Erratum to: An approach to interpretation of step drawdown tests

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There are errors in Table 4 of the original article, specifically for Dd (column 4), B.L Asmptn1 (column 5) and Re-1 Asmptn1 (column 8).

The correct version of Table 4 is given below.

In the original article, Table 4 presents Reynold's number at different entrance velocities and at different discharge levels. The Reynold's number in the original Table 4 was calculated using the formula:

$$Re = (\text{density of fluid} \times \text{magnitude of its velocity} \times \text{boundary to fluid flow}) / \text{viscosity of fluid}$$

The work used two approaches for fixing the boundary to fluid flow. In the first approach the boundary to fluid flow was assumed to be length from the well bottom to the pumping water level. The second approach was based on the assumption of the

boundary length being the total length of the screen (See section Calculation of Reynold's number on page 1022). There is no error with the calculations related to the second approach but there are errors related to the first approach mentioned above.

Firstly the drawdown values (Dd) in column 4 of the original Table 4 do not match with the observed drawdown values in column 2 of the original Table 2. There were some errors in copying values from Table 2 to the corresponding column in Table 4. Thus, in this Erratum the correct values of drawdown (Dd), as given in Table 2 of the original article, have been put in Table 4. Since B.L Asmptn1 (column 5) and Re-1 Asmptn1 (column 8) values are a function of drawdown (Dd), they also change.

There was another small error in calculation of B.L Asmptn1 (column 5), which was calculated using the formula:

$$\text{B. L Asmptn1 (column 5)} = \text{Depth of well construction} - (\text{initial water level} + \text{drawdown})$$

The initial depth to water level was mentioned as 4.22 m below ground level (mbgl) (see section Experimentation in the original article, page 1019). The position of the last slotted pipe was given as 39.5–43.5 mbgl. The tubewell design has 3 m of blank pipe with conical bottom following the last slotted pipe. This gives depth of well construction as 46.5 mbgl. So, while calculating the values of B.L Asmptn1 (column 5) for Table 4 of the original article, only drawdown (Dd) was subtracted from the depth of well construction values. Instead, a sum of initial water level and drawdown (Dd) should have been subtracted. This error in the calculation has also been rectified.

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Table 4 Reynold's number at different entrance velocities and at different discharge levels

Steps	E. Vel (m/s)	Density (kg/m ³)	Dd (m)	B.L (m) Asmptn 1	B.L (m) Asmptn 2	Viscosity (N s/m ²)	<i>Re</i> -1 Asmptn 1	<i>Re</i> -2 Asmptn 2
1	0.00349	1000	5	37.28	14	0.001	130107	48860
2	0.00385	1000	6.1	36.18	14	0.001	139293	53900
3	0.00424	1000	6.9	35.38	14	0.001	150011	59360
4	0.00456	1000	7.45	34.83	14	0.001	158825	63840
5	0.00483	1000	8.05	34.23	14	0.001	165331	67620
6	0.0051	1000	8.5	33.78	14	0.001	172278	71400

E. Vel - entrance velocity, B.L – boundary length, *Re* – Reynold's number, Asmptn – assumption, Dd – drawdown, Ns/m² – Newton seconds per m²