

## Nine Unpublished Texts in the Collection of the British Museum

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### §1. Introduction<sup>1</sup>

§1.1. The nine tablets published herewith are a part of a broader project entitled, “The Mathematical Knowledge During the III Dynasty of Ur in the Light of Administrative Records,” sponsored by the Gerda Henkel Foundation. Within the framework of this project, a research

trip to the British Museum was undertaken, with the aim of identifying new material. The idea of the author was, at the beginning, to include these documents in a volume at the end of the project but, for various reasons, the project has been interrupted. In any case, the author hopes that an edition of new texts can be of use to his colleagues.

### §2. Catalogue

No.	BM Number	Date	Provenience	Content
1.	BM 12562	[-/-/-]	unknown	Fragment; the text records measurements of agricultural fields.
2.	BM 19683	AS 3/-/-	Girsu	The fragment of the right upper part is divided into two columns and records works for building levees.
3.	BM 19997	[-/-/-]	unknown	Text recording the field area and the number of trees in some orchards.
4.	BM 23029	Š 45/x/-	Girsu	Receipt for a barley loan (še ur <sub>5</sub> -ra) from Ur-NI received by Ur-niġar; seal of Atu.
5.	BM 23092	Š 46/x/-	Girsu	Sealed envelope of a receipt for a barley loan (še ur <sub>5</sub> -ra) from the warehouse of Ninġursaġ from Bazi; seal of Namġhani.
6.	BM 102106	AS 1/-/-	Girsu	Balanced account of barley to sow some agricultural field parcels.
7.	BM 106079	AS 6/-/-	Umma	Text recording maintenance work on agricultural fields; seal of Nimġir-ane, scribe, son of Inim-Šara.
8.	BM 106101	undated	Umma	Text recording the quantity of earth to build the mud wall of Niġ-lagar’s house (im-du <sub>8</sub> -a e <sub>2</sub> niġ <sub>2</sub> -lagar-ka).
9.	BM 106102	Š 42/-/-	Umma	Works inspection in some fields in the Kamari area; seal of Lugal-niġ-lagare, scribe, son of Dada.

<sup>1</sup> The author wishes to thank the Gerda Henkel Foundation for the opportunity to develop this research project. Special thanks also go to the Trustees of the British Museum for their support during my period in the Study Room, and to Christopher Walker, whose willingness and deep knowledge of the documentation has helped me to understand several passages in the texts. Thanks also go to

Angela Greco for her help in understanding the text BM 19997, and to Franco D’Agostino for his comments and suggestions. Abbreviations used in the article are found on the website of the Cuneiform Digital Library Initiative (CDLI); add AS (Amar-Sin), IS (Ibbi-Sin), ŠS (Šu-Sin), Š (Šulgi) and WOO (*Wiener Offene Orientalistik*). Tablet measurements are in cm.

### §3. Texts

#### §3.1. BM 12562

Measurements: 3.1×2.4×2.4

Provenience: unknown

Date: -/-/-

##### §3.1.1. Transliteration and Translation

Obverse

Column 1

- |          |                         |                       |
|----------|-------------------------|-----------------------|
| 1. [...] | ki                      | ...                   |
| 2. [...] | 5(iku) GAN <sub>2</sub> | ... 5 iku field area; |
| 3. [...] | x [...]                 | ...                   |
- rest broken

Column 2

- |                         |   |   |
|-------------------------|---|---|
| 1. [...]                | 4(iku) <sup>2</sup> GAN <sub>2</sub> <sup>2</sup> [...] | ...                                     |
| 2. 1(eše <sub>3</sub> ) | 4(iku) GAN <sub>2</sub> x [...]                         | 1 eše <sub>3</sub> 4 iku field area ... |
| 3. 1(eše <sub>3</sub> ) | GAN <sub>2</sub> [...]                                  | 1 eše <sub>3</sub> field area ...       |
| 4. 5(iku)               | GAN <sub>2</sub> x [...]                                | 5 iku field area ...                    |
| 5. [...]                | GAN <sub>2</sub> <sup>2</sup>                           | ... field area ...                      |
- rest broken

Reverse

broken

#### §3.2. BM 19683

Measurements: 4.2×3.6×2.3

Provenience: Girsu

Date: AS 3/-/-

##### §3.2.1. Transliteration and Translation

Obverse

Column 1

- |  |                                     |   |
|--|-------------------------------------|---|
| 1. a <sub>2</sub> -pa <sub>5</sub>     | na-ba-sa <sub>2</sub> -ta           | From the side of the Nabasa-canal:      |
| 2. 1.30 ninda                          | gid <sub>2</sub> 1 kuš <sub>3</sub> | 90 ninda the length, 1 cubit            |
|  | dagal 1 kuš <sub>3</sub> sukud      | the width, 1 cubit the height,          |
| 3. a-ša <sub>3</sub>                   | 7 1/2 sar                           | the volume 7 1/2 sar;                   |
| 4. 1.00 ninda                          | gid <sub>2</sub> 1 kuš <sub>3</sub> | 60 ninda the length,                    |
|  | dagal 2 kuš <sub>3</sub> sukud      | 1 cubit the width, 2 cubits the height, |
| 5. a-ša <sub>3</sub>                   | 20 sar                              | the volume: 20 sar;                     |
| 6. a-pi <sub>4</sub> -sal <sub>4</sub> | x [...]                             | Apisal ...;                             |
- rest broken

Column 2

- |                            |                |
|----------------------------|----------------|
| 1. 20 [...]                | 20 ...         |
| 2. a-ša <sub>3</sub> [...] | the volume ... |
| 3. 12 x [...]              | 12 ...         |
| 4. a [...]                 | ...            |
| 5. a <sup>1</sup> [...]    | ...            |
- rest broken

Reverse

Column 1

beginning broken

- |          |     |
|----------|-----|
| 1. [...] | ... |
|----------|-----|

- |                            |                      |
|----------------------------|----------------------|
| 2. n [...]                 | n ...                |
| 3. n [...]                 | n ...                |
| 4. a <sub>2</sub> [...-ta] | from the side of ... |

Column 2

beginning broken

- |                        |   |                                |
|------------------------|---|--------------------------------|
| 1. 55 ninda            | gid <sub>2</sub> 1 kuš <sub>3</sub> <sup>1</sup>                    | 55 ninda the length,           |
|                        | [dagal] 1 kuš <sub>3</sub>  | 1 cubit the width, 1 cubit     |
|                        | sukud <sup>1</sup>  | the height;                    |
| 2. a-ša <sub>3</sub>   | 4 1/2 sar 5 gin <sub>2</sub>  | the volume 4 1/2 sar, 5 shek-  |
|                        |   | els.                           |
| 3. e a-ša <sub>3</sub> | pirig-tur-gin <sub>7</sub> -  | For a levee in the field       |
|                        | DU-še <sub>3</sub>  | Pirigtur-gin-DU.               |
|                        |   | blank space                    |
| 4. šuniğin             | 8.50 ninda gid <sub>2</sub>   | Total: 530 ninda the length.   |
| 5. šuniğin             | 1.58 1/2 sar kin  | Total: 118 1/2 sar the activi- |
|                        | sahar u <sub>3</sub> <sup>1</sup> u <sub>2</sub> -sag <sub>11</sub> | ty for earthwork and reed      |
|                        |   | bundle for barges.             |
| 6. e a-ša <sub>3</sub> | lugal-mussa <sup>sa2</sup>  | The levee of the Lugal-mussa   |
|                        | gaba a-geštin-na-ka   | field that is in front of      |
|                        |   | A-geštin field.                |
| 7. e ki-sumun-na       | gid <sub>2</sub> -da  | has been measured up to the    |
|                        |   | levee of a plot with poor      |
|                        |   | soil?;                         |
| 8. ugula sanga         | dumu-zi u <sub>3</sub>  | the foremen (are) the          |
|                        | sanga nin-DAR-a   | chief administrator of (the    |
|                        |   | temple of) Dumuzi and          |
|                        |   | the chief administrator of     |
|                        |   | (the temple of) Nin-           |
|                        |   | DARa.                          |

Left Edge

- |             |   |                           |
|-------------|---|---------------------------|
| 1. mu gu-za | den-lil <sub>2</sub> -la <sub>2</sub> ba- | Year: The throne of Enlil |
|             | [dim <sub>2</sub> ]                       | was fashioned.            |

§3.2.2. The text, even if it is considerably broken, records, in the preserved part of the obverse, the earth to be removed from the side of the Nabasa canal, by measuring its length, width and height and calculating the total volume. The expression “a<sub>2</sub>-pa<sub>5</sub>” (obv. i 1) never appears in the texts of Ur III, but the meaning is clear. Parallel texts, recording work to be done on canals and recording the length, width, and height are RTC 412 (Girsu, AS 3/-/-) and ASJ 13, 225 71 (Girsu, undated). In the preserved part of the reverse, length, width, and height are recorded, together with the calculation of volume, for the construction of a levee in a field whose name is damaged. Moreover, the total sum of earth and reeds<sup>2</sup> to be used for building a levee in the field Lugal-mussa located in front of the field A-geštin is recorded. In the lower edge, the expression ki sumun has an unknown meaning; K. Maekawa (1992: 198) suggests that it could mean “plots with poor soil.” The expression is attested about

<sup>2</sup> For the expression in rev. ii 7, u<sub>2</sub>-sag<sub>11</sub>, see Robson 1999: 106.

fifty times, and it is documented in almost all cases in Girsu, although there are other attestations from Garšana (*CUSAS* 3, 1362; IS 2/i/–), Irisagrig (*Nisaba* 15/2, 462; ŠS 8/–/–), Umma (*PPAC* 5, 1646; date broken) and Ur (*UET* 3, 1367; ŠS 9/x/–).

### §3.3. BM 19997

*Measurements:* 11×7.2×3.2

*Provenience:* unknown

*Date:* –/–/–

#### §3.3.1. Transliteration and Translation

*Obverse*

*Column 1*

- |  |  |
|--|--|
| 1. 1(iku) 1/4 (iku) GAN <sub>2</sub><br>ḡeš <sup>es</sup> kiri <sub>6</sub>  | 1 1/4 iku the surface (of the)<br>orchard;               |
| 2. 2.20 ḡeš <sup>es</sup> ḡešnimbar  | (there are) 140 date palms;                              |
| 3. ug <sub>3</sub> -IL <sub>2</sub> nu-ḡeš <sup>es</sup> kiri <sub>6</sub>   | UgIL the (responsible) or-<br>chardist;                  |
| 4. a-ru-a lu <sub>2</sub> - <sup>d</sup> nanna<br>dumu ur-ur   | ex-voto of Lu-Nanna<br>son of Ur-ur;                     |
| 5. ugula ab-ba-gu-la   | the foreman Abba-gula.                                   |
| 6. 2(iku) 1/2(iku) GAN <sub>2</sub><br>ka-a-DU   | 2 1/2 iku the surface (of<br>the) irrigation-inlet-plot; |
| 7. 3(iku) 1/2(iku) GAN <sub>2</sub><br>ki-ḡal <sub>2</sub>   | 3 1/2 iku the surface (of)<br>uncultivated land;         |
| 8. 3.53 ḡeš <sup>es</sup> ḡešnimbar  | 233 date palms   |
| 9. 1.00 ḡeš <sup>es</sup> ḡešnimbar u <sub>2</sub><br>du <sub>11</sub> -ga   | 60 date palms (which have<br>been) cut down;             |
| 10. 25.43 <HAR>-lam<br>ḡeš <sup>es</sup> u <sub>3</sub> -suh <sub>5</sub>  | 1543 “HARlam” objects<br>of pine trees;                  |
| 11. 7.10 HAR ḡeš <sup>es</sup> hašhur  | 430 “HAR” objects of apple<br>trees;                     |
| 12. 12 HAR ḡeš <sup>es</sup> peš <sub>3</sub>  | 12 “HAR” objects of pear<br>trees;                       |
| 13. <...> HAR ḡeš <sup>es</sup> še-du <sub>10</sub> gid <sub>2</sub>   | ... “HAR” objects of long juni-<br>pers;                 |
| 14. 20 la <sub>2</sub> 2 ḡeš <sup>es</sup> mes gid <sub>2</sub>  | 18 “HAR” objects of long<br>boxwood trees;               |
| 15. 7 ḡeš <sup>es</sup> gipar <sub>x</sub> (PAR <sub>4</sub> )   | 7 mulberry trees;  |
| 16. 15 HAR ḡeš <sup>es</sup> šinig gid <sub>2</sub>  | 15 “HAR” objects of long<br>tamarisk;                    |
| 17. nimgir-KA-gi-na  | (the responsible gardener:)<br>Nimgir-Kagina;            |
| 18. ḡeš <sup>es</sup> kiri <sub>6</sub> amar-sun <sub>2</sub> -zi-da   | orchard (of) Amar-sunzida.                               |
| 19. 10 sar GAN <sub>2</sub> ḡeš <sup>es</sup> ḡešnimbar  | 10 sar the surface of date<br>palms;                     |
| 20. 16 ḡeš <sup>es</sup> ḡešnimbar   | (there are) 16 date palms;                               |
| 21. lu <sub>2</sub> -KA-ni gu-za-la <sub>2</sub>   | (responsible is) LuKAni, the<br>throne-bearer;           |
| 22. ḡeš <sup>es</sup> kiri <sub>6</sub> a-diri e <sub>2</sub> -he <sub>2</sub> -ḡal <sub>2</sub><br>unu <sub>3</sub> | orchard Adiri (of) E-heḡal,<br>the herdsman;             |
| 23. ḡugula? ḡden-lil <sub>2</sub> -la <sub>2</sub>   | the foreman(?) Enlila;                                   |

*Column 2*

*Almost totally blank. The number 8 (OB form) is written in the lower part. The number 3 is written in the center.*

*Reverse*

*blank space*

§3.3.2. The text records the sizes of gardens and the number of their trees, although formulations at the end of the text (ḡeš<sup>es</sup>kiri<sub>6</sub> gid<sub>2</sub>-da, ḡeš<sup>es</sup>šid-da) are missing. It records the extent, composition, and presence of trees in two orchards, probably designated by the name of a person; for one in particular it is specified that he is a herdsman (unu<sub>3</sub>). The first orchard is divided into two parcels, each under the responsibility of an orchardist: UgIL and Nimgir-Kagina. The parcel under the responsibility of UgIL measures 4,500 m<sup>2</sup> of land cultivated as a date palm grove with 140 date palms. The land is defined as ex-voto of Lu-Nanna, son of Ur-ur, under the supervision of Abba-gula, whose title is not specified (possibly a šandana). The second, larger parcel consists of 9,000 m<sup>2</sup> of land defined as an “irrigation-inlet-plot” (ka-a-DU; see Greco 2015: 23) and 9,000 m<sup>2</sup> of uncultivated land. In this parcel, under the responsibility of the orchardist Nimgir-Kagina, there are 233 (standing) date palms, 60 date palms which are already cut down (u<sub>2</sub> du<sub>11</sub>-ga; see Attinger 1993: 733), 1543 objects <HAR>-lam<sup>3</sup> related to pine trees (ḡeš<sup>es</sup>u<sub>3</sub>-suh<sub>5</sub>), 430 objects HAR linked to apple trees (ḡeš<sup>es</sup>hašhur), 12 objects HAR related to pear trees (ḡeš<sup>es</sup>peš<sub>3</sub>), an unspecified number of objects HAR linked with junipers, 18 box trees (both qualified as “long,” gid<sub>2</sub>), seven trees called ḡeš<sup>es</sup>gipar<sub>x</sub> (perhaps mulberry trees), 15 objects HAR linked to tamarisk, also qualified as being long. The second orchard, whose dimensions are below the average, measures 360 m<sup>2</sup>, with 16 date palms, is attributed to the responsibility of the throne-bearer Lu-KAni. The mention of the orchard is probably followed by an indication of the supervisor, Enlila, who could be a “šandana” of the city Nigin (in older literature Nina).

### §3.4. BM 23029

*Measurements:* 11×7.2×3.2

*Provenience:* unknown

*Date:* –/–/–

#### §3.4.1. Transliteration and Translation

<sup>3</sup> The meaning of the object HAR associated with wood or trees is unclear (see Greco 2015: 73). The word “lam” in connection with wood or trees never occurs alone but always in conjunction with one of two objects: HAR-lam or KIŠ-lam. In connection with pine (u<sub>3</sub>-suh<sub>5</sub>), we know of two attestations (*CUSAS* 3, 1255; *CUSAS* 3, 272), both with the form HAR-lam.

Obverse

1. 2;0.4 še gur lugal 2 gur 4 ban<sub>2</sub> barley, (measured in) royal (gur)

blank space

2. še ur<sub>5</sub>-ra-še<sub>3</sub> as a barley loan

3. ki ur-NI-ta from UrNI,

Reverse

1. ur-<sup>Γ</sup>niġar<sup>Γ</sup> Ur-niġar

2. <sup>Γ</sup>šu ba<sup>Γ</sup>-ti has received;

3. [kišib<sub>3</sub>] a-tu sealed by Atu;

blank space

4. iti amar-a-a-si month: "Amara'si,"

5. mu ur-bi<sub>2</sub>-lum<sup>ki</sup> ba-ḫul year: "Urbilum was destroyed."

§3.4.2. This simple text records a barley loan.<sup>4</sup> The name Ur-NI is very rare in Girsu;<sup>5</sup> it is documented only five times and never in connection with loans.

§3.5. BM 23092

Measurements: 4×3.4×2.4

Provenience: Girsu

Date: Š 46/x/

§3.5.1. Transliteration and Translation

Obverse

1. 13;4.0 še gur lugal 13 gur 4 barig of barley, (measured in) royal (gur),

2. še ur<sub>5</sub>-ra engar nu-banda<sub>3</sub>-<gu<sub>4</sub>> barley loan for the plowmen of the oxen overseer

seal impression

3. i<sub>3</sub>-dub<sup>d</sup>nin-ḫur-saġ-ta from the warehouse of Nin-hursaġ,

4. ki ba-zi-ta from Bazi,

5. mu ma-an-šum<sub>2</sub>-<še<sub>3</sub>> instead of Manšum

Reverse

1. kišib<sub>3</sub> nam-ḫa-ni sealed by Namḫani,

2. šeš-a-na his brother;

3. e<sub>2</sub> nam-ḫa-ni household of Namḫani;

seal impression

4. iti amar-a-a-si month: "Amara'si,"

5. mu ki-maš<sup>ki</sup> ba-ḫul year: "Kimaš was destroyed."

Seal

1. nam-[ḫa-ni] Namḫani,

2. dub-[sar] scribe,

3. [...] ...

§3.5.2. The text records a barley loan to plowmen of an

<sup>4</sup> See Paoletti & Spada 2005 for a general overview of barley loans.

<sup>5</sup> HLC 91 (pl. 31) obv. iii 20, CM 26, 68 obv. 2 & 85 obv. 4; Nisaba 7, 39 obv. 3 & 46 obv. 2.

oxen overseer from the warehouse of Ninḫursaġ. Barley loans from this warehouse are documented in Nisaba 13, 39, MVN 12, 239, and Nisaba 10, 68, dated to Š 47/x/-; these three documents support the addition of "gu<sub>4</sub>" in obv. 2. The barley loan documented in Nisaba 10, 68, comes from Bazi as well.

§3.6. BM 102106

Measurements: 4×3.4×2.4

Provenience: Girsu

Date: Š 46/x/

§3.6.1. Transliteration and Translation

Obverse

1. <sup>Γ</sup>19<sup>Γ</sup>;3.1 še gur lugal 19 gur 3 barig 1 ban<sub>2</sub> barley, (according to the) royal (measure),

2. ki ur-<sup>d</sup>da-mu-ta from Ur-Damu;

3. 21;2.4 ki ur-<sup>d</sup>lamma 21 gur 2 barig 4 ban<sub>2</sub> from Ur-Lamma, son of Lu-Suen;

blank space

4. šuniġin 41;0.5 še<sup>l</sup> gur total: 41 gur 5 ban<sub>2</sub> barley; therefrom:

5. ša<sub>3</sub>-bi-ta 6 bur<sub>3</sub> 1 eše<sub>3</sub> 5 iku field area (sowed with) 1 gur 2 barig 3 ban<sub>2</sub> each (bur<sub>3</sub>);

6. 6(bur<sub>3</sub>) 1(eše<sub>3</sub>) 5(iku) GAN<sub>2</sub> 1;2.3-ta 3 bur<sub>3</sub> 1 eše<sub>3</sub> 3 1/4 iku field area (sowed with) 1 gur 3 barig 1 ban<sub>2</sub> 5 sila<sub>3</sub> each (bur<sub>3</sub>);

7. 3(bur<sub>3</sub>) 1(eše<sub>3</sub>) 3(iku) 1/4(iku) GAN<sub>2</sub> 1;3.1 5 sila<sub>3</sub>-ta 1 bur'u, 2 bur<sub>3</sub> 2 eše<sub>3</sub> 3 iku field area (sowed with) 1 gur 4 barig each (bur<sub>3</sub>).

8. 1(bur'u) 2(bur<sub>3</sub>) 2(eše<sub>3</sub>) 3(iku) GAN<sub>2</sub> 1;4.0-ta the barley: 38 gur 4 barig 4 1/3 sila;

9. še-bi 38;4.0 4 1/3 sila<sub>3</sub> gur delivery;

10. mu-ku<sub>x</sub>(DU)

Reverse

1. lu<sub>2</sub>-x-[...] x Lu-...,

2. da-da [dumu ur]-<sup>Γ</sup>gu<sup>Γ</sup>-la Dada, son of Ur-gula;

blank space

3. a-ša<sub>3</sub>-maḫ Great Field;

4. nig<sub>2</sub>-ka<sub>9</sub>-ak balanced account,

blank space

5. mu<sup>d</sup>amar-<sup>d</sup>suen lugal year: "Amar-Suen is king."

§3.6.2. The obverse of the tablet records a delivery (mu-ku<sub>x</sub>) of barley to be used for sowing fields of various sizes. The indication on the origin of the text is given by Ur-Lamma son Lu-Suen who is only known in Girsu. In lines 6-8 of the obverse, the scribe recorded the quantities of barley for each "bur<sub>3</sub>" to be used for sowing the fields: the total sum of these three barley amounts is 38;4.0.4



1/3 sila<sub>3</sub> 2 1/2 gin<sub>2</sub>, in the “še-bi” entry in line 9 rounded to 38.4.0.4 1/3 sila<sub>3</sub>. The reverse of the tablet is partially broken, but the final colophon records that it is a “balanced account” (nig<sub>2</sub>-ka<sub>9</sub>-ak) related to the “great field” (a-ša<sub>3</sub>-mah).

### §3.7. BM 106079

*Measurements:* 12.1×8.2×2.4

*Provenience:* Umma

*Date:* AS 6/–/–

#### §3.7.1. Transliteration and Translation

*Obverse*

*Column 1*

1.  $\Gamma$  2(bur<sub>3</sub>) 1(iku) 1/2(iku) 2 bur<sub>3</sub> 1 iku 1/2 iku field  
GAN<sub>2</sub> ḡeš- $\Gamma$  ur<sub>3</sub> ḡ-[ra] area harrowing, 1 time,  
a-ra<sub>2</sub> 1 4(iku) 1/2(iku) at 4 1/2 iku (a day),  
GAN<sub>2</sub>-[ta]
2. a<sub>2</sub> eren<sub>2</sub>-na-bi u<sub>4</sub> 25 its workers' labor: 25 days;
3. 1/2(iku) 1/4(iku) GAN<sub>2</sub> 3/4 iku field area of tug-  
tug<sub>2</sub>-sag<sub>x</sub> (ŠE.KIN) sag work at 1/4 iku (a  
1/4(iku) GAN<sub>2</sub>-ta day),
4. a<sub>2</sub> eren<sub>2</sub>-na-bi u<sub>4</sub> 3 its workers' labor: 3 days;
5.  $\Gamma$  iti ḡ dal month: “Flight;”
6. 1(bur'u) 1(bur<sub>3</sub>) 1(eše<sub>3</sub>) 1 bur'u 1 bur<sub>3</sub> 1 eše<sub>3</sub> 3 iku  
3(iku) GAN<sub>2</sub> ḡeš- field area harrowing, 2  
[ur<sub>3</sub>]-ra a-ra<sub>2</sub> 2 1(eše<sub>3</sub>) times, at 1 eše<sub>3</sub> (a day),  
GAN<sub>2</sub>-[ta]
7.  $\Gamma$  a<sub>2</sub> eren<sub>2</sub>-na-bi u<sub>4</sub> 3.27 its workers' labor: 207 days;
8. 3(bur<sub>3</sub>) 2(iku) 1/2(iku) 3 bur<sub>3</sub> 2 1/2 iku harrowing,  
GAN<sub>2</sub> ḡeš- $\Gamma$  ur<sub>3</sub>-ra ḡ 3 times, at 1 eše<sub>3</sub> field  
a-ra<sub>2</sub> 3 1(eše<sub>3</sub>) GAN<sub>2</sub>-ta area (a day),
9. a<sub>2</sub> eren<sub>2</sub>-na-bi u<sub>4</sub> 1.24 2/3 its workers' labor: 84 2/3  
days;

*blank space*

10. a<sub>2</sub> ḡeš-ur<sub>3</sub>-ra labor of harrowing;
11. 19.33 sar al 6 sar-[ta] 1173 sar of hoeing, at 6 sar  
(a day),
12.  $\Gamma$  a<sub>2</sub> ḡ-bi u<sub>4</sub> 3.15 1/2 its labor: 195 1/2 days;
13. 12.45 sar al 30 sar-ta 765 sar of hoeing, at 30 sar  
(a day);
14. a<sub>2</sub>-bi u<sub>4</sub> 25 1/2 its labor: 25 1/2 days;
15. 30.20 sar <sup>u</sup>kiš<sub>17</sub> ku<sub>5</sub>-ra<sub>2</sub> 1820 sar acacia cut at 20 sar  
(a day),

2(u) sar-ta

*Column 2*

1. [a<sub>2</sub>-bi u<sub>4</sub> 1.31] its labor: 91 days;
2. 10.00 [... sar-ta] 600+ at n sar (a day),
3. a<sub>2</sub>-[bi u<sub>4</sub> ...] its labor: n days;
4. 17.40 [... sar-ta] 1060+ at n sar (a day),
5. a<sub>2</sub>-bi u<sub>4</sub> 1.20 [...] its labor: 80+ days;
6. 4.30 sar <sup>u</sup>kiš<sub>17</sub> 10 sar-ta 270 sar: acacia at 10 sar (a  
day);
7. a<sub>2</sub>-bi u<sub>4</sub> 27 its labor: 27 days;

8. 1.03 sar <sup>u</sup>kiš<sub>17</sub> x 7 sar-ta 63 sar acacia at 7 sar (a  
day);
9. a<sub>2</sub>-bi u<sub>4</sub> 10 la<sub>2</sub> 1 its labor: 9 days.
10. 12.22 1/2 sar al 15 sar-ta 742 1/2 sar of hoeing at 15  
sar (a day),
11. a<sub>2</sub>-bi u<sub>4</sub> 49 1/2 its labor: 49 1/2 days;
12. 20 sar nig<sub>2</sub>-gul 10 sar-ta 20 sar of pickaxing at 10 sar  
(a day),
13. a<sub>2</sub>-bi u<sub>4</sub> 2 its labor: 2 days;
14. 7.07 sar al 7 sar-ta 427 sar of hoeing at 7 sar (a  
day),
15. a<sub>2</sub>-bi u<sub>4</sub> 1.01 its labor: 61 days;
16. 10.28 1/3 sar al 6 1/2 sar-ta 628 1/3 sar at 6 1/2 sar (a  
day),

*Reverse*

*Column 1*

1. [a<sub>2</sub>]-bi u<sub>4</sub> 1.36 2/3 its labor: 96 2/3 days;
2. 38 1/2 sar al 5 1/2 [sar-ta] 38 1/2 sar of hoeing at 5 1/2  
sar (a day),
3. a<sub>2</sub>-bi u<sub>4</sub> 7 its labor: 7 days;
4. 4.52 1/2 sar al 5 292 1/2 sar of hoeing at 5 sar  
 $\Gamma$  sar ḡ-[ta] (a day),
5. a<sub>2</sub>-bi u<sub>4</sub> 58 1/2 its labor: 58 1/2 days;
6. 8 sar al 4 sar-ta 8 sar of hoeing at 4 sar (a  
day),
7. a<sub>2</sub>-bi u<sub>4</sub> 2 its labor: 2 days;
8. a<sub>2</sub> lu<sub>2</sub> huḡ-ḡa<sub>2</sub> 6 sila<sub>3</sub>-ta work of hirelings at 6 sila<sub>3</sub> (a  
day);
9. 25 sar al 5 sar-ta 25 sar of hoeing at 5 sar (a  
day),
10. a<sub>2</sub>-bi u<sub>4</sub> 5 its labor: 5 days;
11. 3.20 sar [al ...] 20 sar-ta 200 sar of hoeing at 20 sar (a  
day),
12. a<sub>2</sub>-bi u<sub>4</sub> 10 its labor: 10 days;
13. a<sub>2</sub> ša<sub>3</sub>-gu<sub>4</sub>-ka seal impression  
seal impression

*Column 2*

1. a-ša<sub>3</sub>-ge kin-ak field work done
2. a-ša<sub>3</sub> ka-ma-ri<sub>2</sub> (in the) field of Kamari;
3. ugula ba-sa<sub>6</sub> foreman: Basa;
4. kišib<sub>3</sub> nimgir-an-ne<sub>2</sub> sealed by Nimgir-ane.  
seal impression
6.  $\Gamma$  mu ḡ a-ra<sub>2</sub> 2-kam ša-[aš-  
ru]-um<sup>ki</sup> ba-ḡul Year: Šašrum was destroyed  
for the 2<sup>nd</sup> time.

*Seal*

1. nimgir-an-ne<sub>2</sub> Nimgir-ane,
2. dub-sar scribe,
3. dumu inim-d<sup>š</sup>sara<sub>2</sub> son of Inim-Šara.

§3.7.2. This tablet records an agricultural labor team's maintenance work on fields. The first section of the text (obv. i 1-10) records the number of workdays of work gangs for harrowing (a<sub>2</sub> ḡeš-ur<sub>3</sub>-ra), while the second section (obv. i 11 – rev. i 13) records the amount of work-

days for workers qualified as  $lu_2$   $hu\hat{g}$ - $\hat{g}a_2$  and  $\mathring{s}a_3$ - $gu_4$  for hoeing (al). On obv. ii 12 of the obverse, the expression  $ni\hat{g}_2$ - $gul$  appears, which, according to K. Maekawa (1997: 126), is to be translated as “pickaxing.” The second column of the reverse indicates that the record describes fieldwork done ( $a$ - $\mathring{s}a_3$ - $ge$   $kin$ - $ak$ ) in the field of Kamari, and the foreman’s name.

### §3.8. BM 106101

*Measurements: 11.2×5.2×2.1*

*Provenience: Umma*

*Date: undated*

#### §3.8.1. Transliteration and Translation

*Obverse*

- |   |  |
|---|--|
| 1. $1\frac{1}{2}$ ninda $gid_2$ 3 kuš <sub>3</sub><br>dagal 2 kuš <sub>3</sub> bur <sub>3</sub>   | <i>1 1/2 ninda the length, 3 cubits the width, 2 cubits the depth,</i>               |
| 2. a- $\mathring{s}a_3$ -bi $\frac{2}{3}$ sar 5 gin <sub>2</sub>  | <i>its volume: 2/3 sar 5 shekels;</i>  |
| 3. $\frac{1}{2}$ ninda 4 kuš <sub>3</sub> $gid_2$ 4 kuš <sub>3</sub> dagal 2 $\frac{1}{3}$ kuš <sub>3</sub> bur <sub>3</sub>              | <i>1/2 ninda 4 cubits the length, 4 cubits the width, 2 1/3 cubits the depth,</i>    |
| 4. a- $\mathring{s}a_3$ -bi $\frac{2}{3}$ sar $la_2$ 1 gin <sub>2</sub>   | <i>its volume: 2/3 sar less 1 shekel;</i>  |
| 5. 2 ninda $gid_2$ 4 kuš <sub>3</sub> dagal $1\frac{2}{3}$ kuš <sub>3</sub> bur <sub>3</sub>  | <i>2 ninda the length, 4 cubits the width, 1 2/3 cubits the depth,</i>               |
| 6. a- $\mathring{s}a_3$ -bi 1 sar $6\frac{2}{3}$ gin <sub>2</sub>   | <i>its volume :1 sar 6 2/3 shekels;</i>  |
| 7. 2 ninda $gid_2$ 4 kuš <sub>3</sub> dagal 1 kuš <sub>3</sub> bur <sub>3</sub>   | <i>2 ninda the length, 4 cubits the width, 1 cubit the depth,</i>                    |
| 8. a- $\mathring{s}a_3$ -bi $\frac{2}{3}$ sar   | <i>its volume: 2/3 sar;</i>  |
| 9. $3\frac{1}{2}$ ninda 3 kuš <sub>3</sub> $gid_2$ 4 kuš <sub>3</sub> dagal 2 kuš <sub>3</sub> bur <sub>3</sub>                           | <i>3 1/2 ninda 3 cubits the length, 4 cubits the width, 2 cubits the depth,</i>      |
| 10. a- $\mathring{s}a_3$ -bi 2 $\frac{1}{2}$ sar  | <i>its volume: 2 1/2 sar;</i>  |
| 11. $\frac{1}{2}$ ninda 1 kuš <sub>3</sub> $gid_2$ $2\frac{2}{3}$ kuš <sub>3</sub> dagal $1\frac{1}{3}$ kuš <sub>3</sub> bur <sub>3</sub> | <i>1/2 ninda 1 cubit the length, 2 2/3 cubits the width, 1 1/3 cubits the depth,</i> |
| 12. a- $\mathring{s}a_3$ -bi 10 $\frac{1}{3}$ gin <sub>2</sub>  | <i>its volume: 10 1/3 shekels;</i>   |
| 13. $\frac{1}{2}$ ninda $gid_2$ 3 kuš <sub>3</sub> dagal 2 kuš <sub>3</sub> bur <sub>3</sub>  | <i>1/2 ninda the length, 3 cubits the width, 2 cubits the depth,</i>                 |
| 14. a- $\mathring{s}a_3$ -bi 15 gin <sub>2</sub>  | <i>its volume: 15 shekels;</i>   |
| 15. $\frac{1}{2}$ ninda $gid_2$ 3 kuš <sub>3</sub> dagal $1\frac{1}{3}$ kuš <sub>3</sub> bur <sub>3</sub>                                 | <i>1/2 ninda the length, 3 cubits the width, 1 1/3 cubits the depth,</i>             |
| 16. a- $\mathring{s}a_3$ -bi 10 gin <sub>2</sub>  | <i>its volume: 10 shekels;</i>   |
| 17. $1\frac{1}{2}$ ninda 2 kuš <sub>3</sub> $gid_2$ nu-ak   | <i>1 1/2 ninda 2 cubits the length; unfinished (measurements);</i>                   |
| 18. 1 ninda 1 kuš <sub>3</sub> $gid_2$ 3  | <i>1 ninda 1 cubit the length,</i>   |

kuš <sub>3</sub> dagal $1\frac{2}{3}$ kuš <sub>3</sub> bur <sub>3</sub>	<i>3 cubits the width, 1 2/3 cubits the depth;</i>
19. a- $\mathring{s}a_3$ -bi $\frac{1}{3}$ sar 7 gin <sub>2</sub>	<i>its volume 1/3 sar 7 shekels;</i>
20. 8 gin <sub>2</sub> DUB- $la_2$	<i>8 shekels DUBla;</i>

*Reverse*

*blank space*

- |  |   |
|--|---|
| 1. $\mathring{s}uni\hat{g}in$ $6\frac{2}{3}$ sar 1 gin <sub>2</sub><br>kin sahar | <i>total: 6 2/3 sar 1 shekel earthwork,</i>           |
| 2. im-du <sub>8</sub> -a e <sub>2</sub> $ni\hat{g}_2$ -lagar-ka                  | <i>pisé wall work for the household of Niġ-lagar.</i> |

*blank space*

§3.8.2. The text records the extent of mud/pisé construction work (im-du<sub>8</sub>-a) in the household of Niġ-lagar (see Sallaberger 1993: 242). This household is only documented in Umma and so we have an indication of the origin of the text. On the obverse of the tablet, the scribe recorded the amount of construction by measuring the length, width, and (height=) depth of presumed walls and then calculating their volume. In the colophon on the reverse, the total volume of the construction resulting from the sum of the volumes written on the obverse is recorded.<sup>6</sup> The text presents two problems: the last line of the obverse where we can read the expression “8 gin<sub>2</sub> DUB- $la_2$ ” is not attested in this context and it is not clear to what 8 shekels refer. The second problem is represented by the expression nu-ak in line 17 of the obverse. As one can see, that line would have had, like the previous ones, the recording of length, width, and depth of the earth to be excavated. For some reason, the scribe has recorded only the length. The phrase that follows, nu-ak appears in similar contexts in seven texts from both Girsu<sup>7</sup> and Umma<sup>8</sup>. These texts document work on canals by recording the total volume of earth to be excavated. The phrase nu-ak, that literally means “not done,” probably signifies, as already noted by P. Notizia (Mander & Notizia 2009: 246), that, for unclear reasons, the work was incomplete.

### §3.9. BM 106102

*Measurements: 12×5.9×2.5*

*Provenience: Umma*

*Date: Š 42/–/–*

#### §3.9.1. Transliteration and Translation

<sup>6</sup> The sum of all the entries (without the 8 gin<sub>2</sub> DUBla in line 20) is  $6\frac{2}{3}$  sar 3 gin<sub>2</sub>. The  $\mathring{s}uni\hat{g}in$  entry of the reverse has  $6\frac{2}{3}$  sar 1 gin<sub>2</sub>.

<sup>7</sup> ASJ 19, 142 127 (Š 36/–/–); RTC 412 (AS 3/–/–); ASJ 13, 225 71 (–/–/–); JCS 63, 26 (–/–/–); CT 3, 35 BM 21335 (–/–/–); ASJ 14, 243 92 (–/–/–).

<sup>8</sup> SAT 2, 210 (Š 39/–/–).

Obverse

- |   |   |   |  |
|---|---|---|--|
| 1. [...] <sub>x</sub> [...]   | ...   | 7. a <sub>2</sub> -bi u <sub>4</sub> 18 <sup>1</sup>  | <i>its labor: 18 days;</i>                   |
| 2. [a <sub>2</sub> ]-bi u <sub>4</sub> [...]                                  | <i>its labor: n days;</i>                                 | 8. x <sup>1</sup> 2.00 <sup>2</sup> 1 <sup>1</sup> guruš <sup>1</sup> u <sub>4</sub> <sup>1</sup> | <i>120<sup>2</sup> workers for ... days,</i> |
| 3. 5(iku) GAN <sub>2</sub> tug <sub>2</sub> -sag <sub>x</sub> x x             | <i>5 iku of tug-sag work ...</i>                          | [n]-še <sub>3</sub>   |  |
| ġeš-ur <sub>3</sub> -ra a-ra <sub>2</sub> 3 4(iku)                            | <i>(labor of) harrowing, 3</i>                            | 9. la-ag ab-sin <sub>2</sub> -ta ri-ri-ga   | <i>(for) cleaning the furrows</i>            |
| 1/2(iku) GAN <sub>2</sub> -ta   | <i>times, at 4 1/2 iku field</i>                          |   | <i>of clumps of earth and</i>                |
|   | <i>area (a day),</i>                                      |   | <i>debris;</i>                               |
| 5. a <sub>2</sub> -bi u <sub>4</sub> 38 1/3-kam                               | <i>its labor: 38 1/3 days;</i>                            | 10. 1 <sup>1</sup> gurum <sub>2</sub> <sup>1</sup> -ak ur-ġeš <sup>3</sup> gigir                  | <i>inspection of Ur-gigir, the</i>           |
| 6. 4(bur <sub>3</sub> ) GAN <sub>2</sub> 1 <sup>1</sup> ġeš-ur <sub>3</sub> - | <i>4 bur<sub>3</sub> of harrowing, 4</i>                  | ugula ašgab <sup>2</sup> (TA)   | <i>supervisor of leather-</i>                |
| ra <sup>1</sup> a-ra <sub>2</sub> 4 1(eše <sub>3</sub> )                      | <i>times, at 1 eše<sub>3</sub> field</i>                  |   | <i>workers(?);</i>                           |
| GAN <sub>2</sub> -ta  | <i>area (a day),</i>                                      | 11. ugula ur-ġeš <sup>3</sup> gigir [nu]-   | <i>the foreman (is) Ur-gigir, the</i>        |
| 7. a <sub>2</sub> eren <sub>2</sub> -na-bi u <sub>4</sub> 4.00                | <i>the workers' labor: 240 days;</i>                      | banda <sub>3</sub> -1 <sup>1</sup> gu <sub>4</sub> <sup>1</sup>                                   | <i>oxen overseer;</i>                        |
| 8. 6(bur <sub>3</sub> ) GAN <sub>2</sub> ġeš-ur <sub>3</sub> -ra              | <i>6 bur<sub>3</sub> of harrowing, 3</i>                  | 12. kišib <sub>3</sub> šeš-kal-[la ...]   | <i>sealed by Šeškalla ...;</i>               |
| a-ra <sub>2</sub> 3 1(eše <sub>3</sub> ) GAN <sub>2</sub> -ta                 | <i>times, at 1 eše<sub>3</sub> field</i>                  | 13. a-ša <sub>3</sub> ka-[ma-ri <sub>2</sub> <sup>ki</sup> ]?                                     | <i>(in the) Kamari field;</i>                |
| GAN <sub>2</sub> -ta  | <i>area (a day),</i>                                      | seal impression   |  |
| 9. a <sub>2</sub> eren <sub>2</sub> -na-bi u <sub>4</sub> 4.30                | <i>the workers' labor: 270 days;</i>                      | 14. [mu] ša-aš-šu <sub>2</sub> -ru <sup>ki</sup> ba-ḥul   | <i>Year: "Šaššuru was de-</i>                |
| 10. 3(bur <sub>3</sub> ) 1(eše <sub>3</sub> ) 5(iku)                          | <i>3 bur<sub>3</sub>, 1 eše<sub>3</sub> 5 iku of har-</i> |   | <i>stroyed."</i>                             |
| GAN <sub>2</sub> ġeš-ur <sub>3</sub> -ra a-ra <sub>2</sub>                    | <i>rowing, 2 times, at 1</i>                              |   |  |
| 2 1(eše <sub>3</sub> ) GAN <sub>2</sub> -ta                                   | <i>eše<sub>3</sub> field area (a day),</i>                |   |  |
| 11. a <sub>2</sub> eren <sub>2</sub> -na-bi u <sub>4</sub> 1.48               | <i>the workers' labor: 108 days;</i>                      |   |  |
| 12. a <sub>2</sub> 1 <sup>1</sup> ġeš-ur <sub>3</sub> -ra <sup>1</sup>        | <i>labor of harrowing;</i>                                |   |  |
| 13. 2.30 sar al 5 sar-ta  | <i>150 sar of hoeing at 5 sar (a</i>                      |   |  |
|   | <i>day),</i>  |   |  |
| 14. a <sub>2</sub> -bi u <sub>4</sub> 30                                      | <i>its labor: 30 days;</i>                                |   |  |
| 15. 1 <sup>1</sup> 31.51 <sup>1</sup> sar al 6 sar-ta                         | <i>1911 sar of hoeing at 6 sar (a</i>                     |   |  |
|   | <i>day),</i>  |   |  |
| 16. 1 <sup>1</sup> a <sub>2</sub> -bi <sup>1</sup> u <sub>4</sub> 5.18 1/2    | <i>its labor: 318 1/2 days;</i>                           |   |  |
| 17. 1 <sup>1</sup> 24.37 <sup>1</sup> sar al 7 sar-ta                         | <i>1477 sar of hoeing at 7 sar (a</i>                     |   |  |
|   | <i>day),</i>  |   |  |
| 18. 1 <sup>1</sup> a <sub>2</sub> -bi u <sub>4</sub> 3.31 <sup>1</sup>        | <i>its labor: 211 days;</i>                               |   |  |
| 19. 1 <sup>1</sup> 29.00 sar al 8 sar-ta <sup>1</sup>                         | <i>1740 sar of hoeing at 8 sar (a</i>                     |   |  |
|   | <i>day),</i>  |   |  |

Reverse

- |   |                                   |
|---|-----------------------------------|
| 1. a <sub>2</sub> -bi u <sub>4</sub> 3.37 1/2       | <i>its labor: 217 1/2 days;</i>   |
| 2. 1 <sup>1</sup> 2.30 sar niġ <sub>2</sub> -gul 15 | <i>150 sar of pickaxing at 15</i> |
| sar-ta <sup>1</sup>                                 | <i>sar (a day),</i>               |
| 3. a <sub>2</sub> -bi u <sub>4</sub> 10             | <i>its labor: 10 days;</i>        |
| 4. 15.00 sar niġ <sub>2</sub> -gul 20               | <i>900 sar of pickaxing at 20</i> |
| sar-ta  | <i>sar (a day),</i>               |
| 5. a <sub>2</sub> -bi u <sub>4</sub> 45             | <i>its labor: 45 days;</i>        |
| 6. 3.36 sar niġ <sub>2</sub> -gul                   | <i>216 sar of pickaxing at 12</i> |
| 1 <sup>1</sup> 12 sar <sup>1</sup> -ta              | <i>sar (a day),</i>               |

Seal

- |                                    |                           |
|------------------------------------|---------------------------|
| 1. lugal-niġ <sub>2</sub> -lagar-e | <i>Lugal-niġ-lagar-e,</i> |
| 2. dub-sar                         | <i>scribe,</i>            |
| 3. [dumu] da-da                    | <i>son of Dada,</i>       |

§3.9.2. The text records an inspection (gurum<sub>2</sub>-ak) for maintenance work on agricultural fields to be done in the area of Kamari. These works have to be carried out by various teams of workers. Personal names help identify its provenience as Umma, where almost all such accounts originate. For each plot, the text records the size, the type of work to be carried out, the field area to be worked each day, and the total number of working days. The most common jobs to be performed are harrowing (ġeš-ur<sub>3</sub>-ra) and hoeing (al). In obv. 3, the expression tug<sub>2</sub>-sag<sub>x</sub> appears: according to T. Maeda (1995: 334), this expression indicates a particular type of work performed by the plough that is different from ġeš-ur<sub>3</sub>-ra and tug<sub>2</sub>-gur<sub>8</sub> (which do not appear in this text). The expression niġ<sub>2</sub>-gul (rev. 2, 4, 6) is discussed in the previous text commentary. A group of guruš workers, whose number is not clear due to an erasure in the text, is employed to clean the furrows of clumps of earth and debris (la-ag ab-sin<sub>2</sub>-ta ri-ri-ga; see Civil 1994: 86).

## BIBLIOGRAPHY

- Attinger, Pascal  
1993 *Éléments de linguistique sumérienne. La construction de du<sub>1</sub>/e "dire". OBO Sonderband 1.* Freiburg: University Press.
- Civil, Miguel  
1994 *The Farmer's Instructions. A Sumerian Agricultural Manual. AuOr Supplementa 5.* Barcelona: Editorial AUSA.
- Greco, Angela  
2015 *Garden Administration in the Girsu Province during the Neo-Sumerian Period. BPOA 12.* Madrid: Consejo Superior de Investigaciones Científicas.
- Maeda, Tohru  
1995 "Three Men of a Gang for Plowing and Four Men for Sowing." *ASJ* 17, 333-337.
- Maekawa, Kazuya  
1992 "The Agricultural Texts of Ur III Lagash of the British Museum (VIII)." *ASJ* 14, 173-243.  
1997 "The Agricultural Texts of Ur III Lagash of the British Museum (XI)." *ASJ* 19, 111-145.
- Mander, Pietro & Notizia, Palmiro  
2009 "Testi relativi all'agricoltura e a lavori di manutenzione fluviale dallo Harvard Semitic Museum." In Paola Negri Scafa & Salvatore Viaggio, eds., *Dallo Stirone al Tigri, dal Tevere all'Eufrate. Studi in onore di Claudio Saporetti.* Rome: Aracne, pp. 233-251.
- Paoletti, Paola & Spada, Gabriella  
2005 *Testi še-ur<sub>5</sub>-ra da Girsu conservati al British Museum. Nisaba 10.* Messina: DiCAM.
- Robson, Eleanor  
1999 *Mesopotamian mathematics, 2100-1600 BC: Technical Constants in Bureaucracy and Education. OECT 14.* Oxford: Oxford University Press.
- Rost, Stephanie  
2011 "Irrigation Management in the Ur III Period: a Reconsideration Based on a Case Study of the Maintenance of the id-NINA-še-DU Canal of the Province of Lagaš." In Gebhard Selz, ed., *The Empirical Dimension of Ancient Near Eastern Studies. WOO 6.* Vienna: LIT-Verlag
- Sallaberger, Walther  
1993 *Der kultische Kalender der Ur III-Zeit. UAVA 7/1.* Berlin: De Gruyter.
- Sallaberger, Walther & Westenholz, Aage  
1999 *Mesopotamien. Akkade-Zeit und Ur III-Zeit. OBO 160/3.* Freiburg: Universitätsverlag & Göttingen: Vandenhoeck & Ruprecht.