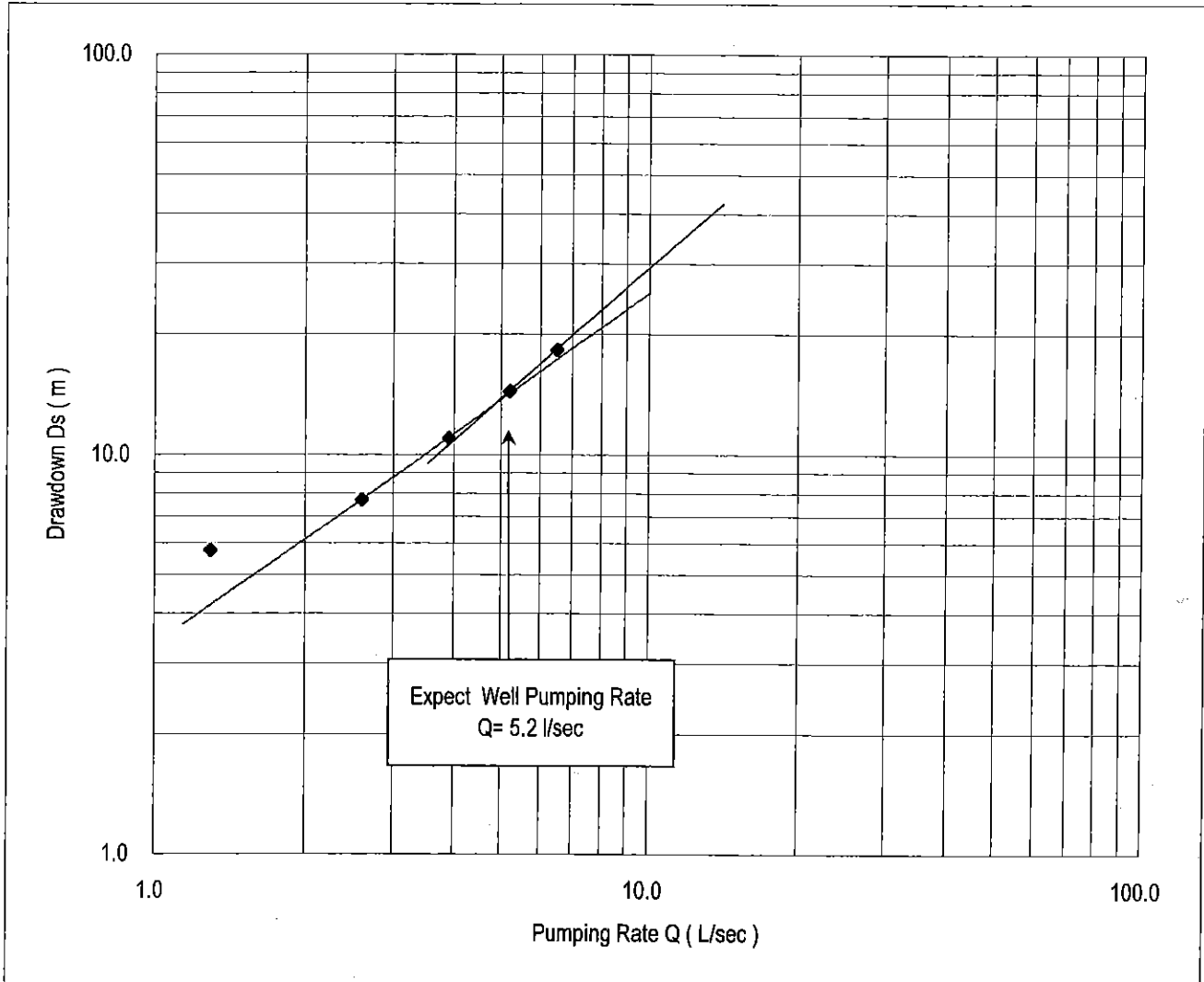
Site Name: Hegrat Al A'asham



## Step Drawdown Test

Well Code: D-03  
 Site Code: D-03  
 S.W.L. : 163.60 m

Site Name: Hegrat Al A'asham



Step	$Q$ (l/sec)	D.W.L. (m)	$D_s$ (m)
1	1.3	169.35	5.75
2	2.6	171.30	7.70
3	3.9	174.58	10.98
4	5.2	177.98	14.38
5	6.5	181.86	18.26

## Constant Discharge & Recovery Test (1/2)

Well Code:   D-03   Site code:   D-03  

Site name:   Hegrat Al A'asham  

Pump on date/hour:   1/8/2006 8:00am  

District:   Jabal Al Sharq  

Pump off date/hour:   2/8/2006 8:00am  

Governorate:   Dahmar  

End of recovery hour:   3/8/2006 9:00am  

Contractor:   Mabkhout Al-Abraki  

S.W.L ( m ):   163.60  

Hydrogeologist:   Abudul Salam Sallam  

D.W.L ( m ):   184.50  

Operator:   Al Raboi  

Yield (l/sec):   5.0  

Duration ( min )	Constant Discharge Test			Recovery Test		Water Analysis	Remarks
	Water level (m)	Drawdown (m)	Pumping rate (l/sec)	Water level (m)	Residual (m)	Conductivity ( $\mu$ S/cm)	
0.0	163.60	0.00		184.50	20.90		
0.5	170.24	6.64		179.70	16.10		
1.0	171.62	8.02		179.50	15.90		
1.5	172.70	9.10		179.56	15.96		
2.0	173.65	10.05		179.59	15.99		
2.5	174.78	11.18		179.62	16.02		
3.0	174.60	11.00		179.66	16.06		
3.5	174.74	11.14		179.70	16.10		
4.0	174.94	11.34		179.72	16.12		
4.5	174.97	11.37		179.75	16.15		
5.0	174.97	11.37		179.76	16.16		
6.0	174.94	11.34		179.78	16.18		
7.0	175.05	11.45		179.83	16.23		
8.0	175.08	11.48		179.85	16.25		
9.0	175.20	11.60		179.88	16.28		
10.0	175.23	11.63		179.92	16.32		
12.0	175.28	11.68		179.96	16.36		
14.0	175.32	11.72		180.11	16.51		
16.0	175.44	11.84		180.18	16.58		
18.0	175.50	11.90		180.20	16.60		
20.0	175.53	11.93		180.15	16.55		
25.0	175.71	12.11		180.14	16.54		
30.0	175.80	12.20		180.00	16.40		
35.0	176.08	12.48		179.85	16.25		
40.0	176.30	12.70		179.73	16.13		
45.0	176.32	12.72		179.65	16.05		
50.0	176.44	12.84		179.62	16.02		
55.0	176.56	12.96		179.60	16.00		
60.0	176.58	12.98		179.54	15.94	840	

## Constant Discharge & Recovery Test (2/2)

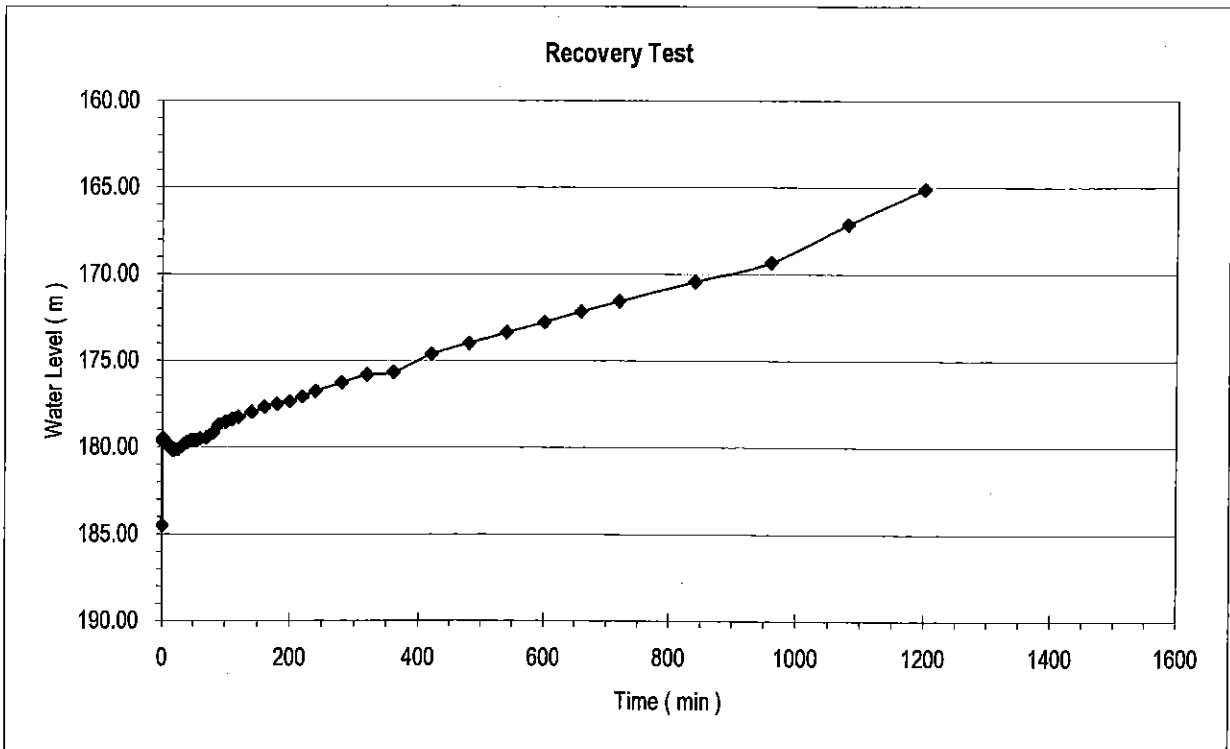
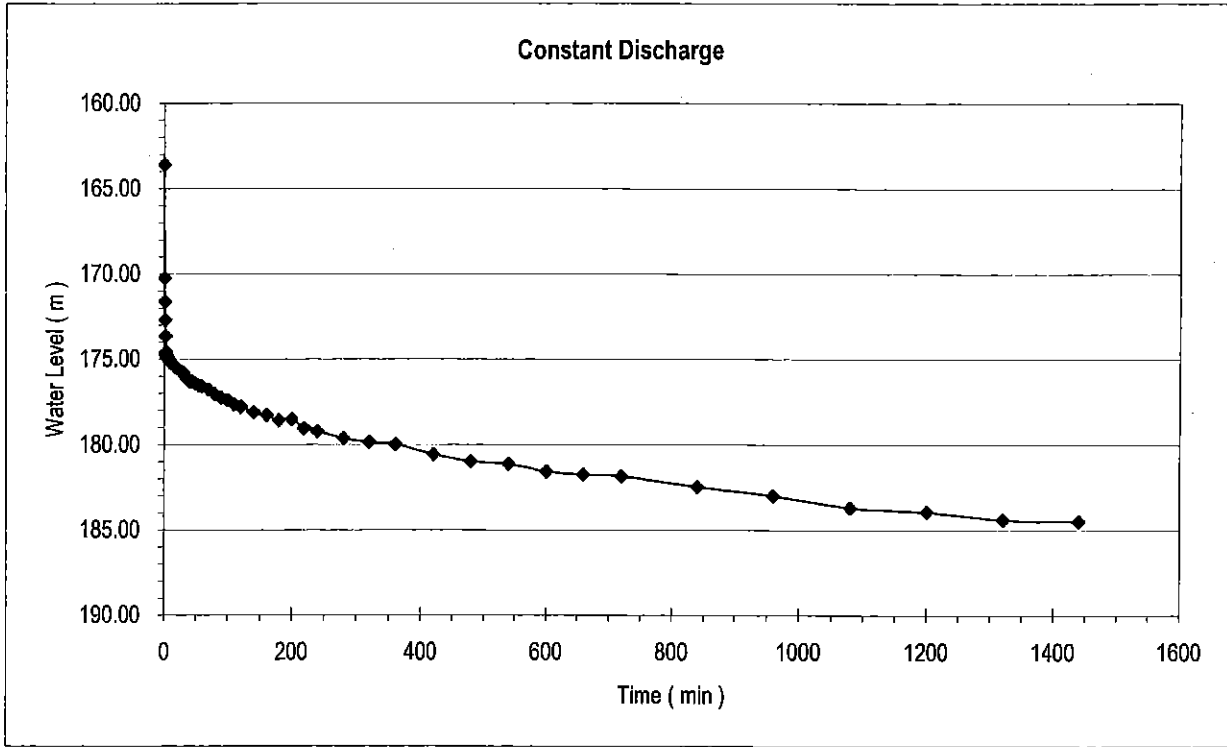
Well Code:   D-03        Site code:   D-03        Site name: Hegrat Al A'asham  
 District: Jabal Al Sharq      Governorate: Dahmar

Duration ( min )	Constant Discharge Test			Recovery Test		Water Analysis	Remarks
	Water level (m)	Drawdown (m)	Pumping rate (l/sec)	Water level (m)	Residual (m)	Conductivity ( $\mu\text{S/cm}$ )	
70.0	176.80	13.20		179.48	15.88		
80.0	177.03	13.43		179.20	15.60		
90.0	177.26	13.66		178.73	15.13		
100.0	177.42	13.82		178.58	14.98		
110.0	177.66	14.06		178.40	14.80		
120.0	177.80	14.20		178.28	14.68	840	
140.0	178.10	14.50		178.00	14.40		
160.0	178.30	14.70		177.70	14.10		
180.0	178.59	14.99		177.53	13.93		
200.0	178.54	14.94		177.38	13.78		
220.0	179.06	15.46		177.10	13.50		
240.0	179.25	15.65		176.80	13.20		
280.0	179.64	16.04		176.30	12.70		
320.0	179.88	16.28		175.86	12.26		
360.0	180.00	16.40		175.70	12.10		
420.0	180.58	16.98		174.65	11.05	840	
480.0	181.00	17.40		174.02	10.42		
540.0	181.15	17.55		173.40	9.80		
600.0	181.59	17.99		172.80	9.20	840	
660.0	181.77	18.17		172.18	8.58		
720.0	181.87	18.27		171.60	8.00		
840.0	182.49	18.89		170.47	6.87		
960.0	183.02	19.42		169.35	5.75		
1080.0	183.70	20.10		167.16	3.56	840	
1200.0	183.95	20.35		165.13	1.53		
1320.0	184.40	20.80		164.20	0.60	840	
1440.0	184.50	20.90		163.70	0.10		
1500.0				163.60	0.00		

# Constant Discharge Test

Well Code: D-03  
Site Code: D-03  
S.W.L. (m): 163.60  
Yield (L/sec): 5.0

Site Name Hegrat Al A'sham  
D.W.L (m): 184.50 Drawdown (m): 20.90



## Pumping Test Report Sheet

Well code: D-04 Site code: D-04 Site name: Al Kuob  
District: Duran Governorate: Dahmar

Target water source: New projected deep well Well depth: 152 m

Contractor: Mabkhout Al-Abraki

Hydrogeologist in charge: Abudul Salam Sallam

Operator: Kaid Al Abraki

Date of start of the test: 31/8/2006 Date of end of the test: 3/9/2006

Pump type: Vertical pump Engine: IVECO Aifo

Pump installation depth: 123 m Datum level: 0.60 m S.W.L.: G.L. 84.90 m

### Step drawdown test

Date/hour started: 1/9/2006 9:00am Date/hour finished: 2/9/2006 1:00am Total hours: 16:00

Yield (l/sec) 1<sup>st</sup> step 0.10 2<sup>nd</sup> step 0.20 3<sup>rd</sup> step 0.30 4<sup>th</sup> step 0.40 5<sup>th</sup> step 0.50

Water level before start the test (G.L.-m): 84.90

Water level after end of 5<sup>th</sup> step (G.L.-m): 96.56

Water level after recovery (G.L.-m): 84.90 Recovery hours 6:00

### Constant discharge test

Date/hour started: 2/9/2006 12:00pm Date/hour finished: 3/9/2006 11:00pm Total hours: 35:00

Yield (l/sec) 0.30

Water level before start of the test (G.L.-m): 84.90

Water level after end of test (G.L.-m): 91.42

Water level after recovery (G.L.-m): 84.90 Recovery hours 11:00

Drawdown (m): 6.52

Revised by:

\_\_\_\_\_  
Name :

Date:

## Provisional Step Drawdown Test (1/2)

Well Code: D-04

Site code: D-04

Pump on date/hour: 23/7/2006 4:30pm

Site name: Al Kuob

Pump off date/hour: \_\_\_\_\_

District: Duran

End of recovery hour: \_\_\_\_\_

Governorate Dahmar

S.W.L (m): 89.90

Contractor: Mabkhout Al-Abraki

Hydrogeologist: Abudul Salam Sallam

Operator: Kaid Al Abraki

23/7/2006 4:30pm

23/7/2006 11:30pm

Duration (min)	1st Step		2nd Step		Recovery		1st Step		2nd Step		Recovery (m)
	W.L. (m)	Yield (l/sec)	W.L. (m)	Yield (l/sec)	(m)		W.L. (m)	Yield (l/sec)	W.L. (m)	Yield (l/sec)	
0.0	89.90	1.00	112.01	2.00	114.41		93.10	0.50	109.00	1.00	120.09
0.5	93.92		112.56		111.32		97.00		110.05		117.75
1.0	93.97		113.12		109.14		97.48		110.95		115.62
1.5	94.15		113.60		108.68		97.87		111.15		114.46
2.0	94.32		114.05		108.66		98.29		112.80		114.39
2.5	94.58		114.39		108.52		98.69		113.47		114.41
3.0	94.71		114.40		108.54		99.19		114.29		114.38
3.5	94.93		114.41		108.43		99.63		114.31		114.28
4.0	95.07		114.41		108.41		100.66		114.95		114.16
4.5	95.24				108.34		100.58		115.26		114.16
5.0	95.40				108.31		101.06		115.80		114.12
6.0	95.69				108.10		102.06		116.11		114.08
7.0	95.92				108.01		102.63		116.63		113.98
8.0	96.63				107.91		103.11		117.49		113.93
9.0	96.67				107.84		103.71		118.67		113.84
10.0	97.03				107.75		104.07		119.33		113.77
12.0	97.66				107.60		104.79		120.09		113.64
14.0	98.72				107.55		105.27				113.52
16.0	99.73				107.23		105.90				113.43
18.0	101.91				107.04		106.62				113.30
20.0	103.97				106.84		107.10				113.20
22.0	105.84				106.69		107.49				113.09
24.0	107.43				106.53		107.91				112.98
26.0	108.97				106.35		108.46				112.80
28.0	110.28				106.19		108.88				112.70
30.0	112.01				106.00		109.00				112.60
40.0											
50.0											
60.0											
70.0											
80.0											
90.0											
100.0											
110.0											
120.0											

## Provisional Step Drawdown Test (2/2)

Well Code: D-04 Site code: D-04  
 Site name: Al Kuob  
 District: Duran  
 Governorate Dahmar

Pump on date/hour: 31/8/2006 9:20pm  
 Pump off date/hour: 31/8/2006 11:50pm  
 End of recovery hour: 1/9/2006 1:50am  
 S.W.L ( m ): 85.50

Contractor: Mabkhout Al-Abraki  
 Hydrogeologist: Abudul Salam Sallam  
 Operator: Kaid Al Abraki

Duration ( min )	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery ( m )
	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	
0.0	85.50	0.10	85.60	0.20	85.84	0.30	86.16	0.40	86.87	0.50	88.04
0.5	86.40		85.60		85.85		86.20		87.20		85.40
1.0	87.20		85.65		85.87		86.23		87.38		83.76
1.5	87.90		85.65		85.88		86.27		87.48		84.18
2.0	87.95		85.65		85.89		86.32		87.56		84.75
2.5	87.80		85.65		85.90		86.36		87.63		85.00
3.0	87.65		85.65		85.91		86.39		87.70		85.20
3.5	87.50		85.67		85.93		86.42		87.76		85.38
4.0	87.40		85.68		85.95		86.45		87.80		85.45
4.5	87.22		85.68		85.97		86.46		87.81		85.60
5.0	87.15		85.68		86.00		86.48		87.82		85.64
6.0	86.90		85.69		86.03		86.53		87.83		85.75
7.0	86.70		85.70		86.05		86.65		87.83		85.80
8.0	86.52		85.71		86.08		86.71		87.84		85.85
9.0	86.42		85.74		86.10		86.75		87.84		85.85
10.0	86.35		85.74		86.12		86.76		87.84		85.90
12.0	86.30		85.80		86.15		86.80		87.85		85.90
14.0	86.10		85.80		86.16		86.83		87.86		85.88
16.0	86.00		85.82		86.16		86.87		87.88		85.86
18.0	85.90		85.82		86.16		86.87		87.89		85.86
20.0	85.70		85.82		86.16		86.87		87.90		85.84
22.0	85.58		85.82		86.16		86.87		87.92		85.82
24.0	85.58		85.83		86.16		86.87		87.98		85.81
26.0	85.58		85.84		86.16		86.87		88.00		85.80
28.0	85.60		85.84		86.16		86.87		88.02		85.79
30.0	85.60		85.84		86.16		86.87		88.04		87.75
40.0											87.70
50.0											85.66
60.0											85.62
70.0											85.58
80.0											85.55
90.0											85.53
100.0											85.51
120.0											85.50



## Step Drawdown Test (1/2)

Well Code: D-06 Site code: D-06  
 Site name: Wardasan  
 District: Ans  
 Governorate Dahmar

Pump on date/hour: 25/7/2006 4:55pm  
 Pump off date/hour: 25/7/2006 11:33pm  
 End of recovery hour: 26/7/2006 3:33pm  
 S.W.L ( m ): 90.45

Contractor: Mabkhout Al-Abraki  
 Hydrogeologist: Abudul Salam Sallam  
 Operator: Al Raboi

Duration ( min )	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery ( m )
	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	
0.0	90.45	0.50	109.89	0.70	133.08	0.90	155.56	1.10			162.00
0.5	106.10		109.92		133.18		155.65				148.00
1.0	106.20		110.35		133.28		155.67				140.20
1.5	105.65		110.92		133.37		155.72				134.68
2.0	105.43		111.31		133.40		155.75				134.10
2.5	105.37		111.67		133.42		155.83				133.70
3.0	105.37		111.85		133.44		155.98				133.50
3.5	105.55		112.03		133.46		156.00				133.30
4.0	105.60		112.18		133.47		156.40				132.85
4.5	105.64		112.28		133.61		156.60				132.57
5.0	105.76		112.36		133.75		156.80				132.37
6.0	106.20		112.60		133.76		156.90				131.83
7.0	106.53		113.70		134.64		156.69				131.28
8.0	106.60		114.23		135.00		157.27				130.80
9.0	106.53		114.50		135.65		157.70				130.30
10.0	106.60		115.87		136.00		157.97				129.87
12.0	106.62		115.92		136.45		158.35				128.93
14.0	107.23		116.60		136.70		158.50				128.05
16.0	107.42		117.70		136.78		158.54				127.20
18.0	107.43		118.10		136.98		159.25				126.40
20.0	107.55		118.33		137.05		160.17				125.60
25.0	107.71		118.68		140.14		161.08				123.60
30.0	107.85		120.91		140.87		161.65				121.69
35.0	108.50		121.32		144.70		162.00				120.02
40.0	108.78		121.47		147.20						118.90
45.0	108.70		123.53		147.65						117.45
50.0	108.72		125.86		148.04						116.00
55.0	108.82		130.15		148.50						115.28
60.0	108.83		130.70		148.63						114.27
70.0	109.18		130.98		150.81						112.94
80.0	109.43		131.63		151.60						111.65
90.0	109.60		131.96		152.75						110.60
100.0	109.75		132.66		153.80						109.67
110.0	109.78		132.98		155.15						108.85
120.0	109.89		133.08		155.56						108.03
140.0											106.88
160.0											105.79
180.0											104.89
200.0											104.09
220.0											103.37

## Step Drawdown Test (2/2)

Well Code: D-06

Site code: D-06

Site name: Wardasan

District: Ans

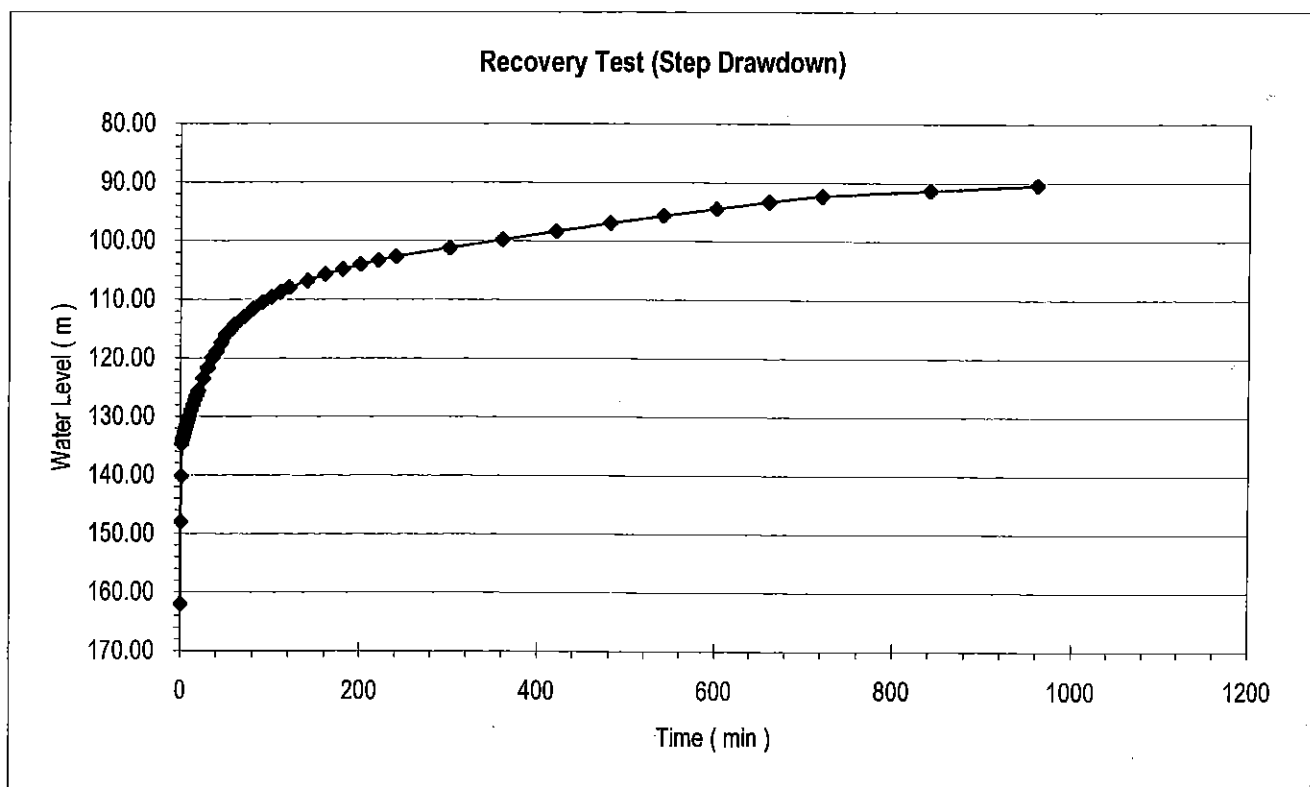
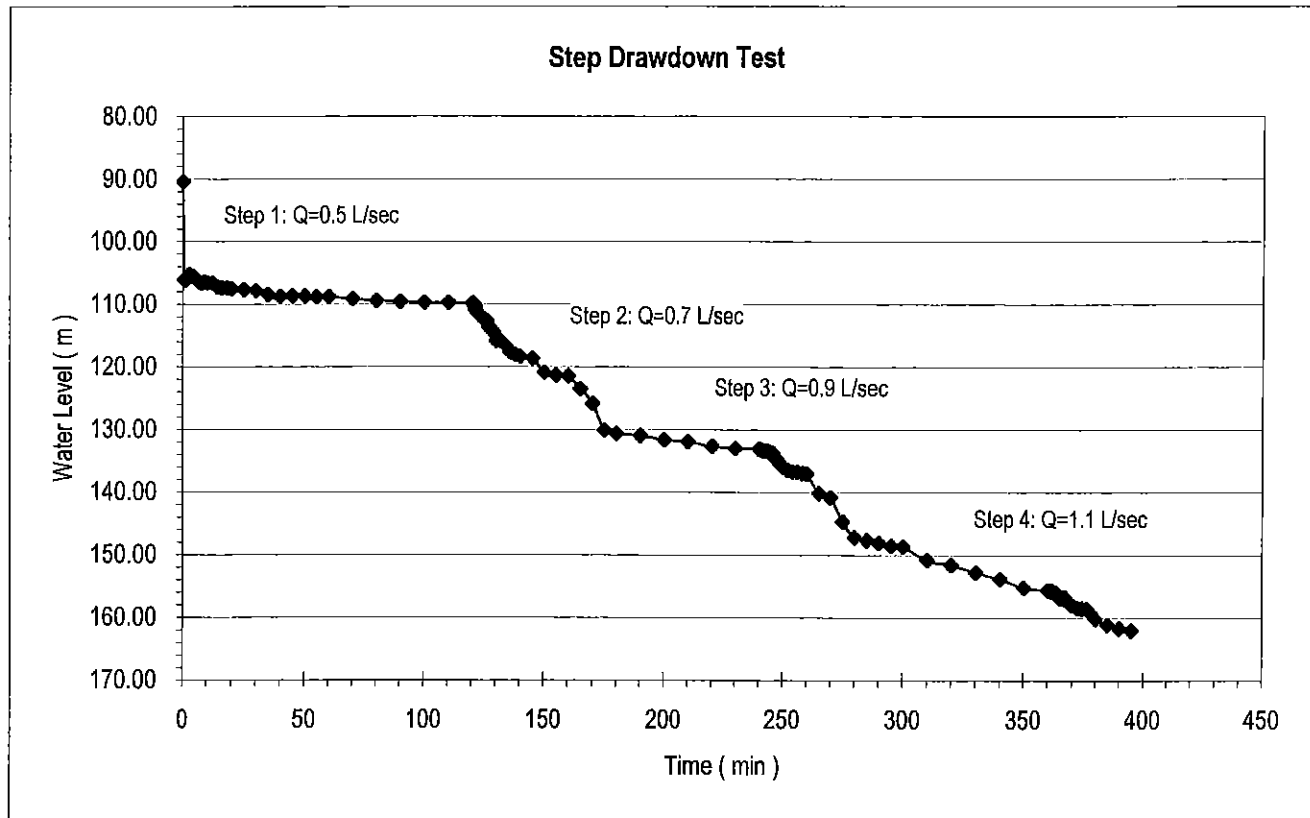
Governorate: Dahmar

Duration (min)	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery (m)
	W.L. (m)	Yield (l/sec)	W.L. (m)	Yield (l/sec)	W.L. (m)	Yield (l/sec)	W.L. (m)	Yield (l/sec)	W.L. (m)	Yield (l/sec)	
240.0											102.72
300.0											101.22
360.0											99.82
420.0											98.39
480.0											96.99
540.0											95.69
600.0											94.49
660.0											93.36
720.0											92.33
840.0											91.38
960.0											90.45

# Step Drawdown Test

Well Code: D-06  
Site Code: D-06  
S.W.L. : 90.45 m

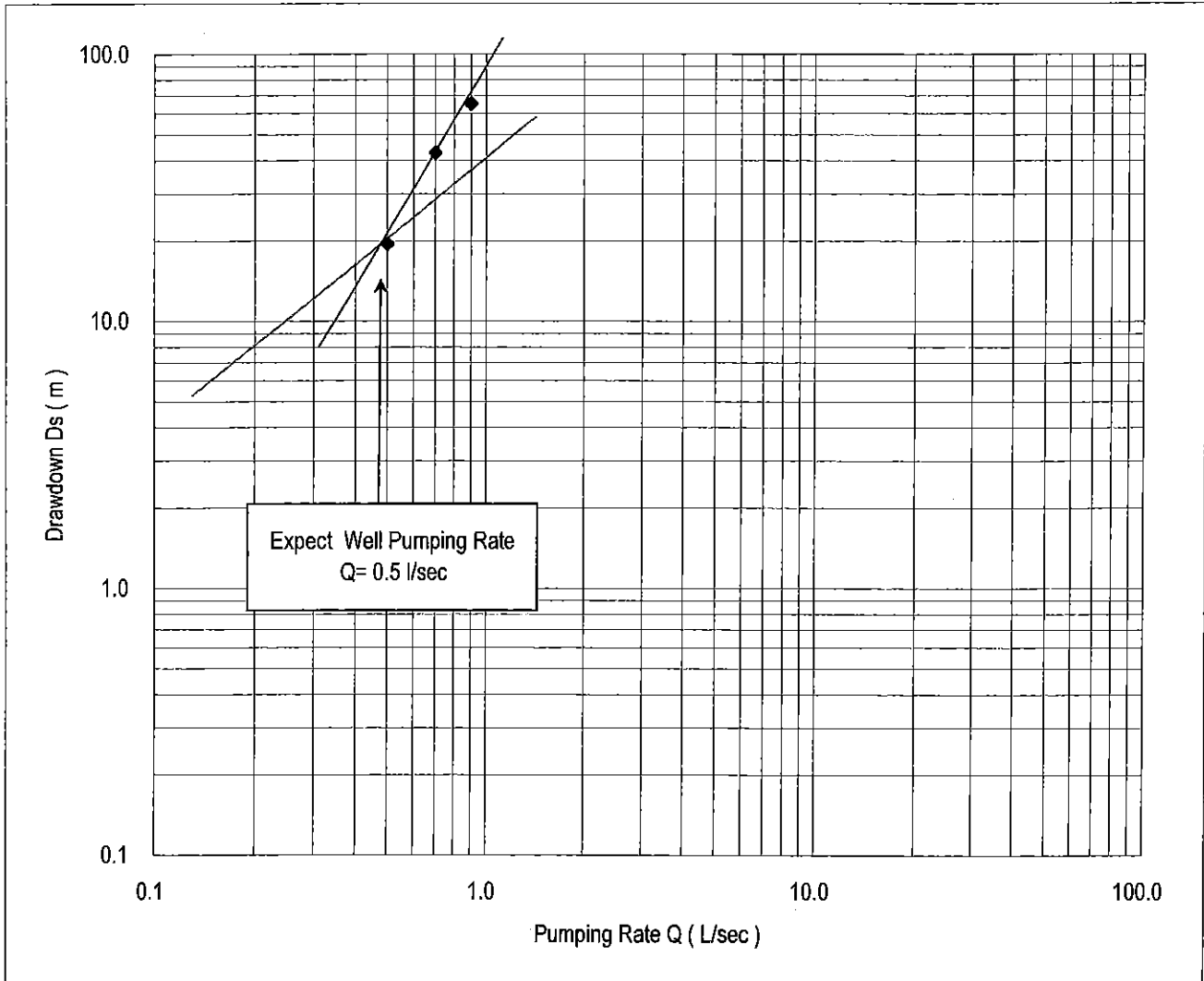
Site Name: Wardasan



## Step Drawdown Test

Well Code: D-06  
 Site Code: D-06  
 S.W.L. : 90.45 m

Site Name: Wardasan



Step	$Q$ (l/sec)	D.W.L. (m)	$D_s$ (m)
1	0.5	109.89	19.44
2	0.7	133.08	42.63
3	0.9	155.56	65.11
4			
5			

## Constant Discharge & Recovery Test (1/2)

Well Code:   D-06                        Site code:   D-06  

Site name:   Wardasan  

Pump on date/hour:   26/7/2006 3:50pm  

District:   Ans  

Pump off date/hour:   27/7/2006 3:50pm  

Governorate:   Dahmar  

End of recovery hour:   28/7/2006 8:50pm  

Contractor:   Mabkhout Al-Abraki  

S.W.L ( m ):   90.45  

Hydrogeologist:   Abudul Salam Sallam  

D.W.L ( m ):   132.70  

Operator:   Al Raboi  

Yield (l/sec):   0.5  

Duration ( min )	Constant Discharge Test			Recovery Test		Water Analysis	Remarks
	Water level ( m )	Drawdown ( m )	Pumping rate (l/sec)	Water level ( m )	Residual ( m )	Conductivity ( $\mu$ S/cm)	
0.0	90.45	0.00		132.70	42.25		
0.5	107.22	16.77		122.66	32.21		
1.0	107.26	16.81		114.40	23.95		
1.5	107.28	16.83		111.78	21.33		
2.0	107.23	16.78		112.29	21.84		
2.5	107.13	16.68		112.50	22.05		
3.0	107.22	16.77		112.90	22.45		
3.5	107.30	16.85		113.20	22.75		
4.0	107.40	16.95		113.45	23.00		
4.5	107.45	17.00		113.73	23.28		
5.0	107.51	17.06		114.08	23.63		
6.0	107.93	17.48		114.26	23.81		
7.0	107.96	17.51		114.58	24.13		
8.0	107.66	17.21		114.84	24.39		
9.0	107.72	17.27		115.10	24.65		
10.0	107.79	17.34		115.27	24.82		
12.0	107.83	17.38		115.62	25.17		
14.0	107.86	17.41		115.85	25.40		
16.0	107.90	17.45		116.00	25.55		
18.0	107.97	17.52		116.02	25.57		
20.0	108.10	17.65		116.12	25.67		
25.0	108.46	18.01		116.15	25.70		
30.0	108.54	18.09		116.02	25.57		
35.0	108.56	18.11		115.91	25.46		
40.0	108.69	18.24		115.76	25.31		
45.0	108.78	18.33		115.55	25.10		
50.0	109.20	18.75		115.36	24.91		
55.0	109.41	18.96		115.16	24.71		
60.0	109.65	19.20		114.98	24.53	1657	

## Constant Discharge & Recovery Test (2/2)

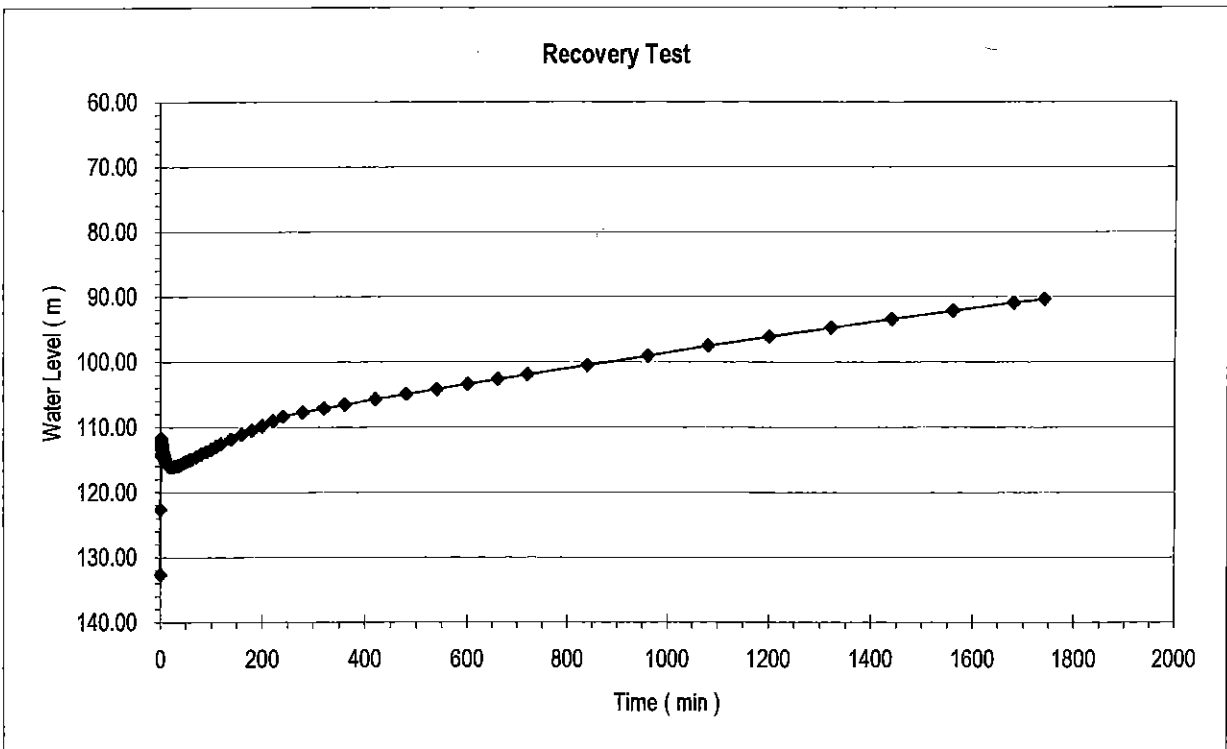
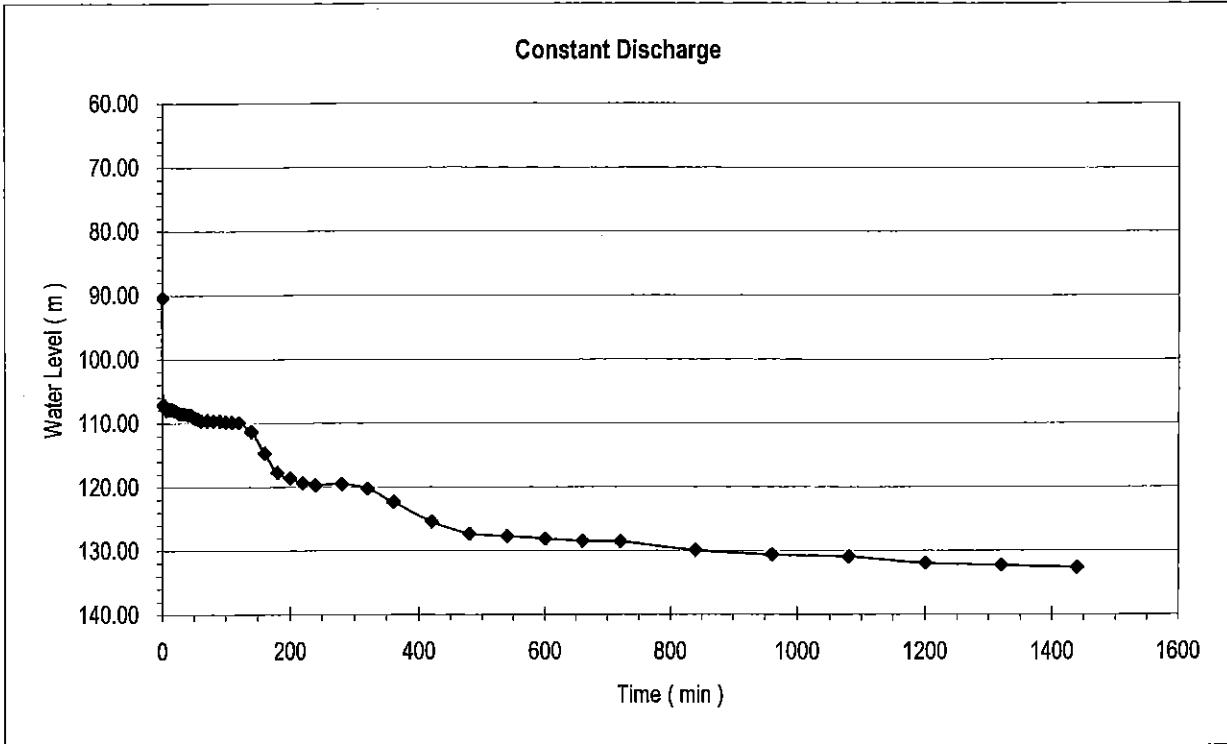
Well Code: D-06      Site code: D-06      Site name: Wardasan  
 District: Ans      Governorate: Dahmar

Duration ( min )	Constant Discharge Test			Recovery Test		Water Analysis	Remarks
	Water level (m)	Drawdown (m)	Pumping rate (l/sec)	Water level (m)	Residual (m)	Conductivity (µS/cm)	
70.0	109.64	19.19		114.60	24.15		
80.0	109.67	19.22		114.20	23.75		
90.0	109.71	19.26		113.81	23.36		
100.0	109.84	19.39		113.41	22.96		
110.0	109.89	19.44		113.00	22.55		
120.0	109.94	19.49		112.61	22.16	1657	
140.0	111.34	20.89		111.90	21.45		
160.0	114.73	24.28		111.22	20.77		
180.0	117.80	27.35		110.55	20.10		
200.0	118.64	28.19		109.85	19.40		
220.0	119.48	29.03		109.10	18.65		
240.0	119.74	29.29		108.41	17.96		
280.0	119.57	29.12		107.80	17.35		
320.0	120.31	29.86		107.20	16.75		
360.0	122.40	31.95		106.62	16.17		
420.0	125.45	35.00		105.77	15.32		
480.0	127.40	36.95		105.00	14.55		
540.0	127.73	37.28		104.22	13.77		
600.0	128.18	37.73		103.46	13.01		
660.0	128.51	38.06		102.71	12.26		
720.0	128.61	38.16		101.99	11.54		
840.0	129.99	39.54		100.53	10.08		
960.0	130.70	40.25		99.10	8.65		
1080.0	131.00	40.55		97.56	7.11	1657	
1200.0	132.00	41.55		96.18	5.73		
1320.0	132.32	41.87		94.83	4.38		
1440.0	132.70	42.25		93.50	3.05		
1560.0				92.22	1.77		
1680.0				90.97	0.52		
1740.0				90.45	0.00		

## Constant Discharge Test

Well Code: D-06  
Site Code: D-06  
S.W.L. (m): 90.45  
Yield (L/sec): 0.5

Site Name Wardasan  
D.W.L. (m): 132.70      Drawdown (m): 42.25



## Pumping Test Report Sheet

Well code: D-07 Site code: D-07 Site name: Al Asakera  
District: Mayfa'a Governorate: Dahmar

Target water source: New projected deep well Well depth: 304 m

Contractor: Mabkhout Al-Abraki

Hydrogeologist in charge: Abudul Salam Sallam

Operator: Hezan Jameel

Date of start of the test: 20/7/2006 Date of end of the test: 22/7/2006

Pump type: Vertical pump Engine: Iveco aifo

Pump installation depth: 250 m Datum level: 0.52 m S.W.L.: G.L.-193.58 m

### Step drawdown test

Date/hour started: 20/7/2006 3:40pm Date/hour finished: 21/7/2006 4:40am Total hours: 13:00

Yield (l/sec) 1<sup>st</sup> step 1.40 2<sup>nd</sup> step 2.80 3<sup>rd</sup> step 4.20 4<sup>th</sup> step 5.60 5<sup>th</sup> step 7.00

Water level before start the test (G.L.-m): 193.63

Water level after end of 5<sup>th</sup> step (G.L.-m): 196.42

Water level after recovery (G.L.-m): 193.63 Recovery hours 3:00

### Constant discharge test

Date/hour started: 21/7/2006 11:15am Date/hour finished: 22/7/2006 6:15pm Total hours: 31:00

Yield (l/sec) 4.50

Water level before start of the test (G.L.-m): 193.63

Water level after end of test (G.L.-m): 195.18

Water level after recovery (G.L.-m): 193.63 Recovery hours 7:00

Drawdown (m): 1.55

Revised by:

Name :

Date:



# Provisional Step Drawdown Test

Well Code:   D-07                        Site code:   D-07    
 Site name:   Al Asakera    
 District:   Mayfa'a    
 Governorate   Dahmar  

Pump on date/hour:   20/7/2006 11:15am    
 Pump off date/hour:   20/7/2006 1:45pm    
 End of recovery hour:   20/7/2006 3:35pm    
 S.W.L ( m ):   194.10  

Contractor:   Mabkhout Al-Abraki    
 Hydrogeologist:   Abudul Salam Sallam    
 Operator:   Hezan Jameel  

Duration ( min )	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery ( m )
	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	
0.0	194.10	1.40	194.60	2.80	194.80	4.20	195.64	5.60	196.38	7.00	197.09
0.5	198.90		194.70		194.95		195.75		196.39		195.40
1.0	195.10		194.80		194.95		195.80		196.40		195.00
1.5	195.12		194.81		194.96		195.85		196.45		194.75
2.0	195.20		194.82		194.96		195.86		196.60		194.50
2.5	194.60		194.82		194.95		195.88		196.70		194.50
3.0	194.62		194.82		195.10		195.88		196.75		194.50
3.5	194.65		194.77		195.20		195.90		196.85		194.49
4.0	194.70		194.77		195.40		195.95		196.90		194.49
4.5	194.68		194.77		195.41		195.95		196.92		194.49
5.0	194.72		194.70		195.50		195.95		196.95		194.49
6.0	194.40		194.75		195.50		196.00		196.97		194.49
7.0	194.50		194.77		195.50		196.00		196.97		194.48
8.0	194.25		194.77		195.52		196.20		196.97		194.48
9.0	194.53		194.77		195.55		196.25		197.02		194.48
10.0	194.58		194.77		195.60		196.30		197.02		194.46
12.0	194.55		194.77		195.62		196.35		197.03		194.46
14.0	194.58		194.77		195.62		196.35		197.04		194.45
16.0	194.59		194.77		195.60		196.36		197.05		194.45
18.0	194.59		194.78		195.60		196.36		197.06		194.45
20.0	194.59		194.80		195.60		196.36		197.07		194.43
22.0	194.59		194.80		195.60		196.36		197.08		194.43
24.0	194.60		194.80		195.61		196.36		197.09		194.43
26.0	194.60		194.80		195.61		196.37		197.10		194.42
28.0	194.60		194.80		195.61		196.38		197.09		194.42
30.0	194.60		194.80		195.64		196.38		197.09		194.41
60.0											194.27
90.0											194.15
110.0											194.15
120.0											194.15
150.0											194.15
180.0											194.15

## Step Drawdown Test

Well Code:   D-07                        Site code:   D-07    
 Site name:   Al Asakera    
 District:   Mayfa'a    
 Governorate   Dahmar  

Pump on date/hour:   20/7/2006 3:40pm    
 Pump off date/hour:   21/7/2006 1:40am    
 End of recovery hour:   21/7/2006 4:40am    
 S.W.L ( m ):           194.15          

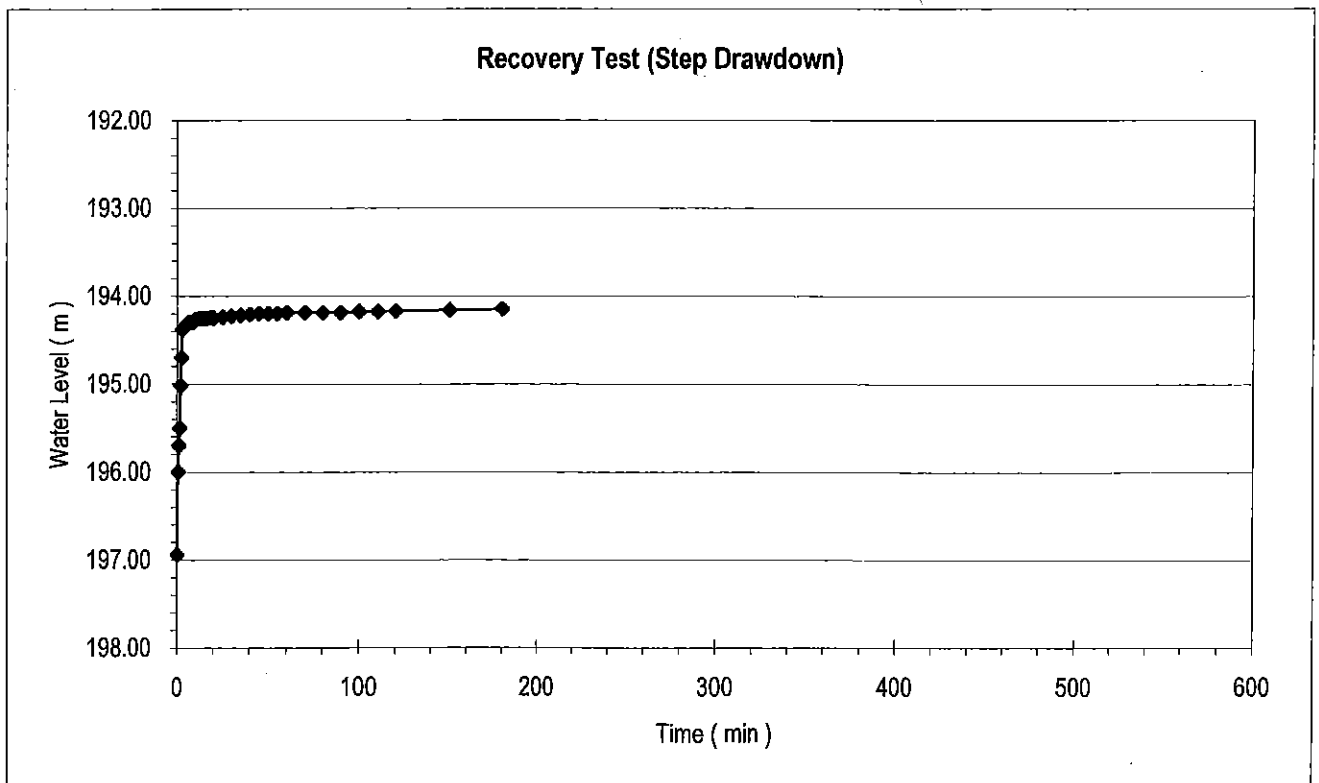
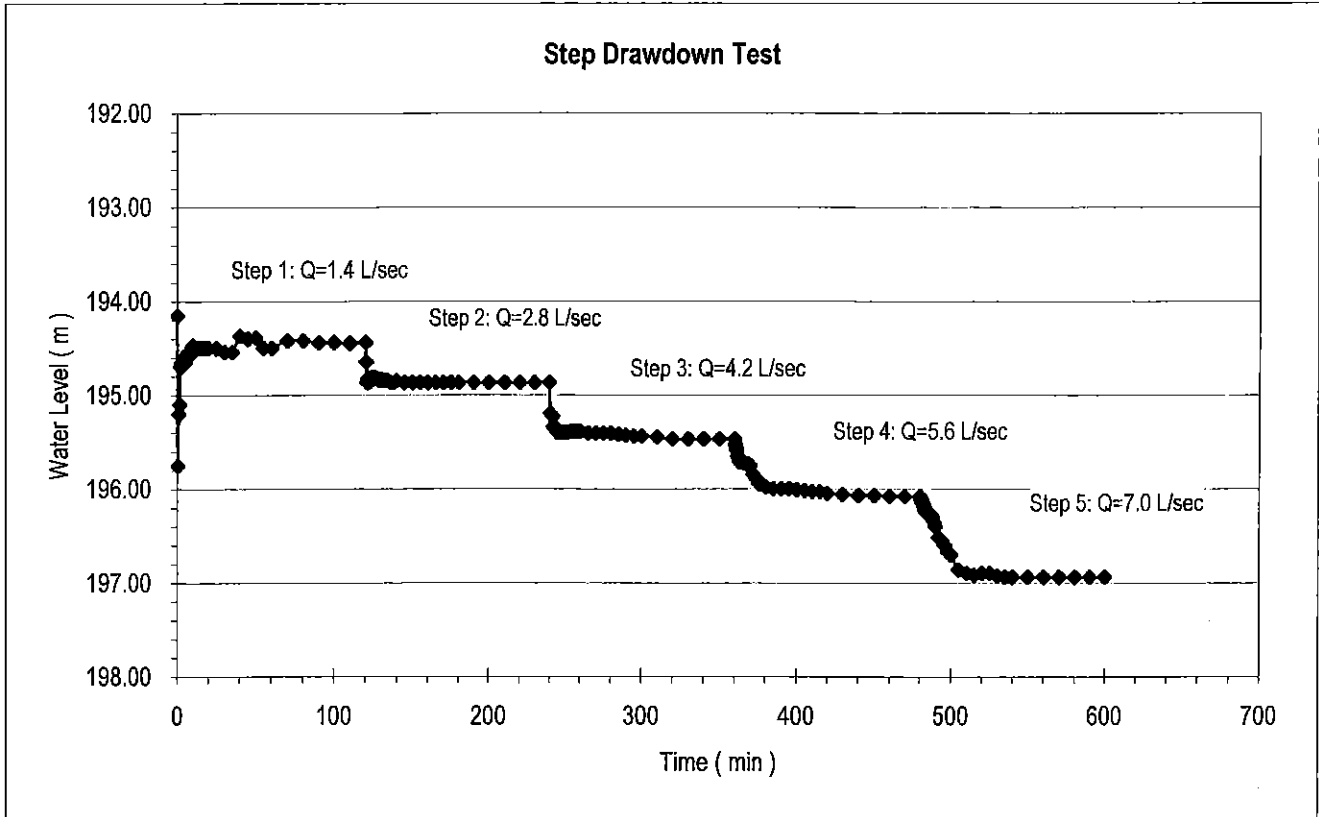
Contractor:   Mabkhout Al-Abraki    
 Hydrogeologist:   Abudul Salam Sallam    
 Operator:   Hezan Jameel  

Duration ( min )	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery ( m )
	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	
0.0	194.15	1.40	194.44	2.80	194.87	4.20	195.47	5.60	196.08	7.00	196.94
0.5	195.75		194.65		195.20		195.53		196.10		196.00
1.0	195.20		194.87		195.21		195.56		196.14		195.70
1.5	195.10		194.83		195.22		195.59		196.14		195.50
2.0	194.70		194.86		195.23		195.65		196.15		195.02
2.5	194.67		194.86		195.34		195.68		196.18		194.70
3.0	194.65		194.85		195.36		195.72		196.21		194.38
3.5	194.60		194.82		195.34		195.72		196.23		194.37
4.0	194.65		194.82		195.36		195.72		196.25		194.36
4.5	194.65		194.82		195.36		195.72		196.26		194.35
5.0	194.65		194.83		195.40		195.72		196.26		194.33
6.0	194.56		194.82		195.40		195.73		196.27		194.30
7.0	194.57		194.83		195.40		195.73		196.27		194.30
8.0	194.57		194.84		195.40		195.74		196.30		194.30
9.0	194.54		194.84		195.40		195.74		196.35		194.30
10.0	194.47		194.84		195.40		195.75		196.40		194.27
12.0	194.50		194.85		195.40		195.85		196.52		194.26
14.0	194.50		194.85		195.39		195.90		196.55		194.26
16.0	194.50		194.87		195.39		195.95		196.60		194.26
18.0	194.50		194.87		195.39		195.95		196.67		194.25
20.0	194.50		194.85		195.39		195.98		196.70		194.25
25.0	194.50		194.87		195.41		196.00		196.86		194.24
30.0	194.54		194.87		195.41		196.00		196.90		194.23
35.0	194.54		194.87		195.41		196.00		196.92		194.22
40.0	194.37		194.87		195.41		196.01		196.90		194.21
45.0	194.40		194.87		195.42		196.02		196.90		194.20
50.0	194.39		194.87		195.43		196.03		196.93		194.20
55.0	194.50		194.87		195.44		196.03		196.94		194.20
60.0	194.50		194.87		195.44		196.05		196.94		194.19
70.0	194.42		194.87		195.45		196.06		196.94		194.19
80.0	194.42		194.87		195.47		196.07		196.94		194.19
90.0	194.44		194.87		195.47		196.07		196.94		194.19
100.0	194.44		194.87		195.47		196.08		196.94		194.18
110.0	194.45		194.87		195.47		196.08		196.94		194.18
120.0	194.44		194.87		195.47		196.08		196.94		194.17
150.0											194.16
180.0											194.15

# Step Drawdown Test

Well Code: D-07  
Site Code: D-07  
S.W.L. : 194.15 m

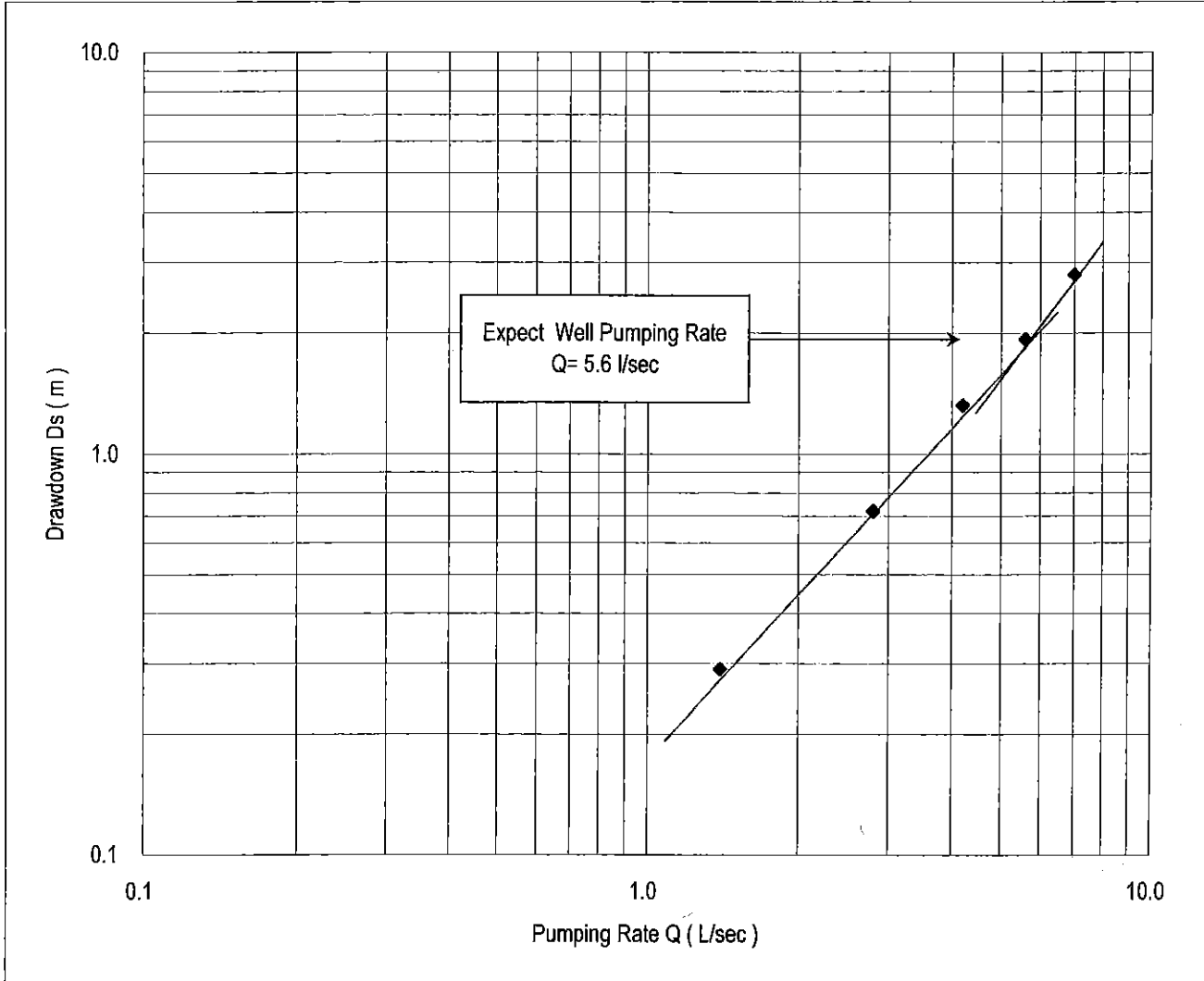
Site Name: Al Asakera



## Step Drawdown Test

Well Code: D-07  
 Site Code: D-07  
 S.W.L. : 194.15 m

Site Name: Al Asakera



Step	Q (l/sec)	D.W.L.(m)	Ds (m)
1	1.4	194.44	0.29
2	2.8	194.87	0.72
3	4.2	195.47	1.32
4	5.6	196.08	1.93
5	7.0	196.94	2.79

## Constant Discharge & Recovery Test (1/2)

Well Code: D-07                      Site code: D-07

Site name: Al Asakera

District: Mayfa'a

Governorate: Dahmar

Pump on date/hour: 21/7/2006 11:15am

Pump off date/hour: 22/7/2006 11:15am

End of recovery hour: 22/7/2006 6:15pm

Contractor: Mabkhout Al-Abraki

S.W.L ( m ): 194.15

Hydrogeologist: Abudul Salam Sallam

D.W.L ( m ): 195.70

Operator: Hezan Jameel

Yield (l/sec): 4.5

Duration ( min )	Constant Discharge Test			Recovery Test		Water Analysis	Remarks
	Water level (m)	Drawdown (m)	Pumping rate (l/sec)	Water level (m)	Residual (m)	Conductivity ( $\mu$ S/cm)	
0.0	194.15	0.00		195.70	1.55		
0.5	195.50	1.35		195.00	0.85		
1.0	195.55	1.40		194.90	0.75		
1.5	195.55	1.40		194.84	0.69		
2.0	195.10	0.95		194.40	0.25		
2.5	195.10	0.95		194.40	0.25		
3.0	195.20	1.05		194.35	0.20		
3.5	195.25	1.10		194.35	0.20		
4.0	195.26	1.11		194.35	0.20		
4.5	195.27	1.12		194.35	0.20		
5.0	195.30	1.15		194.35	0.20		
6.0	195.35	1.20		194.35	0.20		
7.0	195.37	1.22		194.35	0.20		
8.0	195.39	1.24		194.35	0.20		
9.0	195.40	1.25		194.35	0.20		
10.0	195.41	1.26		194.35	0.20		
12.0	195.44	1.29		194.35	0.20		
14.0	195.55	1.40		194.35	0.20		
16.0	195.50	1.35		194.35	0.20		
18.0	195.35	1.20		194.35	0.20		
20.0	195.30	1.15		194.35	0.20		
25.0	195.35	1.20		194.35	0.20		
30.0	195.40	1.25		194.35	0.20		
35.0	195.42	1.27		194.33	0.18		
40.0	195.44	1.29		194.33	0.18		
45.0	195.45	1.30		194.33	0.18		
50.0	195.45	1.30		194.33	0.18		
55.0	195.45	1.30		194.32	0.17		
60.0	195.45	1.30		194.32	0.17	1062	

## Constant Discharge & Recovery Test (2/2)

 Well Code: D-07

 Site code: D-07

 Site name: Al Asakera

 District: Mayfa'a

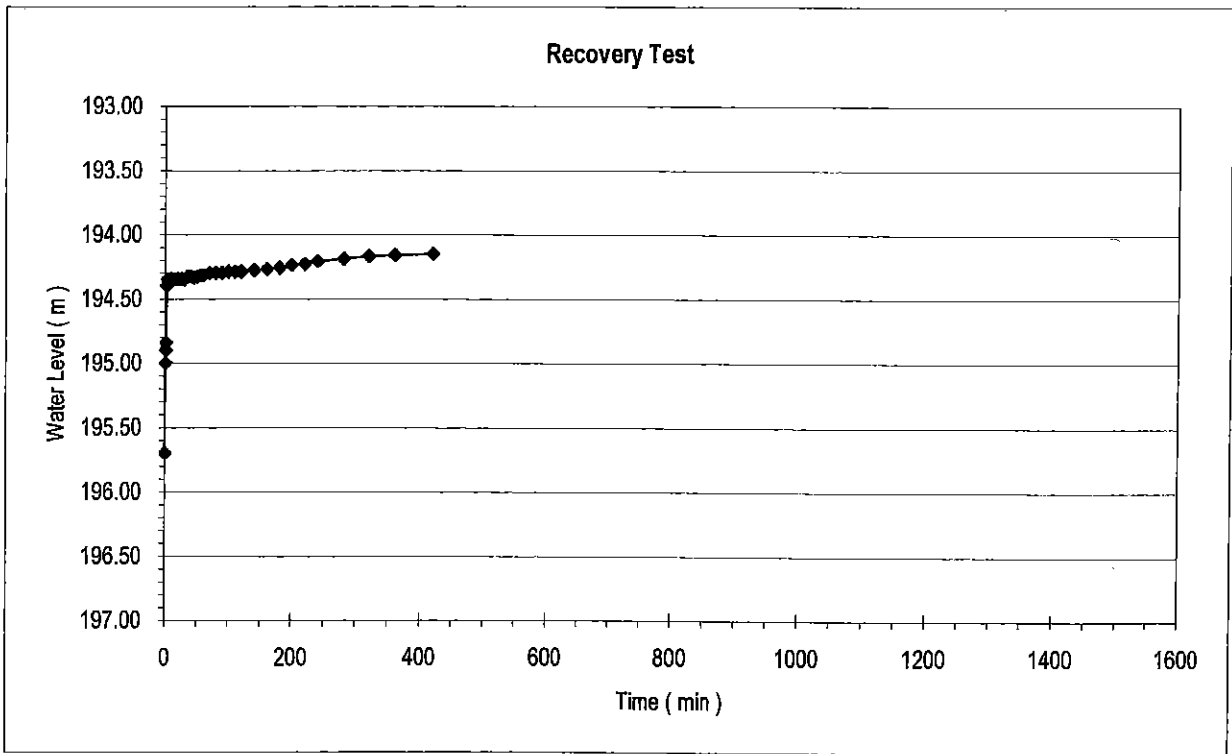
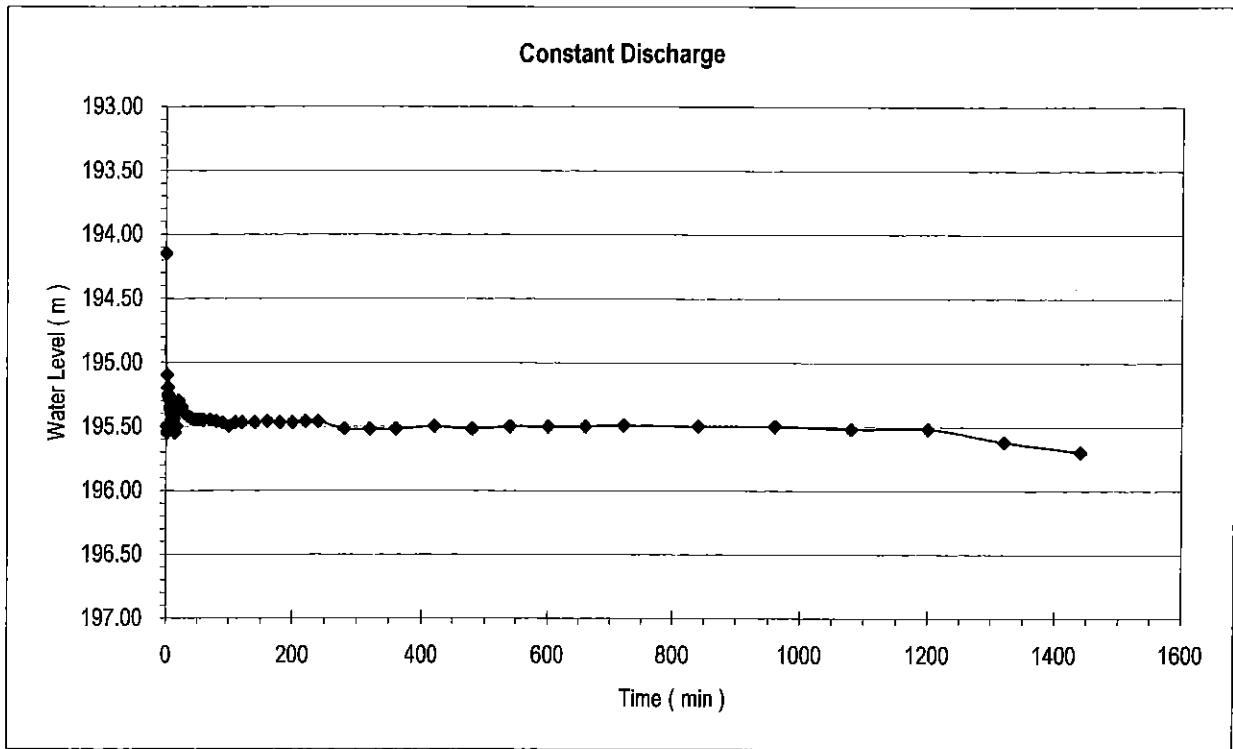
 Governorate: Dahmar

Duration (min)	Constant Discharge Test			Recovery Test		Water Analysis	Remarks
	Water level (m)	Drawdown (m)	Pumping rate (l/sec)	Water level (m)	Residual (m)	Conductivity ( $\mu$ S/cm)	
70.0	195.45	1.30		194.30	0.15		
80.0	195.46	1.31		194.30	0.15		
90.0	195.47	1.32		194.30	0.15		
100.0	195.50	1.35		194.29	0.14		
110.0	195.47	1.32		194.29	0.14		
120.0	195.47	1.32		194.29	0.14	1062	
140.0	195.47	1.32		194.28	0.13		
160.0	195.46	1.31		194.27	0.12		
180.0	195.47	1.32		194.26	0.11	1062	
200.0	195.47	1.32		194.24	0.09		
220.0	195.46	1.31		194.23	0.08		
240.0	195.46	1.31		194.21	0.06		
280.0	195.52	1.37		194.19	0.04		
320.0	195.52	1.37		194.17	0.02		
360.0	195.52	1.37		194.16	0.01	1062	
420.0	195.50	1.35		194.15	0.00		
480.0	195.52	1.37					
540.0	195.50	1.35					
600.0	195.50	1.35				1062	
660.0	195.50	1.35					
720.0	195.49	1.34					
840.0	195.50	1.35				1062	
960.0	195.50	1.35					
1080.0	195.52	1.37				1062	
1200.0	195.52	1.37					
1320.0	195.62	1.47				1062	
1440.0	195.70	1.55					

## Constant Discharge Test

Well Code: D-07  
 Site Code: D-07  
 S.W.L. (m): 194.15  
 Yield (L/sec): 4.5

Site Name Al Asakera  
 D.W.L. (m): 195.70      Drawdown (m): 1.55



## Pumping Test Report Sheet

Well code: D-08 Site code: D-08 Site name: Masneat Abdul Aziz  
District: Mayfa'a Governorate: Dahmar

Target water source: New projected deep well Well depth: 268 m

Contractor: Mabkhout Al-Abraki

Hydrogeologist in charge: Abudul Salam Sallam

Operator: Hosein Jameel

Date of start of the test: 20/7/2006 Date of end of the test: 23/7/2006

Pump type: Vertical pump Engine: Iveco aifo

Pump installation depth: 192 m Datum level: 0.82 m S.W.L.: G.L.-61.98 m

### Step drawdown test

Date/hour started: 20/7/2006 5:50pm Date/hour finished: 21/7/2006 12:50pm Total hours: 19:00

Yield (l/sec) 1<sup>st</sup> step 1.40 2<sup>nd</sup> step 2.80 3<sup>rd</sup> step 4.20 4<sup>th</sup> step 5.60 5<sup>th</sup> step 7.00

Water level before start the test (G.L.-m): 61.98

Water level after end of 5<sup>th</sup> step (G.L.-m): 126.95

Water level after recovery (G.L.-m): 61.98 Recovery hours 9:00

### Constant discharge test

Date/hour started: 21/7/2006 12:00am Date/hour finished: 23/7/2006 10:00am Total hours: 46:00

Yield (l/sec) 4.50

Water level before start of the test (G.L.-m): 61.98

Water level after end of test (G.L.-m): 123.68

Water level after recovery (G.L.-m): 61.98 Recovery hours 22:00

Drawdown (m): 61.70

Revised by: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_



## Provisional Step Drawdown Test

Well Code:   D-08                        Site code:   D-08    
 Site name:   Masneat Abdul Aziz    
 District:   Mayfa'a    
 Governorate   Dahmar  

Pump on date/hour:   20/7/2006 7:45am    
 Pump off date/hour:   20/7/2006 10:15am    
 End of recovery hour:   20/7/2006 5:45pm    
 S.W.L ( m ):   62.80  

Contractor:   Mabkhout Al-Abraki    
 Hydrogeologist:   Abudul Salam Sallam    
 Operator:   Hosein Jameel  

Duration ( min )	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery ( m )
	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	
0.0	62.80	1.40	68.13	2.80	72.27	4.20	81.44	5.60	92.01	7.00	103.88
0.5	64.96		68.18		72.69		81.58		92.46		99.98
1.0	65.10		68.22		73.02		81.79		93.10		98.22
1.5	65.03		68.33		73.34		81.96		93.48		97.46
2.0	65.01		68.35		73.65		82.16		93.94		96.87
2.5	65.04		68.41		74.03		82.47		94.32		96.27
3.0	65.08		68.48		74.22		82.77		94.73		95.73
3.5	65.21		68.64		74.47		83.11		95.06		94.91
4.0	65.28		68.72		74.70		83.44		95.27		94.59
4.5	65.39		68.80		74.91		83.72		95.39		94.10
5.0	65.50		68.89		75.12		84.00		95.52		93.66
6.0	65.73		69.08		75.61		84.46		95.68		92.78
7.0	65.87		69.36		76.26		84.96		95.78		91.88
8.0	66.02		69.54		76.53		85.32		95.92		91.08
9.0	66.23		69.71		76.85		85.74		96.67		90.25
10.0	66.34		69.86		77.18		86.19		97.17		89.64
12.0	66.66		70.22		77.81		87.02		98.18		88.17
14.0	66.83		70.44		78.27		87.76		98.97		87.06
16.0	67.12		70.61		79.12		88.44		99.73		85.92
18.0	67.23		70.72		79.24		89.10		100.45		84.81
20.0	67.46		70.84		79.69		89.65		101.09		83.89
22.0	67.67		70.95		80.13		90.21		101.69		82.70
24.0	67.71		71.11		80.51		90.66		102.30		82.10
26.0	67.84		71.66		80.82		91.14		102.84		81.44
28.0	67.99		71.97		81.17		91.51		103.39		80.63
30.0	68.13		72.27		81.44		92.01		103.88		80.08
60.0											78.78
90.0											77.42
120.0											76.14
150.0											74.91
180.0											73.62
210.0											72.37
240.0											71.15
270.0											69.92
300.0											68.75
330.0											67.51
360.0											66.33
390.0											65.19
420.0											64.09
450.0											62.80

## Step Drawdown Test (1/2)

Well Code: D-08 Site code: D-08  
 Site name: Masneat Abdul Aziz  
 District: Mayfa'a  
 Governorate Dahmar

Pump on date/hour: 20/7/2006 5:50pm  
 Pump off date/hour: 21/7/2006 3:50am  
 End of recovery hour: 21/7/2006 12:50pm  
 S.W.L ( m ): 62.80

Contractor: Mabkhout Al-Abraki  
 Hydrogeologist: Abudul Salam Sallam  
 Operator: Hosein Jameel

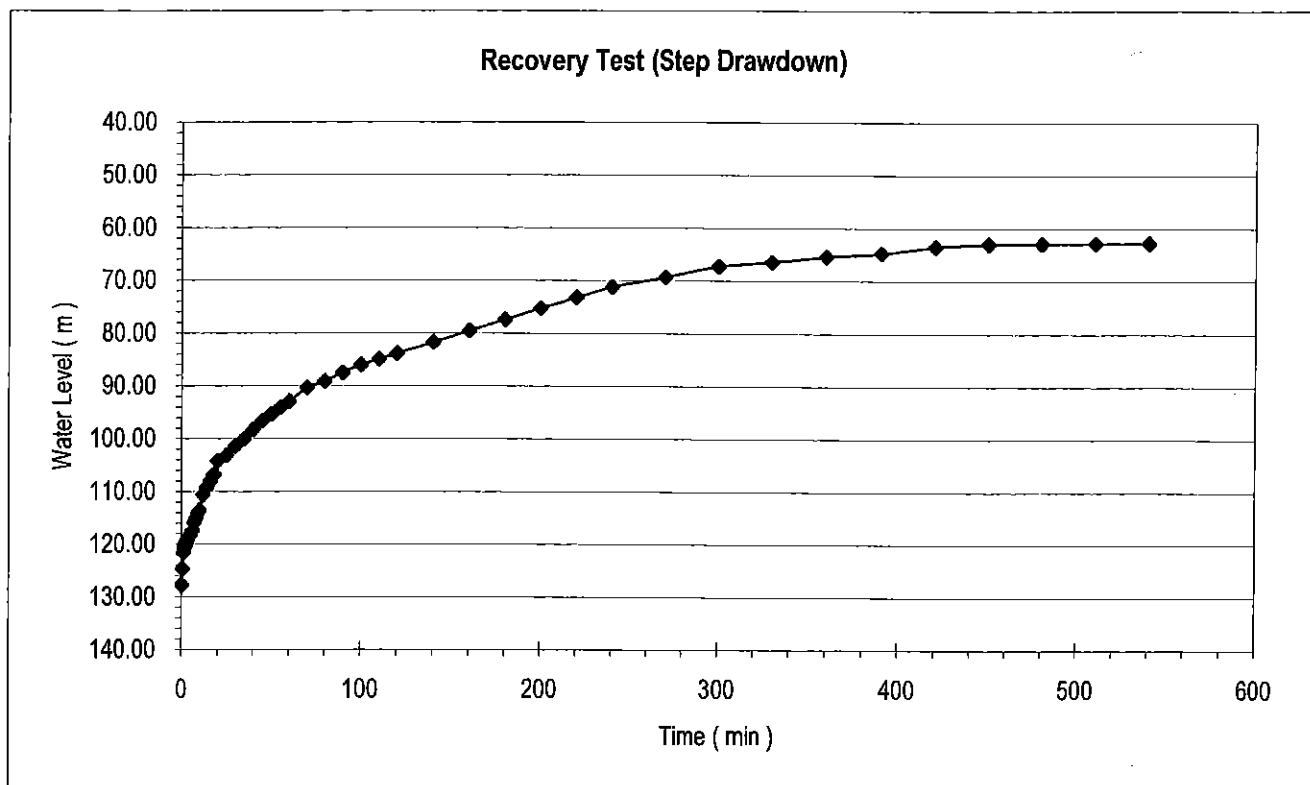
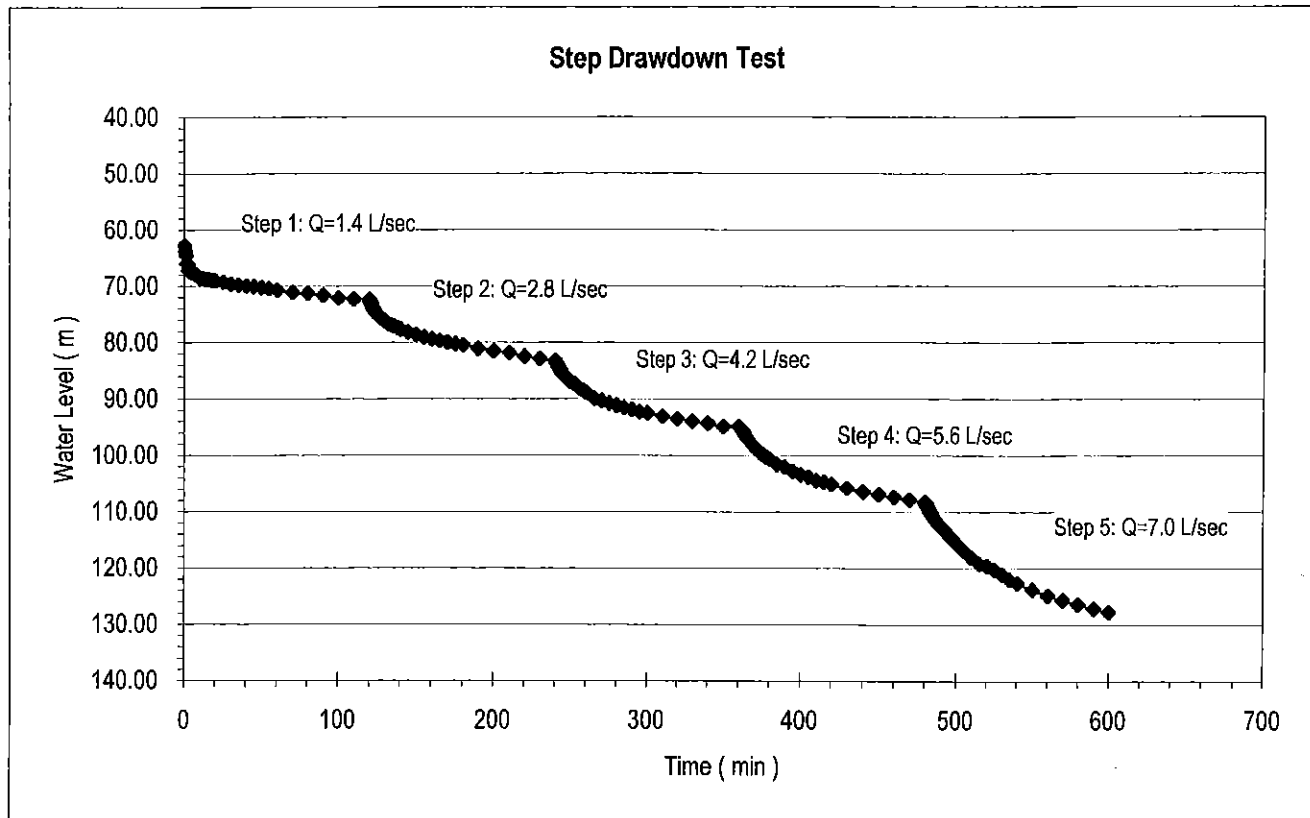
Duration ( min )	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery ( m )
	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	
0.0	62.80	1.40	72.38	2.80	83.28	4.20	94.87	5.60	108.27	7.00	127.77
0.5	63.80		72.91		83.60		95.02		108.46		124.70
1.0	64.53		73.12		83.80		95.14		108.75		121.65
1.5	65.98		73.59		84.05		95.27		109.02		120.73
2.0	66.10		73.82		84.35		95.45		109.36		120.37
2.5	67.23		74.11		84.60		95.61		109.57		119.71
3.0	67.31		74.34		84.80		95.77		109.84		119.26
3.5	67.39		74.62		85.13		96.07		110.09		118.89
4.0	67.47		74.79		85.30		96.34		110.37		118.70
4.5	67.59		74.98		85.49		96.56		110.68		118.41
5.0	67.63		75.16		85.67		96.79		110.87		118.20
6.0	67.74		75.47		85.95		97.23		111.25		117.50
7.0	67.87		75.68		86.28		97.53		111.65		115.91
8.0	68.12		75.87		86.54		97.89		112.00		115.13
9.0	68.29		76.09		86.80		98.22		112.36		114.27
10.0	68.66		76.23		87.00		98.46		112.68		113.62
12.0	68.69		76.73		87.35		98.97		113.07		110.70
14.0	68.73		76.92		87.80		99.54		113.80		109.27
16.0	68.84		77.17		88.22		99.88		114.37		108.04
18.0	68.95		77.46		88.53		100.26		114.90		106.77
20.0	69.06		77.67		88.92		100.67		115.59		104.23
25.0	69.28		78.23		89.96		101.64		116.90		103.19
30.0	69.67		78.70		90.33		102.11		118.12		101.48
35.0	69.76		79.13		90.79		102.86		119.14		100.02
40.0	69.95		79.44		91.21		103.39		119.57		98.35
45.0	70.12		79.72		91.61		103.89		120.28		96.73
50.0	70.30		80.02		91.93		104.44		121.16		95.39
55.0	70.47		80.28		92.31		104.72		121.97		94.11
60.0	70.74		80.50		92.52		105.12		122.62		92.98
70.0	71.13		81.16		93.10		105.80		123.83		90.45
80.0	71.29		81.57		93.55		106.40		124.85		89.13
90.0	71.63		81.88		93.99		106.87		125.69		87.56
100.0	72.14		82.48		94.30		107.37		126.43		86.07
110.0	72.31		82.90		94.92		107.85		127.15		85.03
120.0	72.38		83.28		94.87		108.27		127.77		83.94
140.0											81.78
160.0											79.60
180.0											77.45
200.0											75.33
220.0					14-180						73.25



## Step Drawdown Test

Well Code: D-08  
 Site Code: D-08  
 S.W.L. : 62.80 m

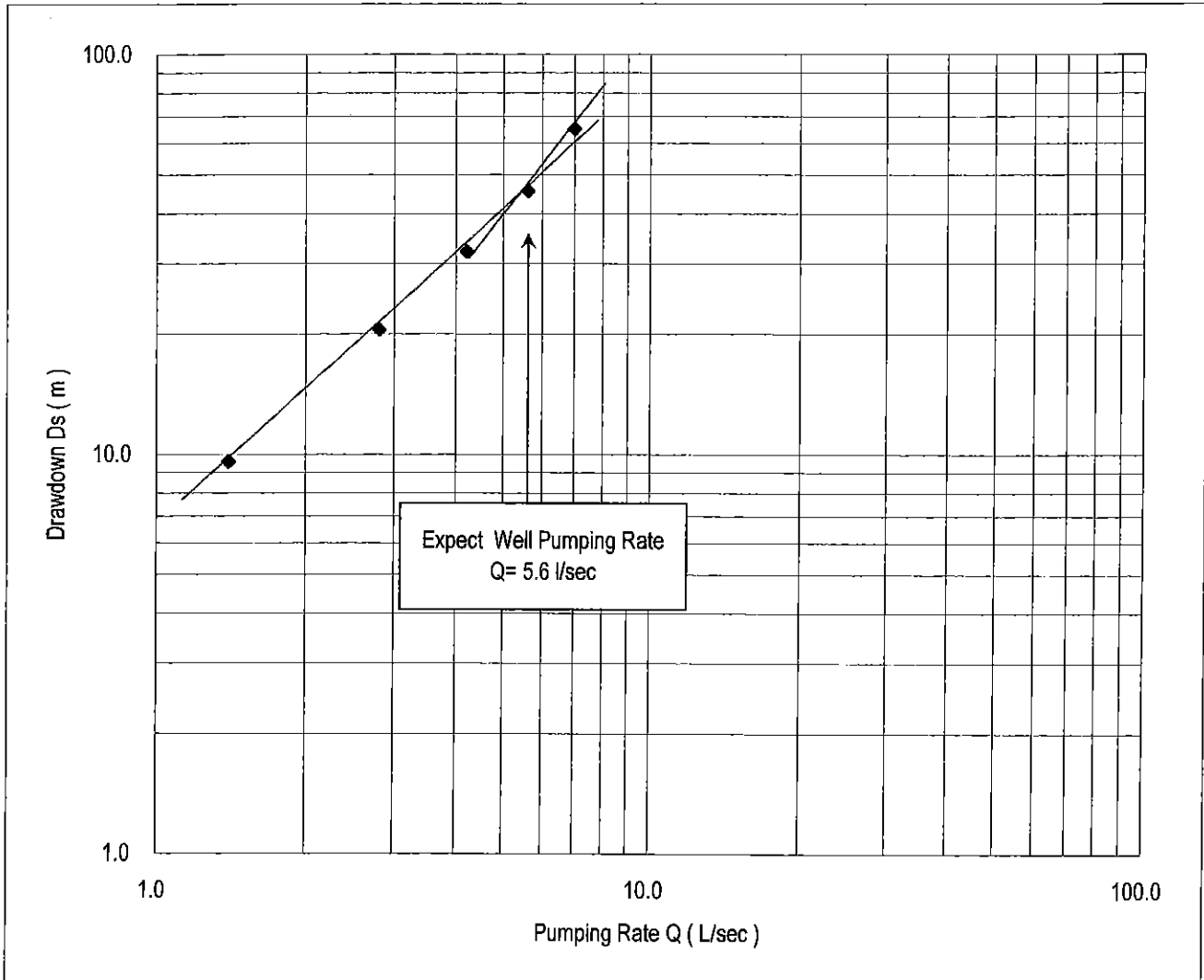
Site Name: Masneat Abdul Aziz



## Step Drawdown Test

Well Code: D-08  
 Site Code: D-08  
 S.W.L. : 62.80 m

Site Name: Masneat Abdul Aziz



Step	Q (l/sec)	D.W.L. (m)	$D_s$ (m)
1	1.4	72.38	9.58
2	2.8	83.28	20.48
3	4.2	94.87	32.07
4	5.6	108.27	45.47
5	7.0	127.77	64.97

## Constant Discharge & Recovery Test (1/2)

Well Code:   D-08                        Site code:   D-08  

Site name:   Masneat Abdul Aziz  

Pump on date/hour:   21/7/2006 12:00am  

District:   Mayfa'a  

Pump off date/hour:   22/7/2006 12:00am  

Governorate:   Dahmar  

End of recovery hour:   23/7/2006 10:00am  

Contractor:   Mabkhout Al-Abraki  

S.W.L ( m ):   62.80  

Hydrogeologist:   Abudul Salam Sallam  

D.W.L ( m ):   124.50  

Operator:   Hosein Jameel  

Yield (l/sec):   4.5  

Duration ( min )	Constant Discharge Test			Recovery Test		Water Analysis	Remarks
	Water level (m)	Drawdown (m)	Pumping rate (l/sec)	Water level (m)	Residual (m)	Conductivity ( $\mu$ S/cm)	
0.0	62.80	0.00		124.50	61.70		
0.5	72.70	9.90		121.10	58.30		
1.0	73.10	10.30		119.20	56.40		
1.5	73.45	10.65		119.35	56.55		
2.0	74.30	11.50		119.30	56.50		
2.5	74.65	11.85		119.10	56.30		
3.0	74.83	12.03		119.00	56.20		
3.5	75.18	12.38		118.87	56.07		
4.0	75.58	12.78		118.72	55.92		
4.5	75.90	13.10		118.55	55.75		
5.0	76.35	13.55		118.12	55.32		
6.0	76.85	14.05		117.78	54.98		
7.0	77.28	14.48		117.47	54.67		
8.0	77.85	15.05		117.09	54.29		
9.0	78.30	15.50		116.64	53.84		
10.0	78.80	16.00		115.16	52.36		
12.0	79.79	16.99		114.12	51.32		
14.0	80.65	17.85		113.30	50.50		
16.0	81.40	18.60		112.60	49.80		
18.0	81.98	19.18		111.74	48.94		
20.0	82.67	19.87		110.82	48.02		
25.0	84.98	22.18		108.93	46.13		
30.0	85.61	22.81		107.29	44.49		
35.0	87.52	24.72		105.74	42.94		
40.0	88.74	25.94		104.07	41.27		
45.0	90.03	27.23		103.13	40.33		
50.0	90.73	27.93		101.98	39.18		
55.0	91.43	28.63		100.98	38.18		
60.0	92.17	29.37		99.97	37.17	420	

## Constant Discharge & Recovery Test (2/2)

Well Code: D-08

Site code: D-08

Site name: Masneat Abdul Aziz

District: Mayfa'a

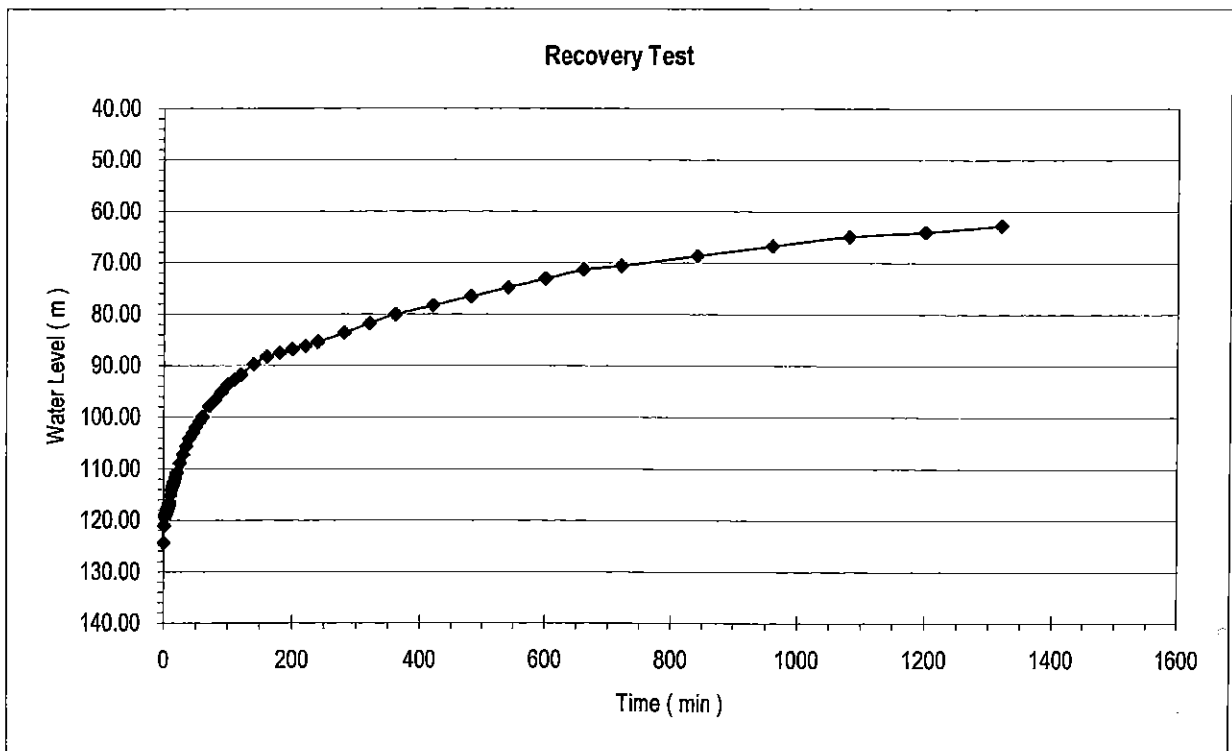
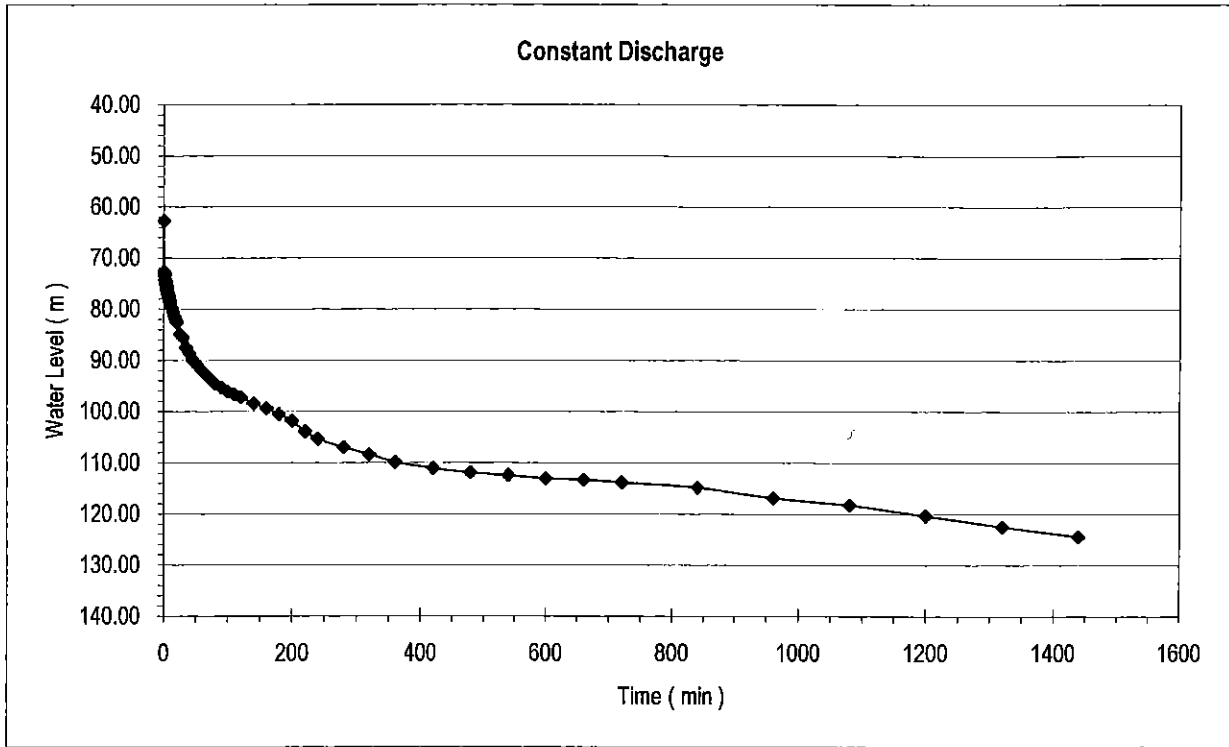
Governorate: Dahmar

Duration (min)	Constant Discharge Test			Recovery Test		Water Analysis	Remarks
	Water level (m)	Drawdown (m)	Pumping rate (l/sec)	Water level (m)	Residual (m)	Conductivity ( $\mu\text{S/cm}$ )	
70.0	93.41	30.61		98.00	35.20		
80.0	94.58	31.78		96.74	33.94		
90.0	95.34	32.54		95.23	32.43		
100.0	96.08	33.28		93.72	30.92		
110.0	96.72	33.92		92.79	29.99		
120.0	97.26	34.46		91.85	29.05	420	
140.0	98.49	35.69		89.80	27.00		
160.0	99.42	36.62		88.37	25.57		
180.0	100.63	37.83		87.65	24.85	420	
200.0	101.86	39.06		86.95	24.15		
220.0	103.91	41.11		86.23	23.43		
240.0	105.43	42.63		85.51	22.71	420	
280.0	107.08	44.28		83.71	20.91		
320.0	108.41	45.61		81.91	19.11		
360.0	109.97	47.17		80.16	17.36		
420.0	111.12	48.32		78.41	15.61		
480.0	112.04	49.24		76.66	13.86		
540.0	112.52	49.72		74.91	12.11		
600.0	113.12	50.32		73.16	10.36		
660.0	113.40	50.60		71.41	8.61	420	
720.0	113.87	51.07		70.67	7.87		
840.0	114.87	52.07		68.71	5.91	420	
960.0	116.96	54.16		66.81	4.01		
1080.0	118.32	55.52		64.92	2.12	420	
1200.0	120.42	57.62		64.07	1.27		
1320.0	122.50	59.70		62.80	0.00	420	
1440.0	124.50	61.70					

## Constant Discharge Test

Well Code: D-08  
Site Code: D-08  
S.W.L. (m): 62.80  
Yield (L/sec): 4.5

Site Name Masneat Abdul Aziz  
D.W.L (m): 124.50 Drawdown (m): 61.70





# Pumping Test Report Sheets

Governorate  
of  
Ibb



## Pumping Test Report Sheet

Well code: I-01 Site code: I-01 Site name: Asfal Bani Saba  
District: Al Qafr Governorate: Ibb

Target water source: New projected deep well Well depth: 305 m

Contractor: Mabkhout Al-Abraki  
Hydrogeologist in charge: Abudul Salam Sallam  
Operator: Kaid Al-Abraki

Date of start of the test: 11/7/2006 Date of end of the test: 14/7/2006  
Pump type: Vertical pump Engine: Iveco aifo  
Pump installation depth: 216 m Datum level: 1.00 m S.W.L.: G.L.-106.40 m

### Step drawdown test

Date/hour started: 12/7/2006 9:20am Date/hour finished: 12/7/2006 9:20pm Total hours: 12:00  
Yield (l/sec) 1<sup>st</sup> step 1.40 2<sup>nd</sup> step 2.80 3<sup>rd</sup> step 4.20 4<sup>th</sup> step 5.60 5<sup>th</sup> step 7.00  
Water level before start the test (G.L.-m): 106.40  
Water level after end of 5<sup>th</sup> step (G.L.-m): 118.60  
Water level after recovery (G.L.-m): 106.40 Recovery hours 2:00

### Constant discharge test

Date/hour started: 13/7/2006 12:08am Date/hour finished: 14/7/2006 1:38pm Total hours: 25:30  
Yield (l/sec) 4.50  
Water level before start of the test (G.L.-m): 106.40  
Water level after end of test (G.L.-m): 112.70  
Water level after recovery (G.L.-m): 106.40 Recovery hours 1:30  
Drawdown (m): 6.30

Revised by: \_\_\_\_\_  
Name : \_\_\_\_\_  
Date: \_\_\_\_\_

# Provisional Step Drawdown Test

Well Code: I-01                      Site code: I-01                      Pump on date/hour: 11/7/2006 11:00am  
 Site name: Asfal Bani Saba                      Pump off date/hour: 11/7/2006 1:30pm  
 District: Al Qafr                      End of recovery hour: 11/7/2006 2:00pm  
 Governorate Ibb                      S.W.L ( m ): 107.40

Contractor: Mabkhout Al-Abraki  
 Hydrogeologist: Abudul Salam Sallam  
 Operator: Kaid Al-Abraki

Duration ( min )	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery ( m )
	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	
0.0	107.40	1.40	108.55	2.80	110.15	4.20	113.06	5.40	115.60	7.00	119.50
0.5	111.55		108.65		110.63						111.95
1.0	110.60		109.35		110.85		113.30				109.72
1.5											108.55
2.0	109.90		109.63		111.10		113.70		117.30		
2.5	109.51		109.79		111.35				117.30		
3.0	109.55		109.95		111.55		113.90		117.85		107.70
3.5			110.25		111.60		113.95		117.25		
4.0	109.10		110.55		111.75		114.08		117.76		
4.5	109.05		110.45		111.95		114.27		119.90		107.65
5.0	109.05		110.39		112.51		114.50		119.96		
6.0	109.05		110.20		112.00		114.80		119.35		107.55
7.0	108.95		110.20		112.05		115.20		119.48		
8.0	108.88		110.20		112.15		115.29		119.48		107.45
9.0	108.86		110.20				115.45		119.49		107.44
10.0	108.85		110.20		112.10		115.50		119.48		107.44
12.0	108.65		110.20		112.10		115.54		119.45		107.44
14.0	108.42		110.10		112.20		115.55		119.47		
16.0	108.35		110.15		112.25		115.55		119.49		107.43
18.0	108.55		110.15		112.40		115.55		119.50		
20.0	108.55		110.15		112.75		115.54		119.49		
22.0	108.55		110.15		112.85		115.56		119.50		107.42
24.0	108.55		110.15		112.93		115.56		119.49		107.42
26.0	108.55		110.15		112.93		115.58		119.50		107.42
28.0	108.55		110.15		112.93		115.60		119.50		107.41
30.0	108.55		110.15		113.06		115.60		119.50		107.40

## Step Drawdown Test

Well Code: I-01                      Site code: I-01                      Pump on date/hour: 12/7/2006 9:20am  
 Site name: Asfal Bani Saba                      Pump off date/hour: 12/7/2006 7:20pm  
 District: Al Qafir                      End of recovery hour: 12/7/2006 9:20pm  
 Governorate Ibb                      S.W.L ( m ): 107.40

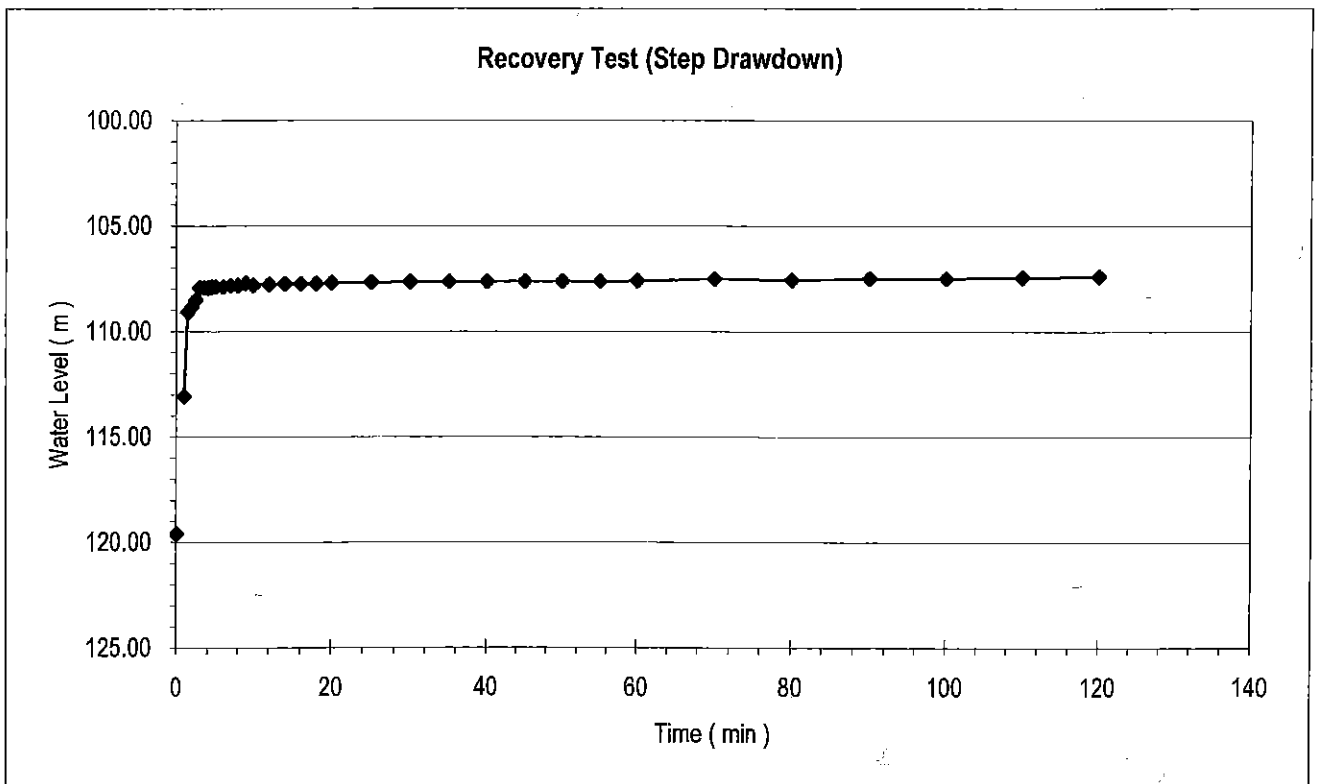
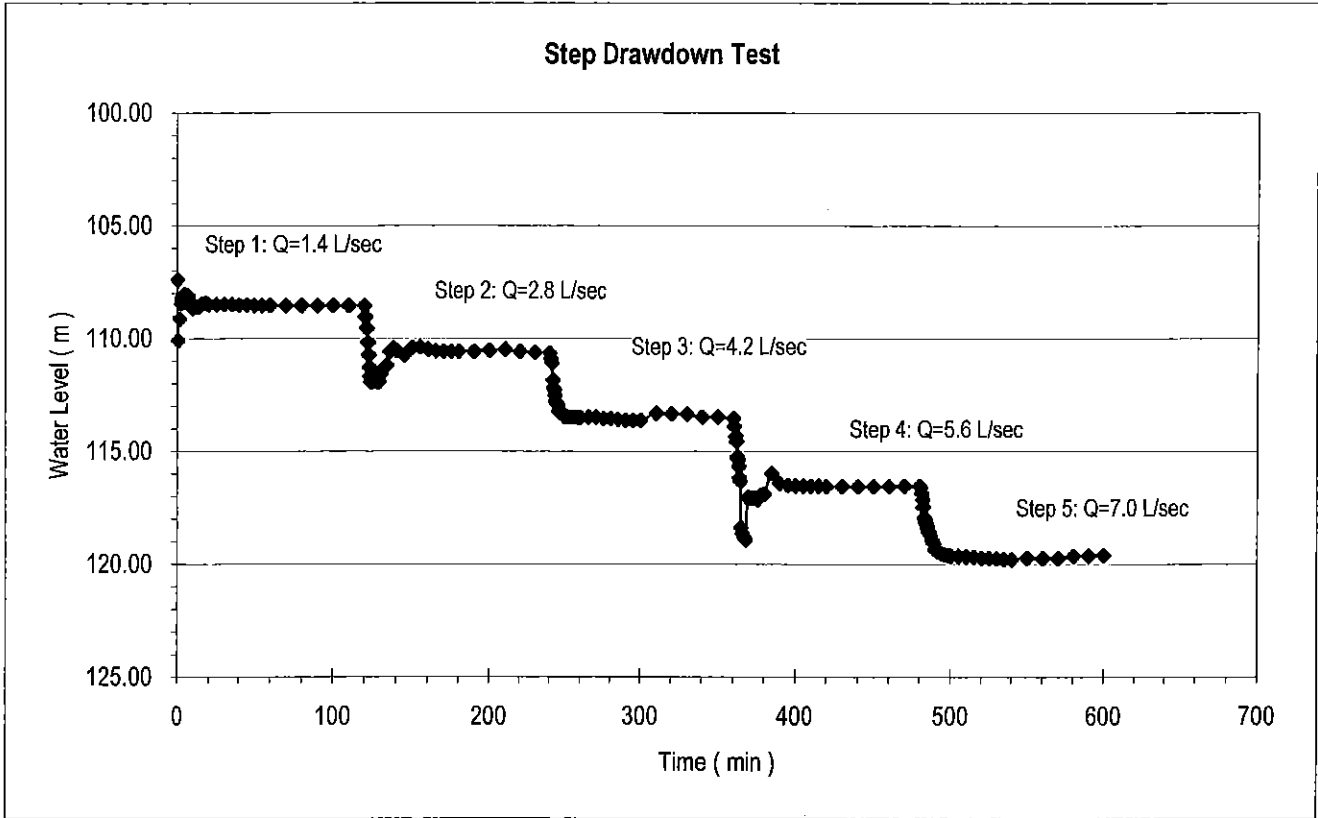
Contractor: Mabkhout Al-Abraki  
 Hydrogeologist: Abudul Salam Sallam  
 Operator: Kaid Al-Abraki

Duration ( min )	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery ( m )
	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	
0.0	107.40	1.40	108.55	2.80	110.66	4.20	113.55	5.60	116.55	7.00	119.60
0.5	110.10		109.05		110.90		113.90		116.60		
1.0											113.10
1.5	109.15		109.56		111.10		114.35		116.88		109.10
2.0			110.20		111.86		114.57		117.15		108.85
2.5	108.45		110.75		112.20		115.25		117.47		108.52
3.0	108.20		111.30		112.30		115.38		117.94		107.95
3.5	108.30		111.70		112.53		115.68		118.00		107.95
4.0	108.10		111.95		112.80		116.18		118.13		107.95
4.5	108.20		111.95		112.87		116.34		118.24		107.90
5.0	108.05		111.90		112.94		118.39		118.38		107.90
6.0	108.19		111.90		113.24		118.65		118.58		107.90
7.0	108.10		111.91		113.25		118.81		118.74		107.85
8.0	108.35		111.95		113.30		118.94		118.93		107.85
9.0	108.60		111.95		113.40		117.08		119.07		107.74
10.0	108.66		111.60		113.50		117.08		119.35		107.84
12.0	108.60		111.35		113.50		117.09		119.45		107.79
14.0	108.60		111.20		113.50		117.08		119.51		107.77
16.0	108.48		110.60		113.50		117.15		119.58		107.77
18.0	108.45		110.45		113.50		116.95		119.61		107.75
20.0	108.50		110.55		113.50		116.90		119.63		107.73
25.0	108.49		110.75		113.50		116.00		119.65		107.69
30.0	108.50		110.42		113.50		116.44		119.67		107.68
35.0	108.50		110.40		113.55		116.50		119.69		107.67
40.0	108.52		110.50		113.55		116.54		119.73		107.66
45.0	108.52		110.57		113.60		116.55		119.75		107.65
50.0	108.53		110.58		113.63		116.55		119.76		107.65
55.0	108.53		110.60		113.63		116.55		119.79		107.65
60.0	108.54		110.60		113.63		116.56		119.80		107.62
70.0	108.55		110.60		113.32		116.56		119.73		107.53
80.0	108.55		110.55		113.35		116.56		119.74		107.57
90.0	108.55		110.50		113.37		116.56		119.75		107.50
100.0	108.55		110.60		113.50		116.56		119.65		107.50
110.0	108.55		110.64		113.50		116.55		119.63		107.45
120.0	108.55		110.66		113.55		116.55		119.60		107.40

# Step Drawdown Test

Well Code: I-01  
Site Code: I-01  
S.W.L. : 107.40 m

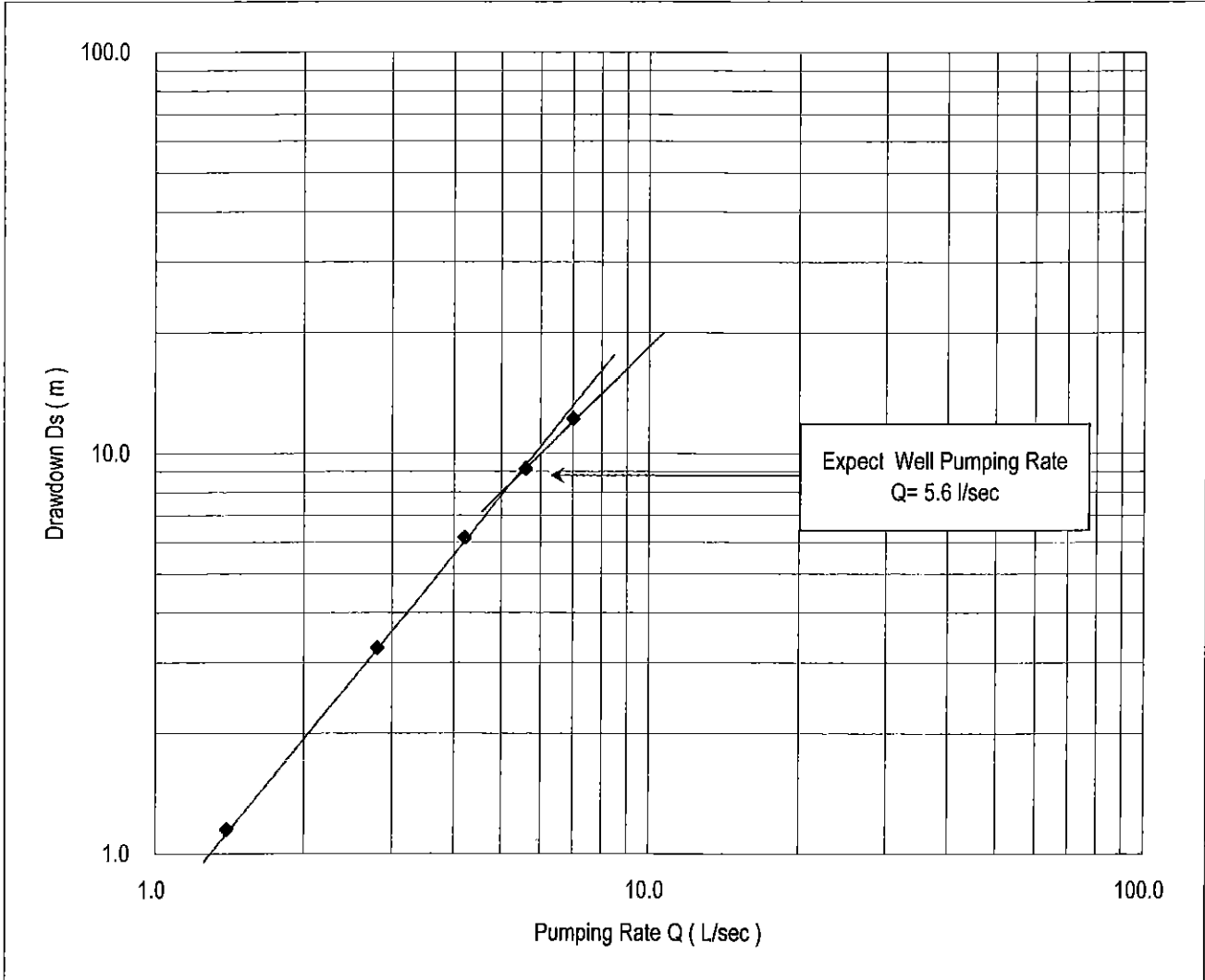
Site Name: Asfal Bani Saba



## Step Drawdown Test

Well Code:   I-01    
 Site Code:   I-01    
 S.W.L. :   107.40 m  

Site Name:   Asfal Bani Saba  



Step	Q (l/sec)	D.W.L. (m)	Ds (m)
1	1.4	108.55	1.15
2	2.8	110.66	3.26
3	4.2	113.55	6.15
4	5.6	116.55	9.15
5	7.0	119.60	12.20

## Constant Discharge & Recovery Test (1/2)

Well Code: I-01 Site code: I-01

Site name: Asfal Bani Saba

District: Al Qafr

Governorate: lbb

Pump on date/hour: 13/7/2006 12:08am

Pump off date/hour: 14/7/2006 12:08am

End of recovery hour: 14/7/2006 1:38pm

Contractor: Mabkhout Al-Abraki

S.W.L ( m ): 107.40

Hydrogeologist: Abudul Salam Sallam

D.W.L ( m ): 113.70

Operator: Kaid Al-Abraki

Yield (l/sec): 4.5

Duration ( min )	Constant Discharge Test			Recovery Test		Water Analysis	Remarks
	Water level (m)	Drawdown (m)	Pumping rate (l/sec)	Water level (m)	Residual (m)	Conductivity ( )	
0.0	107.40	0.00		113.70	6.30		
0.5	112.50	5.10		110.50	3.10		
1.0	112.62	5.22		108.07	0.67		
1.5	112.60	5.20		108.53	1.13		
2.0	112.55	5.15		108.92	1.52		
2.5	112.56	5.16		107.89	0.49		
3.0	112.56	5.16		107.84	0.44		
3.5	112.58	5.18		107.80	0.40		
4.0	112.68	5.28		107.77	0.37		
4.5	112.64	5.24		107.76	0.36		
5.0	112.67	5.27		107.70	0.30		
6.0	112.72	5.32		107.56	0.16		
7.0	112.75	5.35		107.55	0.15		
8.0	112.84	5.44		107.55	0.15		
9.0	112.85	5.45		107.54	0.14		
10.0	112.93	5.53		107.53	0.13		
12.0	112.93	5.53		107.52	0.12		
14.0	112.98	5.58		107.50	0.10		
16.0	112.99	5.59		107.50	0.10		
18.0	113.14	5.74		107.47	0.07		
20.0	113.17	5.77		107.47	0.07		
25.0	113.25	5.85		107.47	0.07		
30.0	113.26	5.86		107.46	0.06		
35.0	113.28	5.88		107.46	0.06		
40.0	113.29	5.89		107.45	0.05		
45.0	113.33	5.93		107.45	0.05		
50.0	113.45	6.05		107.44	0.04		
55.0	113.40	6.00		107.43	0.03		
60.0	113.38	5.98		107.42	0.02		

## Constant Discharge & Recovery Test (2/2)

Well Code: I-01      Site code: I-01      Site name: Asfal Bani Saba  
 District: Al Qafr      Governorate: Ibb

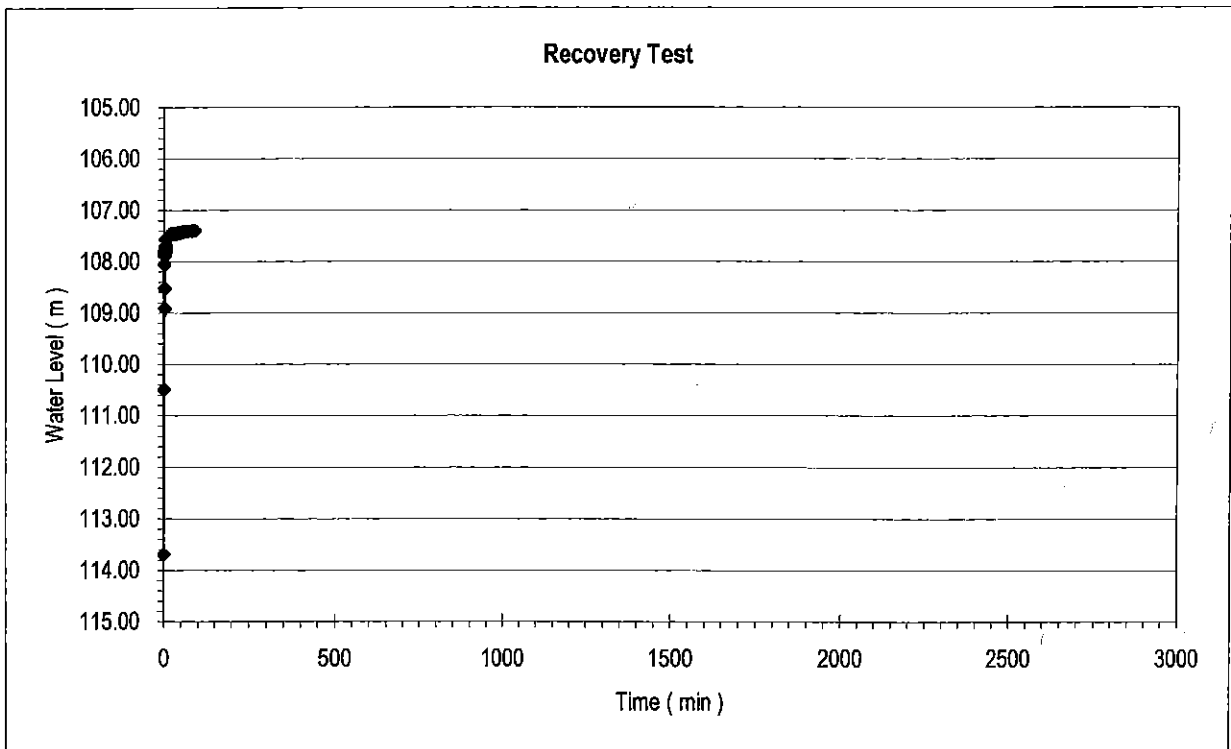
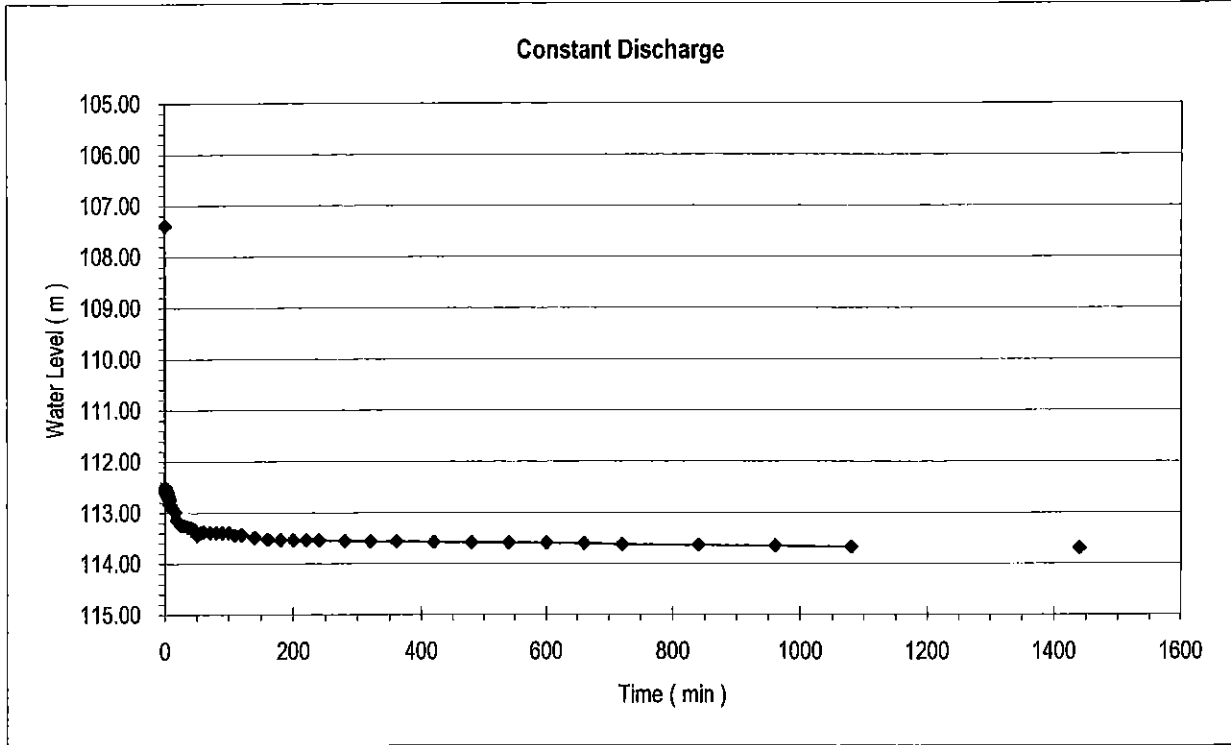
Duration ( min )	Constant Discharge Test			Recovery Test		Water Analysis	Remarks
	Water level (m)	Drawdown (m)	Pumping rate (l/sec)	Water level (m)	Residual (m)	Conductivity ( )	
70.0	113.40	6.00		107.41	0.01		
80.0	113.40	6.00		107.41	0.01		
90.0	113.40	6.00		107.40	0.00		
100.0	113.40	6.00					
110.0	113.45	6.05					
120.0	113.44	6.04					
140.0	113.49	6.09					
160.0	113.53	6.13					
180.0	113.54	6.14					
200.0	113.54	6.14					
220.0	113.55	6.15					
240.0	113.55	6.15					
280.0	113.56	6.16					
320.0	113.57	6.17					
360.0	113.57	6.17					
420.0	113.58	6.18					
480.0	113.59	6.19					
540.0	113.60	6.20					
600.0	113.60	6.20					
660.0	113.61	6.21					
720.0	113.63	6.23					
840.0	113.65	6.25					
960.0	113.66	6.26					
1080.0	113.68	6.28					
1200.0							
1320.0							
1440.0	113.70	6.30					
1560.0	113.70	6.30					
1680.0	113.70	6.30					
1800.0	113.70	6.30					
1920.0							
2040.0							
2160.0							
2280.0							
2400.0							



# Constant Discharge Test

Well Code: I-01  
Site Code: I-01  
S.W.L. (m): 107.40  
Yield (L/sec): 4.5

Site Name Asfal Bani Saba  
D.W.L (m): 113.70 Drawdown (m): 6.30



## Pumping Test Report Sheet

Well code: I-02 Site code: I-02 Site name: Al Sana  
District: Al Makhader Governorate: Ibb

Target water source: New projected deep well Well depth: 272 m

Contractor: Mabkhout Al-Abraki  
Hydrogeologist in charge: Abdul Salam Sallam  
Operator: Al Raboi

Date of start of the test: 11/7/2006 Date of end of the test: 16/7/2006  
Pump type: Vertical pump Engine: Iveco aifo  
Pump installation depth: 210 m Datum level: 0.52 m S.W.L.: G.L.-35.58 m

### Step drawdown test

Date/hour started: 13/7/2006 5:10pm Date/hour finished: 14/7/2006 5:10pm Total hours: 24:00  
Yield (l/sec) 1<sup>st</sup> step 1.20 2<sup>nd</sup> step 2.40 3<sup>rd</sup> step 3.60 4<sup>th</sup> step 4.80 5<sup>th</sup> step 6.00  
Water level before start the test (G.L.-m): 35.58  
Water level after end of 5<sup>th</sup> step (G.L.-m): 167.18  
Water level after recovery (G.L.-m): 35.58 Recovery hours 14:00

### Constant discharge test

Date/hour started: 14/7/2006 6:00pm Date/hour finished: 16/7/2006 9:00pm Total hours: 51:00  
Yield (l/sec) 3.90  
Water level before start of the test (G.L.-m): 35.58  
Water level after end of test (G.L.-m): 140.48  
Water level after recovery (G.L.-m): 35.58 Recovery hours 27:00  
Drawdown (m): 104.90

Revised by:

Name :

Date:

## Provisional Step Drawdown Test (1/2)

 Well Code: I-02

 Site code: I-02

 Pump on date/hour: 11/7/2006 7:15am

 Site name: Al Sana

 Pump off date/hour: 11/7/2006 9:45am

 District: Al Makhader

 End of recovery hour: 12/7/2006 9:45am

 Governorate Ibb

 S.W.L ( m ): 36.10

 Contractor: Mabkhout Al-Abraki

 Hydrogeologist: Abudul Salam Sallam

 Operator: Al Raboi

 Pump set depth: 193m

Duration ( min )	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery ( m )
	W.L. ( m )	Yield ( l/sec)	W.L. ( m )	Yield ( l/sec)	W.L. ( m )	Yield ( l/sec)	W.L. ( m )	Yield ( l/sec)	W.L. ( m )	Yield ( l/sec)	
0.0	36.10	1.40	45.79	2.80	63.50	4.20	93.80	5.40	138.25	7.00	191.83
0.5	40.70		45.90		63.80		94.55		139.55		181.50
1.0	41.35		46.00		64.50		95.78		140.60		176.20
1.5	42.46		46.60		65.05		96.90		141.40		172.98
2.0	42.50		47.18		65.72		97.93		142.45		170.90
2.5	42.59		48.03		66.35		99.05		143.33		168.35
3.0	42.71		48.40		67.06		99.83		144.45		166.30
3.5	42.85		48.85		67.60		101.07		145.45		164.90
4.0	42.94		49.19		68.30		101.89		147.10		162.44
4.5	43.05		49.60		68.98		102.79		148.35		160.90
5.0	43.07		50.07		69.72		103.64		149.80		158.17
6.0	43.40		50.50		70.92		105.30		151.92		159.36
7.0	43.62		50.80		71.92		106.90		154.10		150.38
8.0	43.76		51.50		73.20		108.40		156.33		146.50
9.0	43.88		52.50		74.41		110.60		158.40		143.06
10.0	43.98		53.30		75.55		112.90		160.45		139.90
12.0	44.23		54.70		77.30		116.85		164.20		132.55
14.0	44.50		55.85		78.72		120.45		167.50		125.35
16.0	44.68		56.79		79.90		123.70		170.47		118.95
18.0	44.90		57.72		81.38		126.65		173.43		112.45
20.0	45.08		58.55		83.38		129.25		178.00		105.80
22.0	45.24		59.08		85.00		131.65		183.07		100.60
24.0	45.40		60.37		87.92		133.70		187.65		99.60
26.0	45.55		61.57		88.83		135.60		191.93		89.59
28.0	45.66		62.69		91.42		137.35		191.83		84.50
30.0	45.79		63.50		93.80		138.25		191.83		80.20
35.0											70.25
40.0											62.40
45.0											56.20
50.0											51.20
60.0											45.85
70.0											43.02
80.0											41.80
1440.0											36.10

## Provisional Step Drawdown Test (2/2)

Well Code: I-02

Site code: I-02

Pump on date/hour: 12/7/2006 9:45am

Site name: Al Sana

Pump off date/hour: 12/7/2006 12:15pm

District: Al Makhader

End of recovery hour: 13/7/2006 4:15pm

Governorate lbb

S.W.L ( m ): 36.10

Contractor: Mabkhout Al-Abraki

Hydrogeologist: Abudul Salam Sallam

Operator: Al Raboi

Pump set depth: 210m

Duration ( min )	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery ( m )
	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	
0.0	36.10	1.20	45.22	2.40	57.90	3.60	76.20	4.80	114.45	6.00	167.70
0.5	40.95		45.50		58.25		76.90		115.70		112.15
1.0	41.28		45.68		58.95		77.35		116.94		155.40
1.5	41.75		45.85		59.95		78.40		118.00		150.40
2.0	42.11		46.30		60.90		79.00		118.79		
2.5	42.25		46.75		61.32		79.80		119.75		146.90
3.0	42.40		47.23		62.19		80.65		121.00		
3.5	42.50		47.52		62.85		81.50		122.10		141.95
4.0	42.55		47.80		63.45		82.25		123.05		138.50
4.5	42.68		48.05		64.55		83.15		124.15		134.35
5.0	42.80		48.43		65.68		83.90		125.19		131.35
6.0	42.98		48.80		66.28		85.25		127.08		127.18
7.0	43.20		49.15		66.70		86.78		129.65		123.58
8.0	43.20		49.55		67.55		88.15		130.90		120.35
9.0	43.23		49.90		68.45		89.44		132.52		117.05
10.0	43.25		50.25		69.30		90.60		133.95		113.47
12.0	43.57		51.85		70.65		92.86		138.10		107.00
14.0	43.90		52.83		71.70		95.45		142.47		100.80
16.0	44.16		53.60		72.60		99.40		146.80		94.93
18.0	44.45		54.15		73.43		102.15		150.85		89.72
20.0	44.63		54.85		74.05		104.74		154.25		84.40
22.0	44.80		55.86		74.50		107.05		157.40		79.88
24.0	44.93		56.20		75.10		109.20		160.65		76.25
26.0	45.05		56.65		75.50		111.30		162.60		72.09
28.0	45.11		57.05		75.90		113.05		165.20		68.87
30.0	45.22		57.90		76.20		114.45		167.70		66.00
35.0											58.77
1740.0											36.10

## Step Drawdown Test (1/2)

Well Code: I-02                      Site code: I-02                      Pump on date/hour: 13/7/2006 5:10pm  
 Site name: Al Sana                      Pump off date/hour: 14/7/2006 3:10am  
 District: Al Makhader                      End of recovery hour: 14/7/2006 5:10pm  
 Governorate Ibb                      S.W.L ( m ): 36.10

Contractor: Mabkhout Al-Abraki  
 Hydrogeologist: Abudul Salam Sallam  
 Operator: Al Raboi

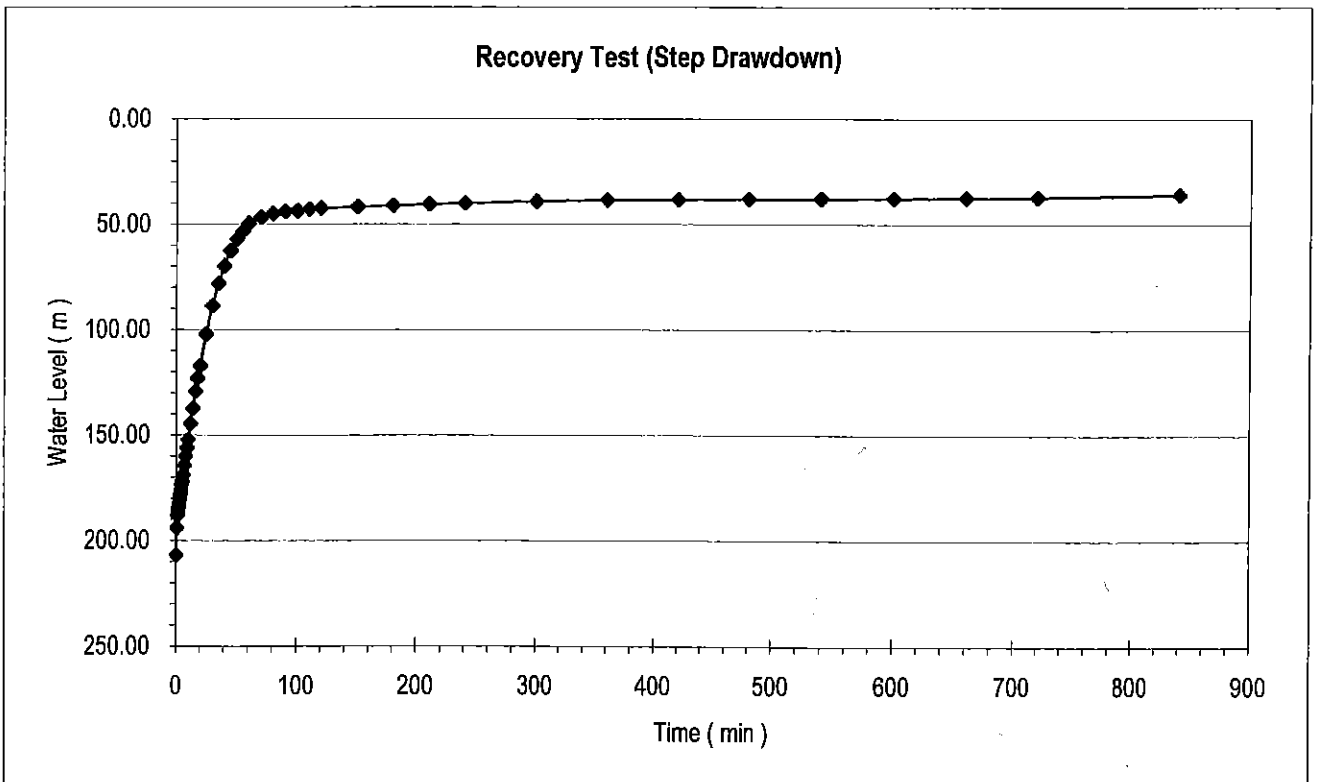
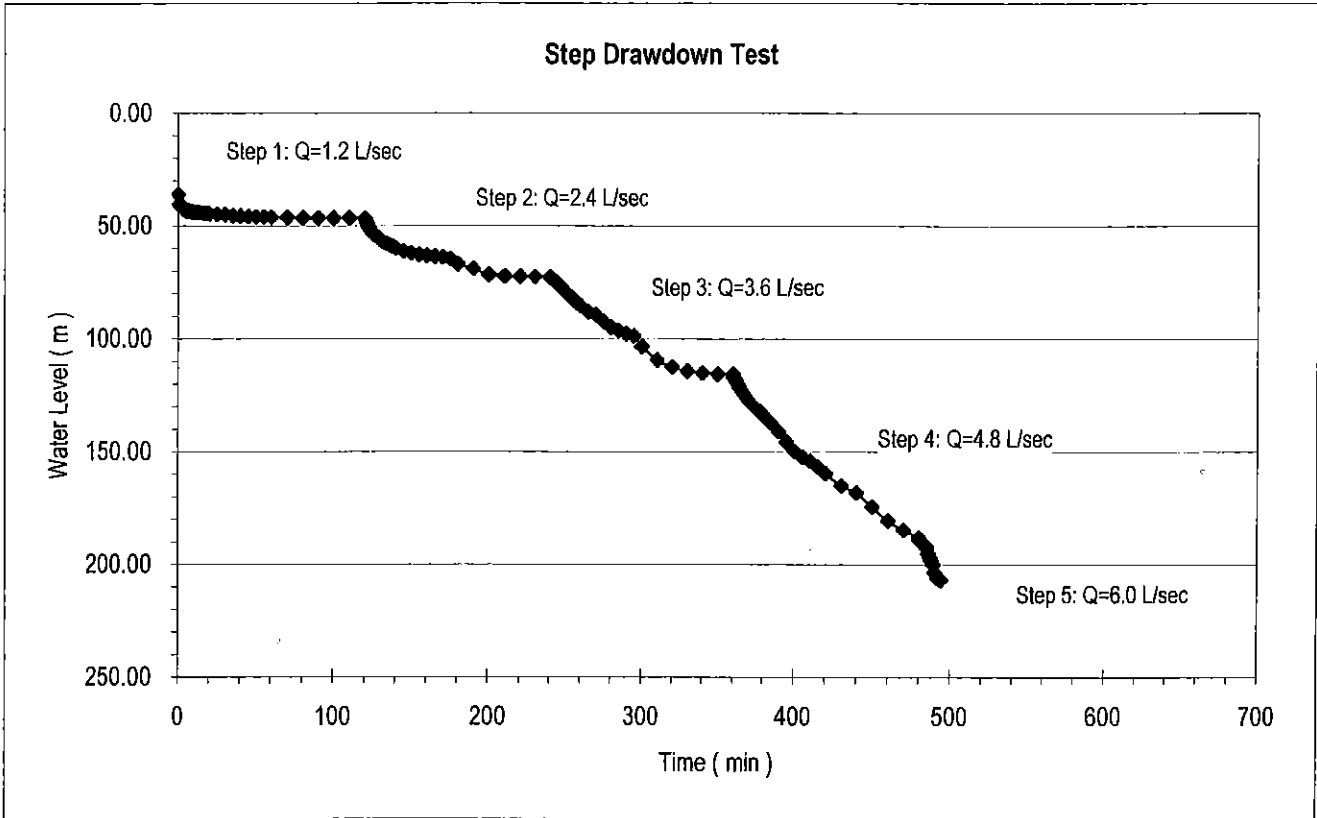
Duration ( min )	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery ( m )
	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	
0.0	36.10	1.20	46.61	2.40	72.80	3.60	115.65	4.80	188.00	6.00	207.00
0.5	40.45		47.88		73.12		117.20		188.95		194.00
1.0	40.49		48.65		73.35		117.58		189.50		188.10
1.5	41.32		49.50		73.70		117.98		189.93		186.48
2.0	41.80		50.30		73.99		118.63		190.33		184.45
2.5	42.10		51.00		74.38		119.40		190.67		182.32
3.0	42.40		51.67		74.63		119.92		190.98		180.40
3.5	42.55		52.30		74.98		120.70		191.30		177.88
4.0	42.85		52.85		75.30		121.31		191.70		176.00
4.5	43.00		53.13		75.60		122.00		192.10		173.40
5.0	43.27		53.45		75.88		122.50		192.70		171.90
6.0	43.30		54.05		76.50		123.53		195.25		168.80
7.0	43.32		54.61		77.20		124.40		196.88		164.35
8.0	43.40		55.11		78.03		125.45		198.25		160.18
9.0	43.73		55.59		78.80		126.30		200.06		156.00
10.0	43.83		56.19		79.56		127.15		203.55		152.23
12.0	44.00		57.22		80.80		128.70		206.10		144.65
14.0	44.15		58.00		81.85		129.95		207.00		137.48
16.0	44.30		58.58		83.23		131.18				129.30
18.0	44.45		59.15		84.40		132.13				123.10
20.0	44.60		59.89		85.47		133.70				117.30
25.0	44.87		61.35		88.02		137.28				102.26
30.0	45.06		62.25		89.40		141.18				88.88
35.0	45.40		62.98		92.40		145.70				78.30
40.0	45.64		63.30		94.90		149.75				70.00
45.0	45.85		63.67		96.30		152.28				62.83
50.0	46.00		63.92		97.75		154.05				57.30
55.0	46.09		64.79		98.70		156.58				53.35
60.0	46.19		66.98		103.46		159.60				49.74
70.0	46.34		69.00		109.32		165.05				47.05
80.0	46.43		71.71		112.50		168.25				45.15
90.0	46.53		72.27		114.20		174.40				44.10
100.0	46.54		72.46		115.01		180.60				43.95
110.0	46.60		72.62		115.65		184.68				43.05
120.0	46.61		72.80		115.65		188.00				42.55
150.0											41.90
180.0											41.30
210.0											40.75
240.0											40.25
300.0											39.40



# Step Drawdown Test

Well Code: I-02  
Site Code: I-02  
S.W.L. : 36.10 m

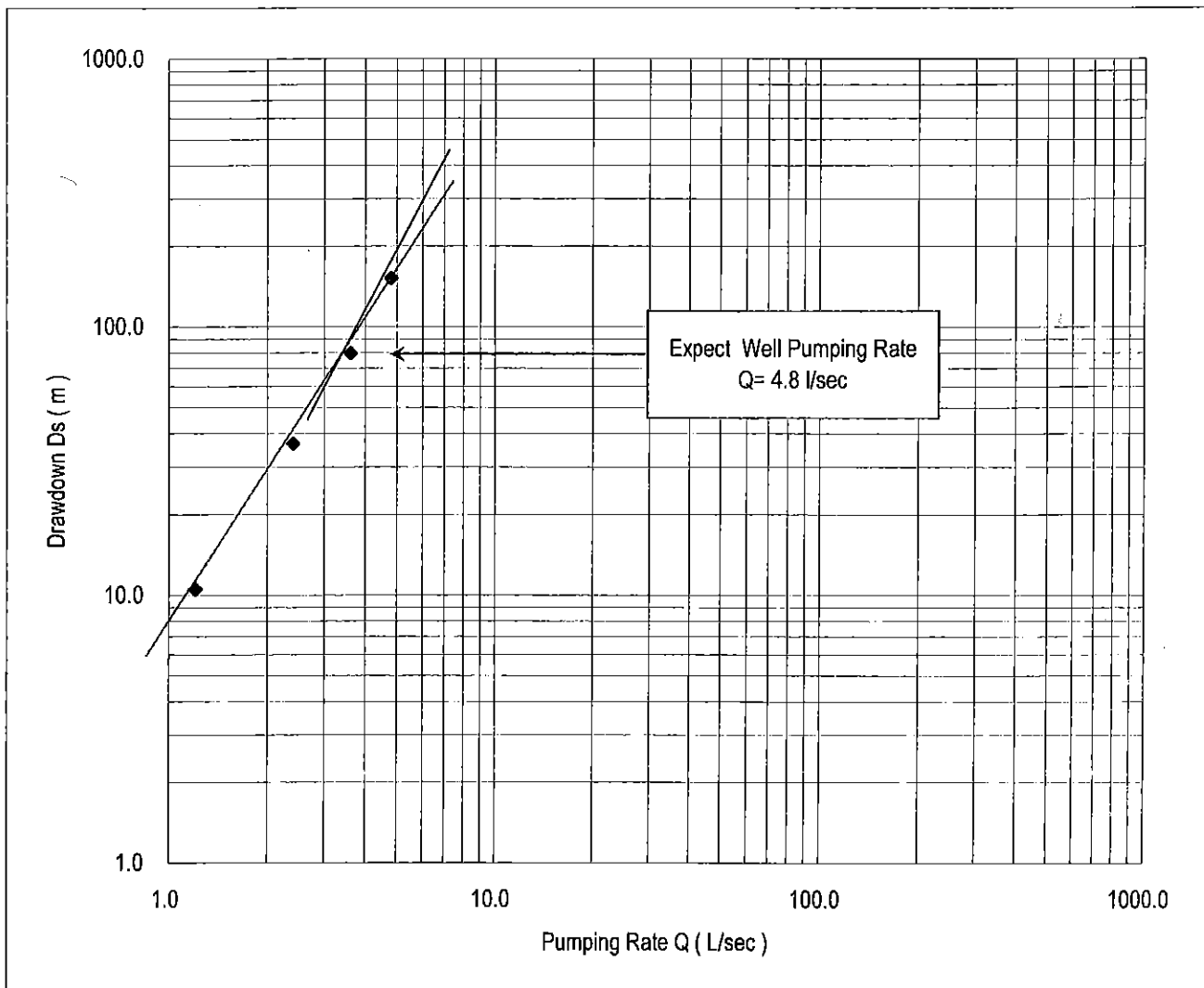
Site Name: Al Sana



## Step Drawdown Test

Well Code:   I-02    
 Site Code:   I-02    
 S.W.L. :   36.10 m  

Site Name:   Al Sana  



Step	Q (l/sec)	D.W.L.(m)	Ds (m)
1	1.2	46.61	10.51
2	2.4	72.80	36.70
3	3.6	115.65	79.55
4	4.8	188.00	151.90
5	6.0		



## Constant Discharge & Recovery Test (1/2)

Well Code: I-02                      Site code: I-02

Site name: Al Sana

Pump on date/hour: 14/7/2006 6:00pm

District: Al Makhader

Pump off date/hour: 14/7/2006 12:08am

Governorate: lbb

End of recovery hour: 16/7/2006 9:00pm

Contractor: Mabkhout Al-Abraki

S.W.L ( m ): 36.10

Hydrogeologist: Abudul Salam Sallam

D.W.L ( m ): 141.00

Operator: Al Raboi

Yield (l/sec): 3.9

Duration ( min )	Constant Dischrge Test			Recovery Test		Water Analysis	Remarks
	Water level (m)	Drawdown (m)	Pumping rate (l/sec)	Water level (m)	Residual (m)	Conductivity (µS/cm)	
0.0	36.10	0.00		141.00	104.90		
0.5	42.34	6.24		132.10	96.00		
1.0	44.00	7.90		126.93	90.83		
1.5	45.61	9.51		124.64	88.54		
2.0	46.84	10.74		123.20	87.10		
2.5	47.95	11.85		121.70	85.60		
3.0	48.98	12.88		120.15	84.05		
3.5	50.01	13.91		118.59	82.49		
4.0	50.98	14.88		116.92	80.82		
4.5	51.68	15.58		115.49	79.39		
5.0	52.60	16.50		113.90	77.80		
6.0	54.10	18.00		111.03	74.93		
7.0	55.20	19.10		108.00	71.90		
8.0	56.92	20.82		105.10	69.00		
9.0	58.32	22.22		102.58	66.48		
10.0	59.24	23.14		99.87	63.77		
12.0	61.35	25.25		94.73	58.63		
14.0	63.22	27.12		89.65	53.55		
16.0	64.81	28.71		85.00	48.90		
18.0	66.26	30.16		81.15	45.05		
20.0	67.90	31.80		77.53	41.43		
25.0	71.50	35.40		70.05	33.95		
30.0	74.30	38.20		63.35	27.25		
35.0	76.69	40.59		58.07	21.97		
40.0	77.87	41.77		53.13	17.03		
45.0	81.43	45.33		50.95	14.85		
50.0	83.87	47.77		48.78	12.68		
55.0	85.43	49.33		47.32	11.22		
60.0	88.10	52.00		46.36	10.26	610	

## Constant Discharge & Recovery Test (2/2)

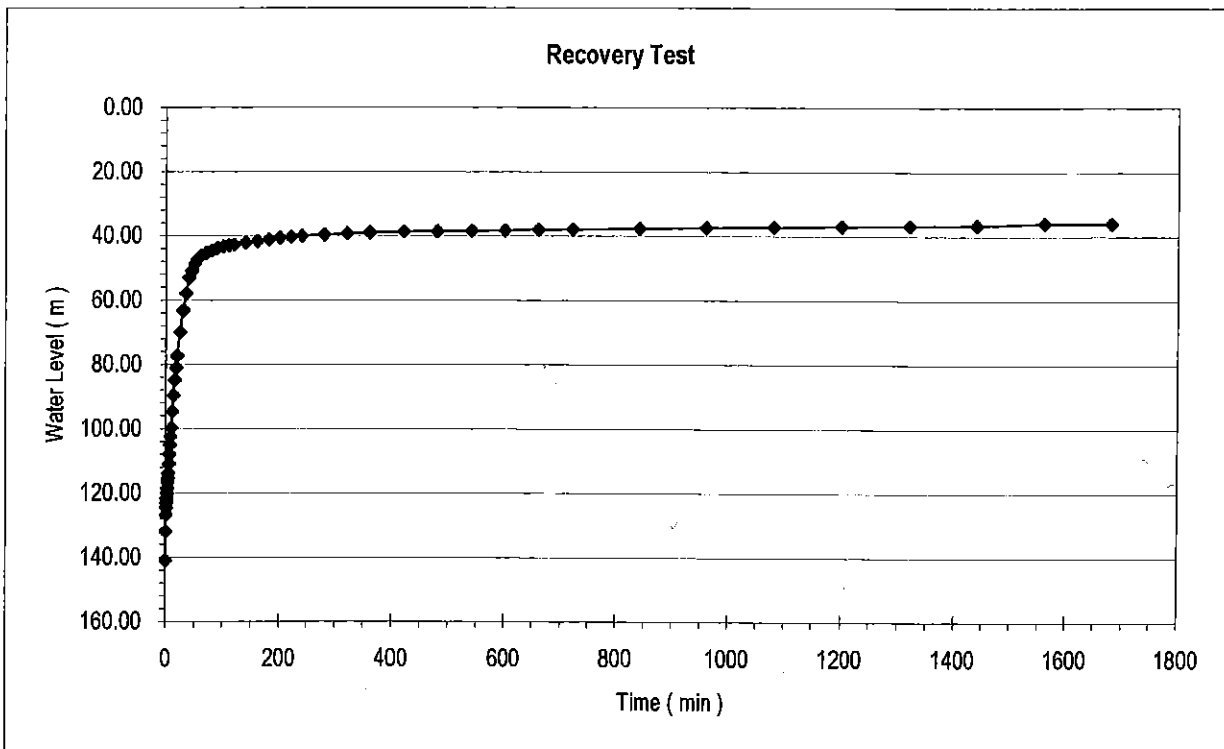
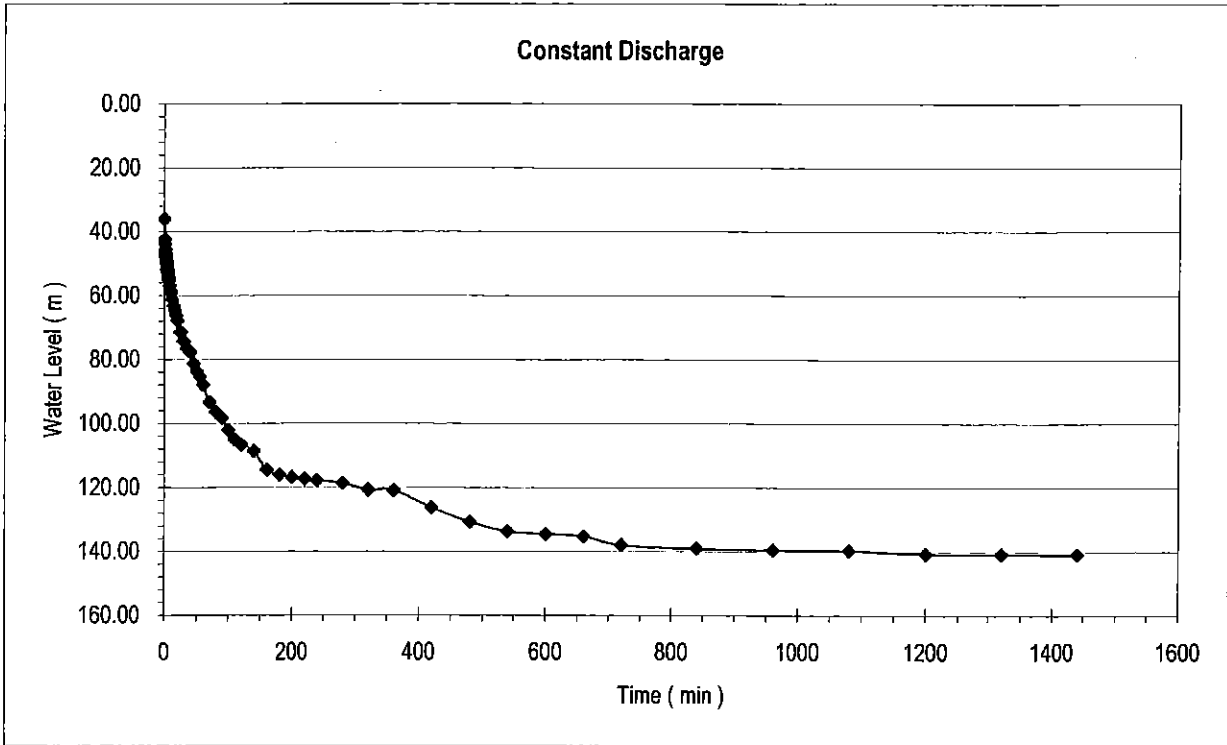
Well Code: I-02      Site code: I-02      Site name: Al Sana  
 District: Al Makhader      Governorate: Ibb

Duration ( min )	Constant Discharge Test			Recovery Test		Water Analysis	Remarks
	Water level (m)	Drawdown (m)	Pumping rate (l/sec)	Water level (m)	Residual (m)	Conductivity ( $\mu$ S/cm)	
70.0	93.50	57.40		45.48	9.38		
80.0	96.55	60.45		44.68	8.58		
90.0	98.35	62.25		43.98	7.88		
100.0	102.15	66.05		43.56	7.46		
110.0	105.10	69.00		43.20	7.10		
120.0	106.70	70.60		42.88	6.78	610	
140.0	108.75	72.65		42.30	6.20		
160.0	114.65	78.55		41.80	5.70		
180.0	116.20	80.10		41.25	5.15	610	
200.0	116.95	80.85		40.72	4.62		
220.0	117.40	81.30		40.52	4.42		
240.0	117.90	81.80		40.12	4.02	610	
280.0	118.77	82.67		39.77	3.67		
320.0	120.85	84.75		39.43	3.33		
360.0	121.03	84.93		39.11	3.01	610	
420.0	126.35	90.25		38.83	2.73		
480.0	130.85	94.75		38.67	2.57	610	
540.0	133.80	97.70		38.52	2.42		
600.0	134.62	98.52		38.38	2.28	610	
660.0	135.35	99.25		38.25	2.15		
720.0	138.05	101.95		38.10	2.00	610	
840.0	139.20	103.10		37.82	1.72	610	
960.0	139.60	103.50		37.54	1.44		
1080.0	139.80	103.70		37.35	1.25	610	
1200.0	140.80	104.70		37.11	1.01		
1320.0	140.85	104.75		36.88	0.78	610	
1440.0	141.00	104.90		36.66	0.56		
1560.0				36.13	0.03		
1680.0				36.10	0.00		

# Constant Discharge Test

Well Code: I-02  
Site Code: I-02  
S.W.L. (m): 36.10  
Yield (L/sec): 3.9

Site Name Al Sana  
D.W.L. (m): 141.00 Drawdown (m): 104.90



## Pumping Test Report Sheet

Well code: I-03 Site code: I-03 Site name: Mamasa Al Marqab  
District: Al Makhader Governorate: Ibb

Target water source: New projected deep well Well depth: 78 m

Contractor: Mabkhout Al-Abraki  
Hydrogeologist in charge: Abudul Salam Sallam  
Operator: Hosein Jammel

Date of start of the test: 15/7/2006 Date of end of the test: 19/7/2006  
Pump type: Vertical pump Engine: Iveco aifo  
Pump installation depth: 69 m Datum level: 0.72 m S.W.L.: G.L.-47.78 m

### Step drawdown test

Date/hour started: 16/7/2006 3:45pm Date/hour finished: 17/7/2006 2:45pm Total hours: 23:00  
Yield (l/sec) 1<sup>st</sup> step 1.10 2<sup>nd</sup> step 1.50 3<sup>rd</sup> step 2.10 4<sup>th</sup> step 2.50 5<sup>th</sup> step 3.00  
Water level before start the test (G.L.-m): 47.78  
Water level after end of 5<sup>th</sup> step (G.L.-m): 65.58  
Water level after recovery (G.L.-m): 47.78 Recovery hours 13:00

### Constant discharge test

Date/hour started: 17/7/2006 2:52pm Date/hour finished: 20/7/2006 8:52am Total hours: 64:00  
Yield (l/sec) 1.60  
Water level before start of the test (G.L.-m): 47.78  
Water level after end of test (G.L.-m): 54.35  
Water level after recovery (G.L.-m): 47.78 Recovery hours 40:00  
Drawdown (m): 6.57

Revised by:

\_\_\_\_\_  
Name :

Date:

## Provisional Step Drawdown Test

Well Code: I-03 Site code: I-03  
 Site name: Mamasa Al Marqab  
 District: Al Makhader  
 Governorate Ibb

Pump on date/hour: 15/7/2006 11:05pm  
 Pump off date/hour: 16/7/2006 1:35am  
 End of recovery hour: 16/7/2006 3:35pm  
 S.W.L ( m ): 48.50

Contractor: Mabkhout Al-Abraki  
 Hydrogeologist: Abudul Salam Sallam  
 Operator: Hosein Jammel

Duration ( min )	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery ( m )
	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	
0.0	48.50	1.00	51.62	1.50	53.73	2.00	55.77	2.50	60.40	3.00	66.30
0.5	52.20		51.73		53.95		56.51		60.64		60.75
1.0	52.50		51.75		54.06		56.60		60.96		57.62
1.5	52.68		51.78		54.21		56.69		61.22		56.98
2.0	52.64		51.90		54.36		56.78		61.52		56.58
2.5	52.50		51.92		54.43		56.86		61.76		56.00
3.0	52.43		52.96		54.55		57.03		61.97		55.65
3.5	52.42		52.04		54.61		57.14		62.18		55.27
4.0	52.37		52.00		54.70		57.25		62.36		54.88
4.5	52.22		52.16		54.76		57.46		62.53		54.52
5.0	52.10		52.25		54.85		57.64		62.65		54.18
6.0	51.97		52.33		54.92		57.98		62.94		53.60
7.0	51.86		52.46		55.00		58.31		63.13		52.95
8.0	51.78		52.62		55.06		58.43		63.37		52.43
9.0	51.71		52.80		55.13		58.56		63.48		51.94
10.0	51.68		53.02		55.17		58.65		63.64		51.53
12.0	52.00		53.13		55.23		58.93		63.87		50.78
14.0	51.98		53.37		55.46		59.27		64.12		50.18
16.0	51.70		53.51		55.53		59.00		64.53		49.75
18.0	51.52		53.60		55.62		59.08		64.87		49.45
20.0	51.42		53.64		55.70		59.30		64.99		49.25
22.0	51.39		53.67		55.71		59.45		65.27		49.15
24.0	51.43		53.69		55.72		59.68		65.65		49.05
26.0	51.47		53.72		55.73		59.95		65.85		49.00
28.0	51.54		53.73		55.75		60.20		65.98		48.96
30.0	51.62		53.73		55.77		60.40		66.30		48.92
60.0											48.90
90.0											48.87
120.0											48.78
180.0											48.72
240.0											48.69
300.0											48.64
420.0											48.60
540.0											48.56
660.0											48.54
780.0											48.52
840.0											48.50

## Step Drawdown Test (1/2)

Well Code:   I-03                        Site code:   I-03    
 Site name:   Mamasa Al Marqab    
 District:   Al Makhader    
 Governorate   lbb  

Pump on date/hour:   16/7/2006 3:45pm    
 Pump off date/hour:   17/7/2006 1:45am    
 End of recovery hour:   17/7/2006 2:45pm    
 S.W.L ( m ):   48.50  

Contractor:   Mabkhout Al-Abraki    
 Hydrogeologist:   Abudul Salam Sallam    
 Operator:   Hosein Jammel  

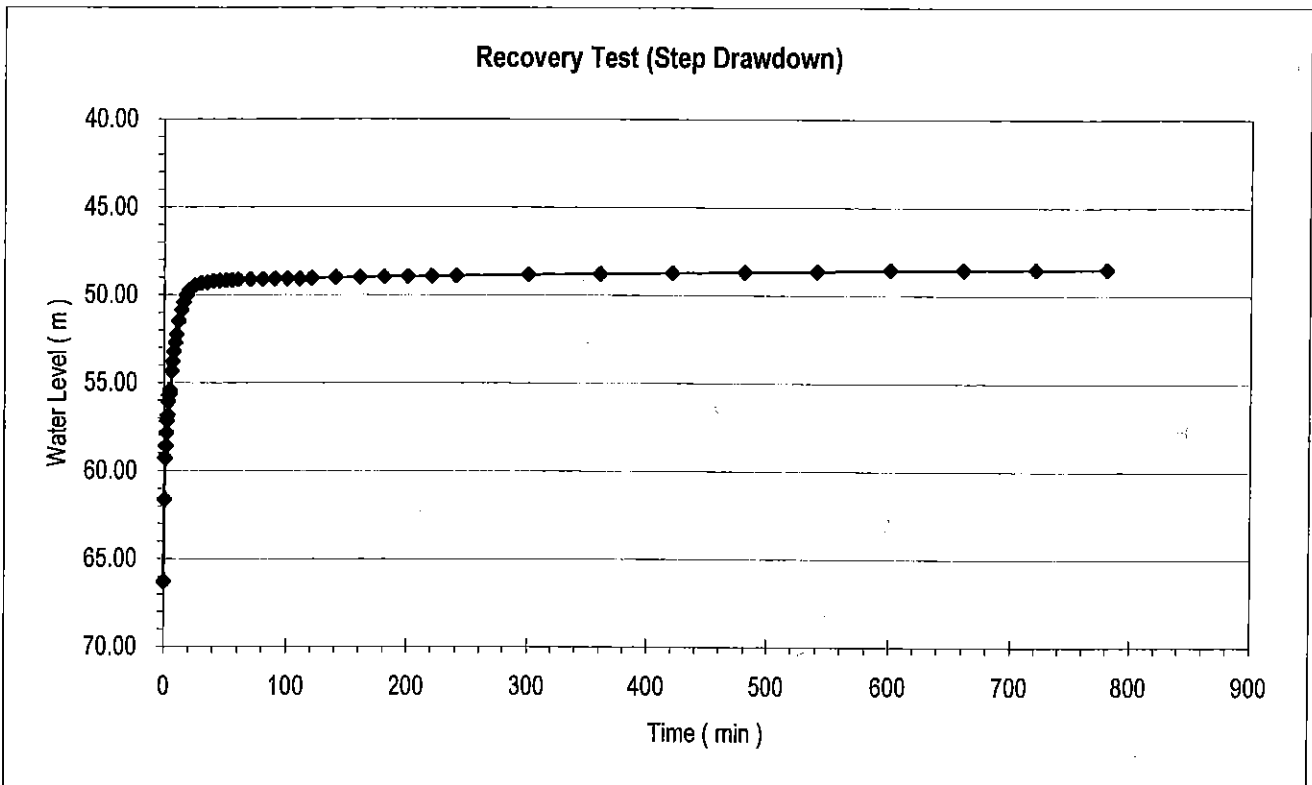
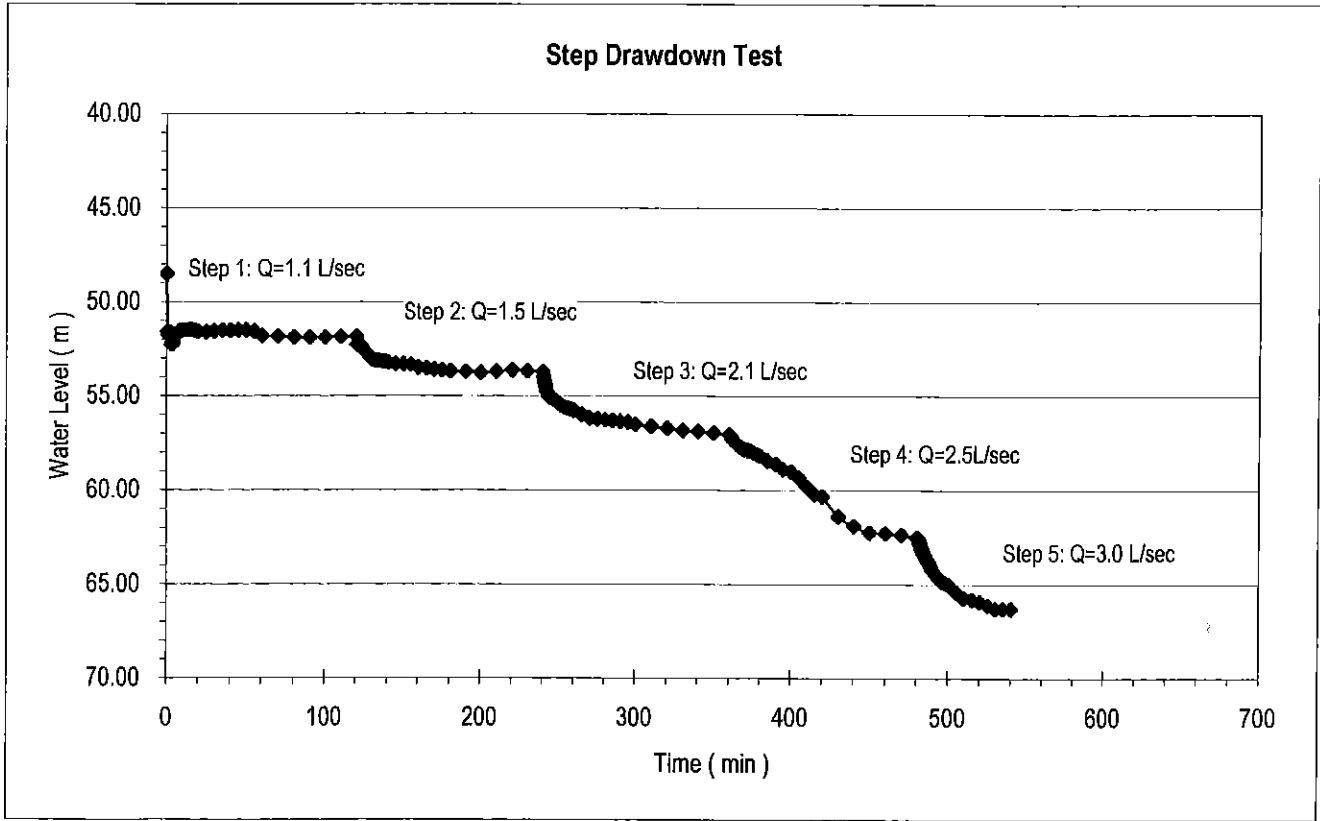
Duration ( min )	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery ( m )
	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	
0.0	48.50	1.10	51.86	1.50	53.74	2.00	57.05	2.50	62.52	3.00	66.30
0.5	51.60		52.27		54.00		57.09		62.53		61.65
1.0	51.80		52.30		54.24		57.13		62.55		59.27
1.5	51.64		52.32		54.37		57.20		62.67		58.58
2.0	51.65		52.34		54.52		57.28		62.81		57.85
2.5	51.78		52.36		54.78		57.33		62.93		57.15
3.0	52.27		52.37		54.82		57.40		63.06		56.85
3.5	52.25		52.46		54.92		57.43		63.18		56.07
4.0	52.10		52.53		55.06		57.48		63.29		55.70
4.5	51.90		52.55		55.09		57.53		63.40		55.40
5.0	51.82		52.62		55.11		57.56		63.48		55.60
6.0	51.79		52.68		55.13		57.64		63.63		54.35
7.0	51.62		52.76		55.21		57.70		63.76		53.80
8.0	51.54		52.87		55.26		57.75		63.90		53.23
9.0	51.53		52.97		55.32		57.82		64.08		52.73
10.0	51.52		53.07		55.40		57.85		64.24		52.26
12.0	51.51		53.13		55.51		57.90		64.48		51.50
14.0	51.50		53.15		55.59		57.93		64.66		50.87
16.0	51.50		53.17		55.66		58.03		64.86		50.42
18.0	51.55		53.20		55.72		58.11		64.94		50.04
20.0	51.61		53.24		55.80		58.19		65.00		49.75
25.0	51.63		53.29		56.00		58.44		65.42		49.47
30.0	51.58		53.31		56.18		58.62		65.72		49.35
35.0	51.52		53.35		56.23		58.91		65.80		49.31
40.0	51.54		53.50		56.28		59.02		65.92		49.24
45.0	51.53		53.53		56.32		59.33		66.12		49.20
50.0	51.53		53.60		56.36		59.80		66.30		49.20
55.0	51.58		53.64		56.40		60.22		66.30		49.17
60.0	51.82		53.68		56.51		60.33		66.30		49.15
70.0	51.85		53.73		56.62		61.40				49.13
80.0	51.90		53.77		56.73		61.90				49.12
90.0	51.92		53.72		56.84		62.25				49.10
100.0	51.89		53.64		56.89		62.27				49.09
110.0	51.86		53.68		56.96		62.36				49.08
120.0	51.86		53.74		57.07		62.52				49.06
140.0											49.02
160.0											48.99
180.0											48.98
200.0											48.96
220.0											48.94



# Step Drawdown Test

Well Code: I-03  
Site Code: I-03  
S.W.L. : 48.50 m

Site Name: Mamasa Al Marqab

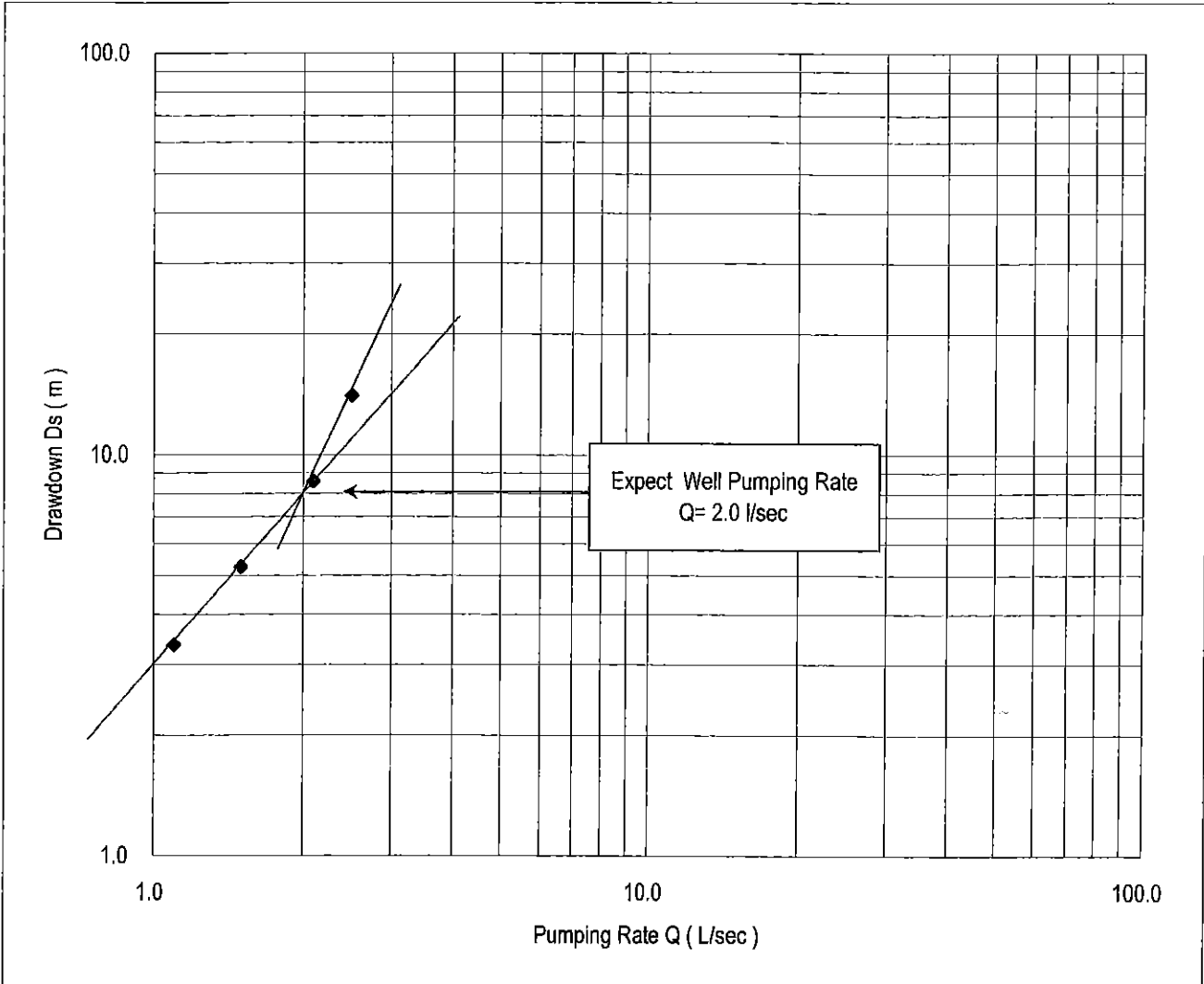




## Step Drawdown Test

Well Code: I-03  
 Site Code: I-03  
 S.W.L. : 48.50 m

Site Name: Mamasa Al Marqab



Step	Q (l / sec)	D.W.L.(m)	D s (m)
1	1.1	51.86	3.36
2	1.5	53.74	5.24
3	2.1	57.07	8.57
4	2.5	62.52	14.02
5	3.0		

## Constant Discharge & Recovery Test (1/2)

Well Code: I-03 Site code: I-03

Site name: Mamasa Al Marqab

District: Al Makhader

Governorate: lbb

Pump on date/hour: 17/7/2006 2:52am

Pump off date/hour: 18/7/2006 2:52am

End of recovery hour: 20/7/2006 8:52am

Contractor: Mabkhout Al-Abraki

S.W.L ( m ): 48.50

Hydrogeologist: Abudul Salam Sallam

D.W.L ( m ): 55.07

Operator: Hosein Jammel

Yield (l/sec): 1.6

Duration ( min )	Constant Discharge Test			Recovery Test		Water Analysis	Remarks
	Water level ( m )	Drawdown ( m )	Pumping rate (l/sec)	Water level ( m )	Residual ( m )	Conductivity ( $\mu$ S/cm)	
0.0	48.50	0.00		55.07	6.57		
0.5	52.40	3.90		51.45	2.95		
1.0	52.52	4.02		51.00	2.50		
1.5	52.73	4.23		50.98	2.48		
2.0	52.67	4.17		50.97	2.47		
2.5	52.64	4.14		50.93	2.43		
3.0	52.62	4.12		50.86	2.36		
3.5	52.79	4.29		50.80	2.30		
4.0	52.87	4.37		50.74	2.24		
4.5	52.98	4.48		50.67	2.17		
5.0	53.06	4.56		50.62	2.12		
6.0	53.10	4.60		50.52	2.02		
7.0	53.14	4.64		50.41	1.91		
8.0	53.22	4.72		50.33	1.83		
9.0	53.36	4.86		50.26	1.76		
10.0	53.49	4.99		50.21	1.71		
12.0	53.59	5.09		50.12	1.62		
14.0	53.56	5.06		50.04	1.54		
16.0	53.57	5.07		49.98	1.48		
18.0	53.55	5.05		49.95	1.45		
20.0	53.59	5.09		49.93	1.43		
25.0	53.68	5.18		49.90	1.40		
30.0	53.70	5.20		49.86	1.36		
35.0	53.87	5.37		49.80	1.30		
40.0	54.10	5.60		49.78	1.28		
45.0	54.32	5.82		49.76	1.26		
50.0	54.34	5.84		49.74	1.24		
55.0	54.35	5.85		49.72	1.22		
60.0	54.36	5.86		49.70	1.20		

## Constant Discharge & Recovery Test (2/2)

Well Code: I-03      Site code: I-03      Site name: Mamasa Al Marqab  
 District: Al Makhader      Governorate: Ibb

Duration ( min )	Constant Discharge Test			Recovery Test		Water Analysis	Remarks
	Water level (m)	Drawdown (m)	Pumping rate (l/sec)	Water level (m)	Residual (m)	Conductivity ( $\mu$ S/cm)	
70.0	54.40	5.90		49.70	1.20		
80.0	54.41	5.91		49.70	1.20		
90.0	54.50	6.00		49.69	1.19		
100.0	54.56	6.06		49.69	1.19		
110.0	54.56	6.06		49.69	1.19		
120.0	54.57	6.07		49.69	1.19		
140.0	54.59	6.09		49.68	1.18	780	
160.0	54.61	6.11		49.68	1.18	780	
180.0	54.65	6.15		49.67	1.17		
200.0	54.61	6.11		49.67	1.17		
220.0	54.59	6.09		49.67	1.17		
240.0	54.60	6.10		49.67	1.17	780	
280.0	54.55	6.05		49.66	1.16		
320.0	54.86	6.36		49.66	1.16		
360.0	54.81	6.31		49.65	1.15		
420.0	54.81	6.31		49.62	1.12	780	
480.0	54.96	6.46		49.59	1.09		
540.0	55.05	6.55		49.55	1.05		
600.0	55.10	6.60		49.50	1.00		
660.0	55.39	6.89		49.47	0.97		
720.0	55.55	7.05		49.43	0.93	780	
840.0	55.35	6.85		49.36	0.86		
960.0	55.12	6.62		49.29	0.79		
1080.0	54.98	6.48		49.23	0.73	780	
1200.0	54.45	5.95		49.16	0.66		
1320.0	54.74	6.24		49.10	0.60		
1440.0	55.07	6.57		49.01	0.51		
1560.0				48.96	0.46		
1680.0				48.90	0.40		
1800.0				48.83	0.33		
1920.0				48.76	0.26		
2040.0				48.70	0.20		
2160.0				48.64	0.14		
2280.0				48.56	0.06		
2400.0				48.50	0.00		

## Constant Discharge Test

Well Code: I-03

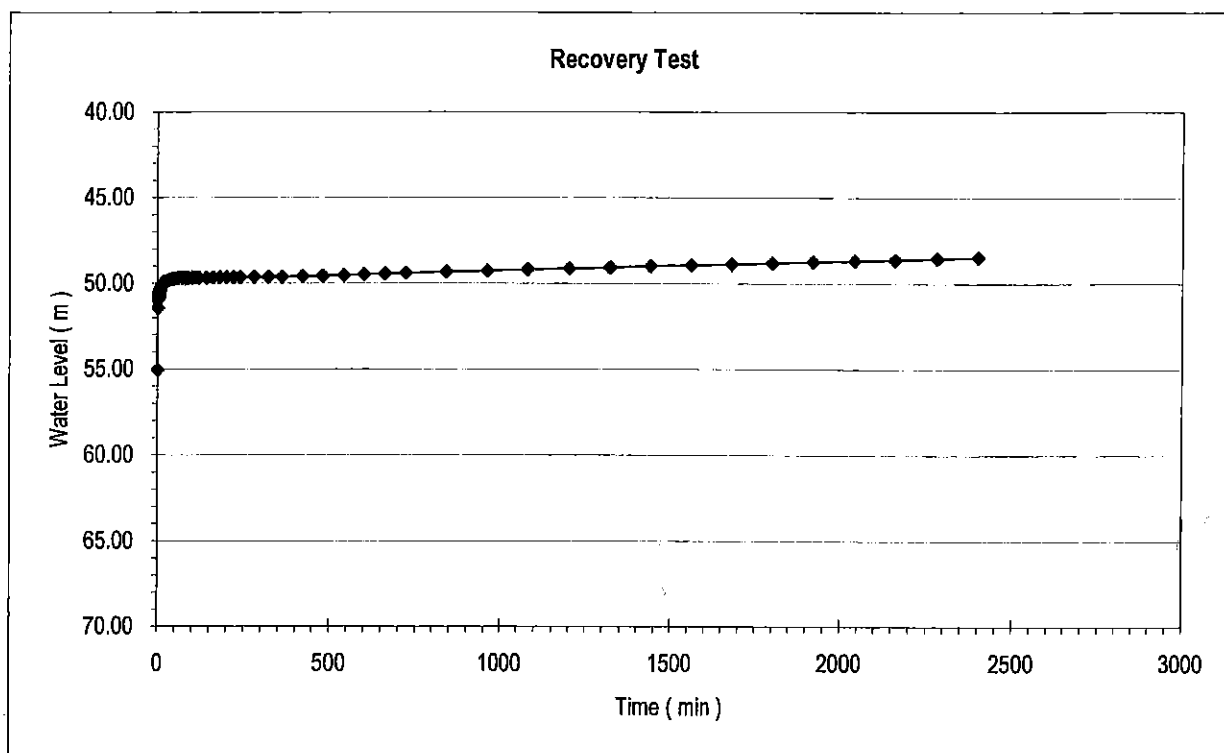
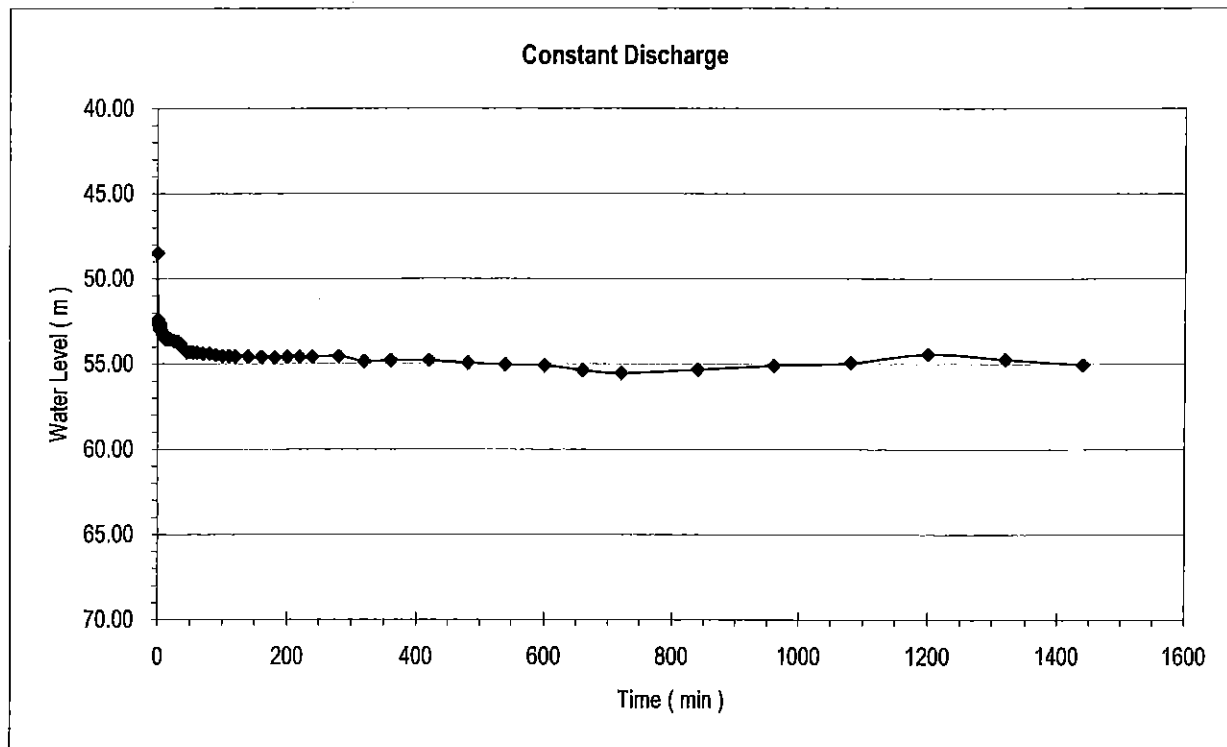
Site Code: I-03

S.W.L. (m): 48.50

Yield (L/sec): 1.6

Site Name Mamasa Al Marqab

D.W.L. (m): 55.07 Drawdown (m): 6.57



## Pumping Test Report Sheet

Well code: I-04 Site code: I-04 Site name: Al Jahlah & Al Meshraq  
District: Ibb Governorate: Ibb

Target water source: New projected deep well Well depth: 305 m

Contractor: Mabkhout Al-Abraki  
Hydrogeologist in charge: Abudul Salam Sallam  
Operator: Al Raboi

Date of start of the test: 17/7/2006 Date of end of the test: 21/7/2006  
Pump type: vertical pump Engine: IVEO aifo  
Pump installation depth: 219 m Datum level: 0.65 m S.W.L.: G.L.-14.85 m

### Step drawdown test

Date/hour started: 18/7/2006 7:15 pm Date/hour finished: 19/7/2006 4:15 pm Total hours: 21:00  
Yield (l/sec) 1<sup>st</sup> step 1.70 2<sup>nd</sup> step 3.40 3<sup>rd</sup> step 5.10 4<sup>th</sup> step 6.80 5<sup>th</sup> step \_\_\_\_\_  
Water level before start the test (G.L.-m): 14.85  
Water level after end of 4<sup>th</sup> step (G.L.-m): 215.32  
Water level after recovery (G.L.-m): 14.85 Recovery hours 11:00

### Constant discharge test

Date/hour started: 19/7/2006 4:31 pm Date/hour finished: 21/7/2006 5:31 pm Total hours: 49:00  
Yield (l/sec) 4.10  
Water level before start of the test (G.L.-m): 14.85  
Water level after end of test (G.L.-m): 110.15  
Water level after recovery (G.L.-m): 14.85 Recovery hours 25:00  
Drawdown (m): 95.30

Revised by:

Name :

Date:



## Step Drawdown Test

Well Code: I-04 Site code: I-04

Pump on date/hour: 18/7/2006 7:15pm

Site name: Al Jahlah & Al Meshraq

Pump off date/hour: 19/7/2006 5:15am

District: Ibb

End of recovery hour: 19/7/2006 4:15pm

Governorate Ibb

S.W.L ( m ): 15.50

Contractor: Mabkhout Al-Abraki

Hydrogeologist: Abudul Salam Sallam

Operator: Al Raboi

Duration ( min )	1st Step		2nd Step		3rd Step		4th Step		5th Step		Recovery ( m )
	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	W.L. ( m )	Yield ( l/sec )	
0.0	15.50	1.70	29.00	3.40	55.43	5.10	96.87	6.80			215.97
0.5	23.20		29.87		55.99		98.70				207.40
1.0	24.25		29.98		56.54		99.80				203.30
1.5	24.70		30.05		56.98		100.60				196.60
2.0	25.10		30.19		57.34		101.58				194.00
2.5	25.40		31.04		57.71		102.43				192.25
3.0	25.61		31.46		58.53		103.40				190.20
3.5	25.66		31.87		59.27		104.45				188.00
4.0	25.70		32.27		59.71		105.45				185.30
4.5	25.72		32.58		60.49		106.39				183.98
5.0	25.83		32.95		61.00		107.42				181.73
6.0	25.80		33.82		61.97		109.32				178.04
7.0	25.72		34.21		63.18		111.18				171.95
8.0	25.58		34.72		64.38		113.12				169.70
9.0	25.62		35.19		65.59		115.02				165.89
10.0	25.66		35.74		66.62		116.82				161.68
12.0	25.78		37.13		68.48		120.20				152.68
14.0	25.89		38.72		70.10		123.92				144.75
16.0	25.98		39.98		71.24		126.96				136.95
18.0	26.08		41.15		72.37		130.15				128.52
20.0	26.22		41.84		72.86		133.00				120.50
25.0	26.46		43.42		75.08		140.24				100.15
30.0	26.72		44.42		76.40		148.10				82.50
35.0	26.94		45.42		77.27		156.40				71.56
40.0	27.28		45.80		78.80		163.50				62.20
45.0	27.52		46.28		80.79		171.17				58.10
50.0	27.74		46.79		83.03		178.75				55.85
55.0	27.85		47.35		86.82		185.98				54.20
60.0	28.00		47.64		88.79		191.20				53.08
70.0	28.21		50.32		91.60		205.26				51.30
80.0	28.19		52.54		93.18		215.97				49.53
90.0	28.31		53.76		93.89						47.75
100.0	28.51		54.35		94.54						45.99
110.0	28.61		54.94		96.00						44.22
120.0	29.00		55.43		96.87						42.44
140.0											40.34
160.0											38.28
180.0											36.10
200.0											33.95
220.0											31.79

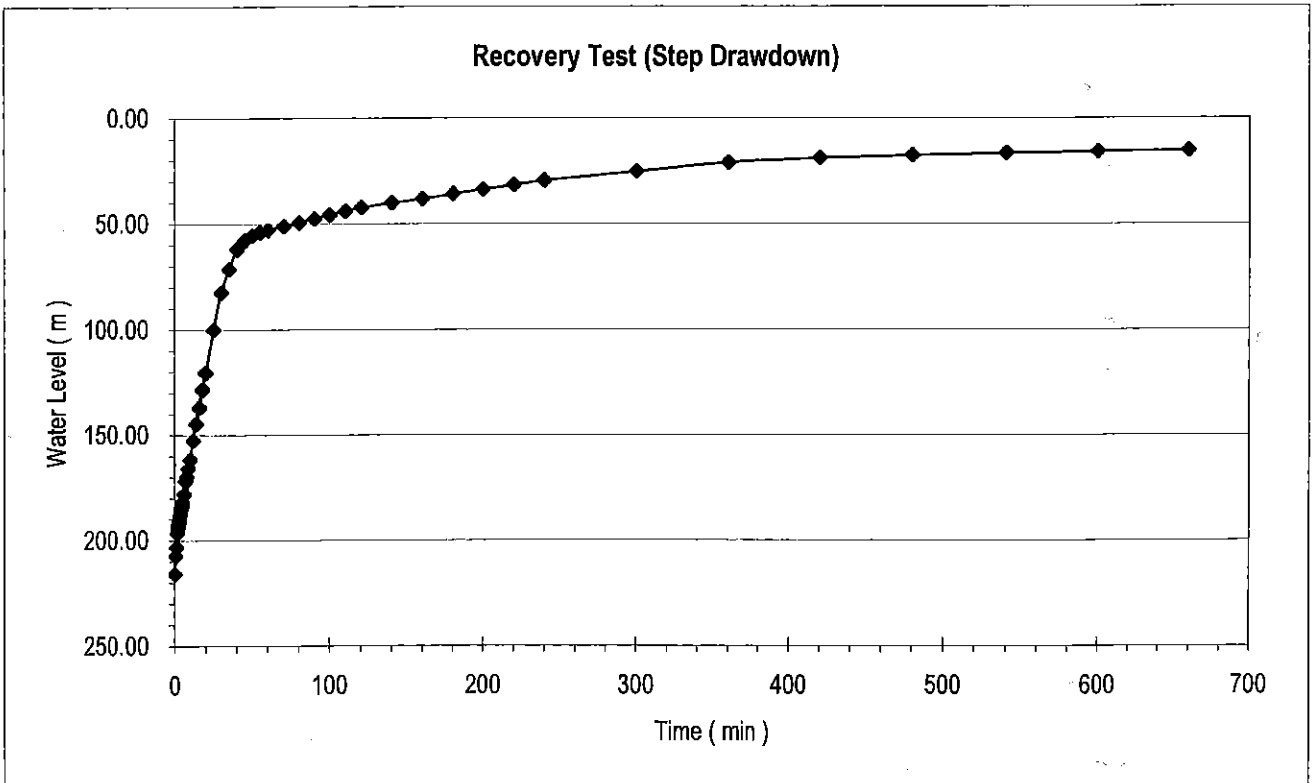
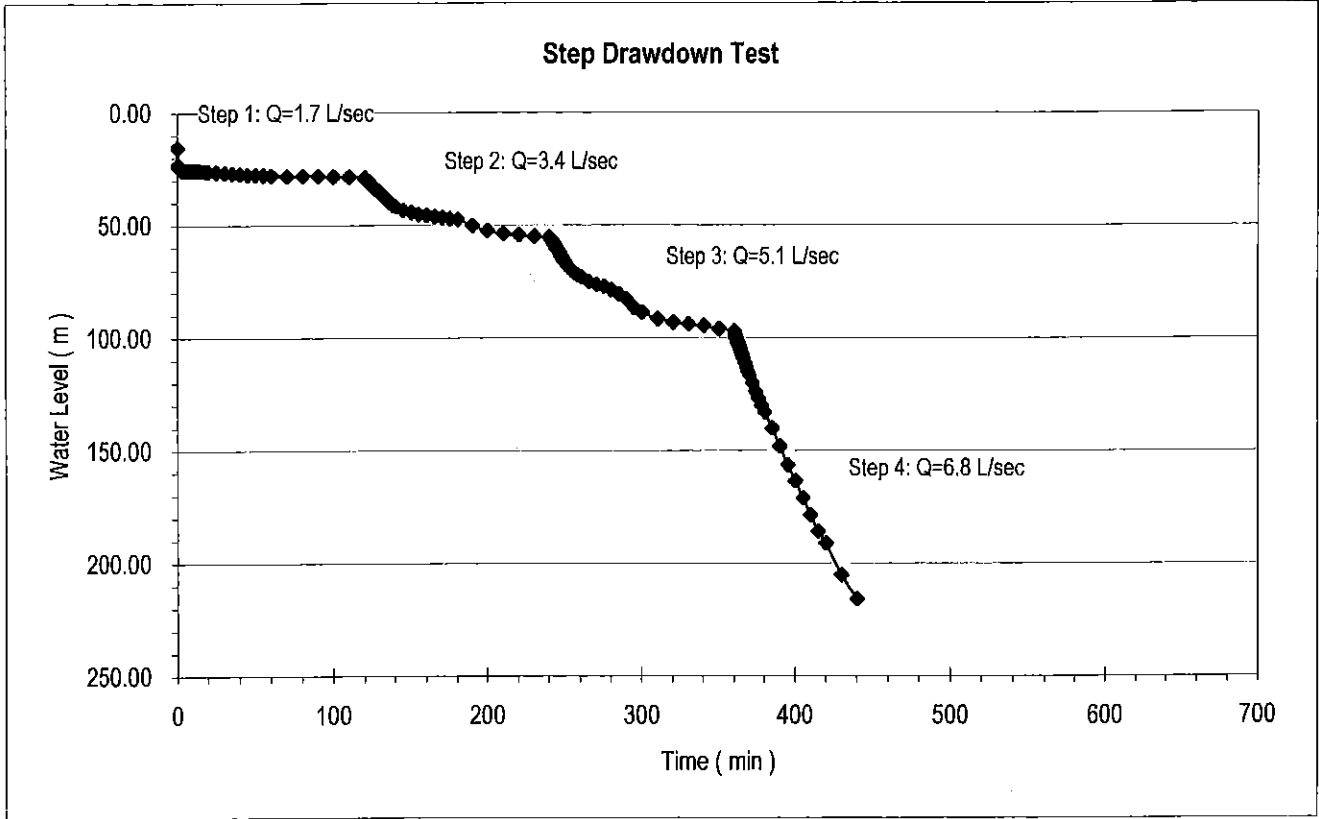




# Step Drawdown Test

Well Code: I-04  
Site Code: I-04  
S.W.L. : 15.50 m

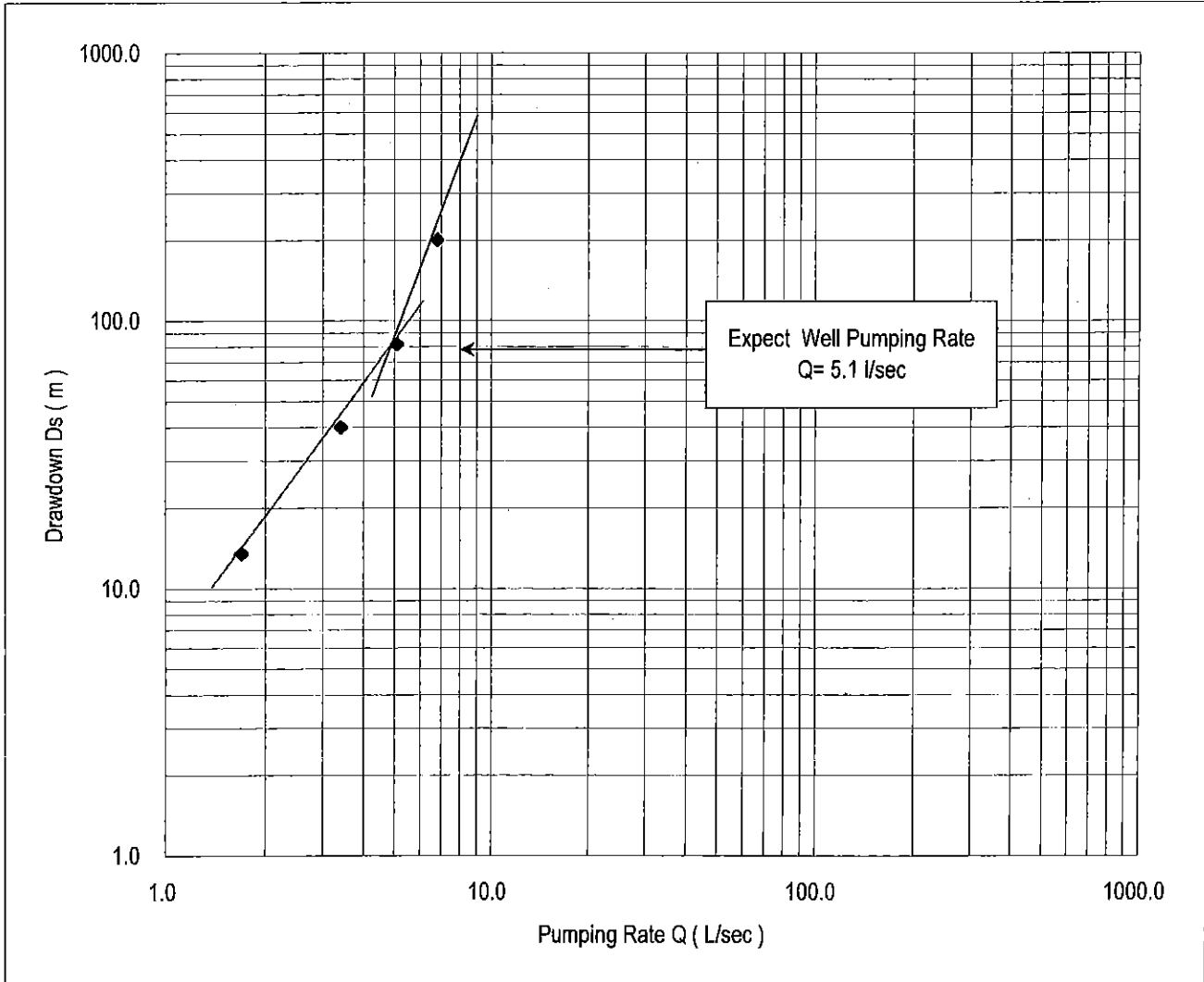
Site Name: Al Jahlah & Al Meshraq



## Step Drawdown Test

Well Code:   I-04    
 Site Code:   I-04    
 S.W.L. :   15.50 m  

Site Name: Al Jahlah & Al Meshraq



Step	$Q$ (l/sec)	D.W.L.(m)	$D_s$ (m)
1	1.7	29.00	13.50
2	3.4	55.43	39.93
3	5.1	96.87	81.37
4	6.8	215.97	200.47
5			

## Constant Discharge & Recovery Test (1/2)

Well Code: I-04 Site code: I-04

Site name: Al Jahlah & Al Meshraq

District: lbb

Governorate: lbb

Pump on date/hour: 19/7/2006 5:13pm

Pump off date/hour: 20/7/2006 5:13pm

End of recovery hour: 21/7/2006 7:13pm

Contractor: Mabkhout Al-Abraki

Hydrogeologist: Abudul Salam Sallam

Operator: Al Raboi

S.W.L ( m ): 15.50

D.W.L ( m ): 110.80

Yield (l/sec): 4.1

Duration ( min )	Constant Discharge Test			Recovery Test		Water Analysis	Remarks
	Water level (m)	Drawdown (m)	Pumping rate (l/sec)	Water level (m)	Residual (m)	Conductivity ( $\mu$ S/cm)	
0.0	15.50	0.00		110.80	95.30		
0.5	24.90	9.40		104.65	89.15		
1.0	31.63	16.13		100.67	85.17		
1.5	33.16	17.66		98.10	82.60		
2.0	34.34	18.84		96.69	81.19		
2.5	35.86	20.36		95.37	79.87		
3.0	36.60	21.10		94.18	78.68		
3.5	37.28	21.78		92.86	77.36		
4.0	38.00	22.50		91.85	76.35		
4.5	38.75	23.25		90.75	75.25		
5.0	39.34	23.84		89.78	74.28		
6.0	40.25	24.75		87.93	72.43		
7.0	41.25	25.75		86.22	70.72		
8.0	42.23	26.73		84.62	69.12		
9.0	43.17	27.67		83.12	67.62		
10.0	44.26	28.76		82.00	66.50		
12.0	46.00	30.50		80.10	64.60		
14.0	47.21	31.71		78.50	63.00		
16.0	48.33	32.83		77.16	61.66		
18.0	49.42	33.92		76.49	60.99		
20.0	50.43	34.93		75.60	60.10		
25.0	52.40	36.90		74.50	59.00		
30.0	55.60	40.10		73.55	58.05		
35.0	58.04	42.54		72.95	57.45		
40.0	59.76	44.26		72.15	56.65		
45.0	61.72	46.22		71.40	55.90		
50.0	63.11	47.61		70.80	55.30		
55.0	64.24	48.74		70.20	54.70		
60.0	65.58	50.08		69.78	54.28	902	

## Constant Discharge & Recovery Test (2/2)

Well Code: I-04

Site code: I-04

Site name: Al Jahlah & Al Meshraq

District: Ibb

Governorate: Ibb

Duration ( min )	Constant Discharge Test			Recovery Test		Water Analysis	Remarks
	Water level (m)	Drawdown (m)	Pumping rate (l/sec)	Water level (m)	Residual (m)	Conductivity ( $\mu$ S/cm)	
70.0	67.90	52.40		68.90	53.40		
80.0	69.37	53.87		68.06	52.56		
90.0	72.23	56.73		67.13	51.63		
100.0	75.05	59.55		66.23	50.73		
110.0	76.80	61.30		65.30	49.80		
120.0	78.78	63.28		64.38	48.88	902	
140.0	79.93	64.43		63.50	48.00		
160.0	82.17	66.67		61.75	46.25		
180.0	83.28	67.78		59.99	44.49	902	
200.0	83.87	68.37		58.23	42.73		
220.0	84.46	68.96		56.48	40.98		
240.0	84.92	69.42		54.78	39.28	902	
280.0	85.90	70.40		51.26	35.76		
320.0	86.12	70.62		47.78	32.28		
360.0	88.57	73.07		44.38	28.88	902	
420.0	92.15	76.65		40.48	24.98		
480.0	92.82	77.32		37.18	21.68		
540.0	93.50	78.00		34.54	19.04	902	
600.0	94.28	78.78		32.56	17.06		
660.0	94.90	79.40		30.66	15.16		
720.0	95.32	79.82		29.51	14.01	902	
840.0	97.96	82.46		27.71	12.21		
960.0	101.22	85.72		24.92	9.42	902	
1080.0	104.06	88.56		22.66	7.16	902	
1200.0	107.24	91.74		20.46	4.96	902	
1320.0	109.22	93.72		18.46	2.96		
1440.0	110.80	95.30		16.36	0.86	902	
1560.0				15.50	0.00		

# Constant Discharge Test

Well Code: 1-04  
Site Code: 1-04  
S.W.L. (m): 15.50  
Yield (L/sec): 4.1

Site Name Al Jahlah & Al Meshraq  
D.W.L. (m): 110.80 Drawdown (m): 95.30

