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## *On the Location of Irisaĝrig\**

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### ***1. Introduction***

The invasion of Iraq in 2003 and its aftermath left the archaeological sites of the country unprotected and extremely vulnerable to looting. Large scale illegal excavations of unprecedented proportions were carried out just before and after the war through vast areas of Iraqi soil, destroying sites and making some of them irrecoverable for archaeological research. One of the effects of this tragedy has been the appearance on the antiquities market of hundreds of unprovenanced cuneiform tablets purchased by private collectors and institutions. The dimensions and patterns of the looting, and its relationship to the archaeological periods affected by the attacks of the looters and the kind of objects unearthed, have been well studied by E. C. Stone, who wrote that “those sites apt to yield the best cylinder seals (Akkadian), cuneiform tablets (Ur III, Old Babylonian) and early coins (Achaemenid, Parthian) show much more evidence for looting than other periods” (Stone 2008: 135).

In collaboration with D. I. Owen, I have tracked the tablets offered for sale on the web by art galleries, auction houses and antiquaries all over the world since the end of the nineties. Tablets offered in this way after 2003 are in fact, and in accordance with Stone’s conclusions, mainly dated to the Ur III period, and secondarily to the Sargonic and Old Babylonian periods. Some of them come from the usual sites known since the beginnings of the 20th century, such as Umma, Girsu and Puzriš-Dagān, but the vast majority of the tablets come from new and previously unknown sites.

The provenance of these texts is usually difficult to ascertain unless we are faced with big groups of tablets, with prosopographical links among them and with

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\* I wish to thank the following colleagues for their kind help in the preparation of this work: David I. Owen very generously shared with me his unpublished material from the archives of Irisaĝrig (Owen 2013a-b); Piotr Steinkeller sent me his unpublished works, which have been most useful in my research; Elizabeth Stone helped me with the geographical coordinates of some of the sites in which I was interested; Stephanie Rost kindly discussed with me some aspects of this paper and solved some of my doubts concerning watercourses; Bram Jagersma shared with me his thoughts on the orthographic variants of the Tabbi-Mama canal. The technicians of our Geographical Information Systems Laboratory (CCHS-CSIC), and particularly Carlos Fernández Freire and Ernesto Salas Tovar, were of much help in the treatment of the satellite images; they also prepared the figures at the end of the paper. This research has been made possible thanks to the financial support granted by the Spanish Ministerio de Ciencia e Innovación through the project FFI2011-23981.

internal data able to provide that kind of information. This has been the case for an enormous and important group of tablets identified as coming from Irisaĝrig, a Sumerian city never excavated before and whose location remains unknown. This phenomenon of unprovenanced tablets coming from a city known to us through other documents is not new, and has a recent and remarkable example in the archives of GARšana.<sup>1</sup> The exact location of this site has been much debated,<sup>2</sup> and regardless of which arguments we may find more convincing, the problem will only be definitively solved by means of surface surveys or regular archaeological excavations. This will also be the case with the location of Irisaĝrig.

## 2. Previous Research on the Location of Irisaĝrig

Irisaĝrig is well documented in cuneiform sources from the third millennium beginning in Early Dynastic times.<sup>3</sup> Its oldest attestation comes from a text from Fara (*FTUPM* 78), which records drinks for people from Irisaĝrig, Adab and Umma. Later testimonies from Nippur dated to the ED IIIb and the Sargonic periods, particularly year-names in which Irisaĝrig is mentioned, suggest a proximity between the two cities, a fact that was soon pointed out by scholars such as M. Lambert (1953: 13), A. Goetze (1963: 20), or H. Sauren (1966: 99). Some years later, C. Wilcke (1972: 55-59) and H. J. Nissen (1975: 27-28) discussed the toponyms recorded in *TCL* 5 5676: x.11-18, and considered their possible locations in relation to Umma and Adab. This text continues to be essential in the treatment of the location of Irisaĝrig.

Among Early Dynastic cuneiform texts, the List of Geographical Names (LGN) has also been used as a source of information to ascertain the location of Irisaĝrig. Its entry 167, attested in both the Ebla and Abū-Šalābiḥ versions, corresponds to the toponym *Sa(r)-ra-LUM*, identified by Steinkeller with *Šarrākum*/Irisaĝrig (1986: 35; see n. 3 for the reservations of C. Lecompte). Assuming, with Th. Jacobsen (1960), that major watercourses in the alluvium were effluents of the Euphrates, and that the Iturungal was an eastern branch of it, D. Frayne (1992: 28-37)

1. For a reading Niĝšana of this toponym, see P. Steinkeller 2011: 377, and 2012: 42; the reading Garšana has been defended by E. Sollberger 1957/8: 107, and W. Heimpel 2009: 1.

2. See Heimpel 2009: 7-9, and 2011; Steinkeller 2011 and 2013.

3. A Sumerian reading of this toponym is here preferred on the basis of *TCL* 5 5676: r.iv.13, which reads (ĝuruš) u<sub>4</sub> 1-šè Iri-saĝ-rig<sub>s</sub><sup>ki</sup>-ga še má-a si-ga (see C. Wilcke 1972: 55); cf. possibly also *MVN* 18 635: 8. A final consonant /g/ of this toponym could also be supported by a tablet from Zabalam, which reads [URU.D]U.HÚB<sup>ki</sup>-ga (CUNES 52-08-50: r.ii.3, courtesy P. Notizia), in case URU.DU.HÚB<sup>ki</sup> is accepted as a writing for Irisaĝrig in ED IIIb texts from Zabalam, as proposed by S. F. Monaco (*CUSAS* 14 183, *et passim*). The alternative Akkadian reading is supported by the Old Babylonian letter W 20474 (*a-al ša-ra-ki*; see A. Falkenstein 1963: 21), and by later lexical texts (Nabnītu XVII 65 = *MSL* 16, p. 155). The identification of this toponym in the Early Dynastic List of Geographical Names is doubtful: this list records *sa-ra-LUM* / *sar-ra-[LUM]* (167), which according to Steinkeller (1986: 35) could correspond to *Šarrākum*; C. Lecompte (2009: 230) has nevertheless put a question mark on this identification arguing that a reading *gúm* for LUM is very rarely attested in Ebla texts, and that this entry belongs to a section of LGN recording toponyms ending in -lum. For a reading /iri/eri/ere/ of URU, see D. O. Edzard 1991: 77-78, and Attinger 2008: 72.

For the attestations of Irisaĝrig in the Early Dynastic IIIb, Sargonic, Ur III, and Old Babylonian periods, see D. O. Edzard and G. Farber 1974: 232-234; Edzard, Farber and Sollberger 1977: 186-187; B. Groneberg 1980: 251; D. R. Frayne 2013.

suggested that the section of LGN in which *Šarrākum* appears corresponded to cities laying along the Iturungal located just upstream from Adab.

Leaving aside the fact that Heimpel (1990) and Steinkeller (2001) later proposed that the watercourse where Frayne placed *Irisağrig* was the Tigris, the toponyms of the so-called “Iturungal Canal” section are very problematic. As Lecompte has shown (2009: 231-232), none of them can be placed with certainty in the region of Nippur, except perhaps for *Šarrākum/Irisağrig* (167) and PIRIG.TUR<sup>ki</sup> (170). Therefore, for the time being, it seems that the analysis of this section of LGN will hardly provide conclusive information about the relative position of *Irisağrig*.

As a matter of fact, the arguments used by Frayne to localize *Irisağrig* mainly relied on other kind of documentation. Among the sites surveyed by R. McC. Adams and cataloged in his *Heartland of cities* (1981), Frayne (1992: 36-37) proposed site no. 1188, modern Umm al-Hafriyyat, as the plausible location of *Irisağrig*. His main arguments were the following:

a) According to the above-mentioned *TCL 5 5676* (Text 1 in Fig. 1), *Irisağrig* was upstream from Umma, at a distance that boat-towers could cover in four days. The water route followed would have been what Frayne identified as the Iturungal, passing through Jidr and Adab.

b) Site no. 1188 is the largest mound laying north of Adab, in the vicinity of Nippur, with extensive Early Dynastic and Sargonic remains.

c) The archaeological reports about the quality of the clay of Umm al-Hafriyyat. This fact would explain the more than 400 pottery kilns mapped in and around Umm al-Hafriyyat, which according to McG. Gibson (1977/78) made of this site one of the few Mesopotamian towns known to be devoted to the manufacture of pottery and bricks. Following Wilcke, who assumed that Keš was the sacred precinct at *Irisağrig*, Frayne linked this feature of Umm al-Hafriyyat with Diğirmah, the tutelary deity of Keš who, for example, was called <sup>d</sup>nin-báhar “lady potter” in the An : *anum* list.

The reasons why I would discard the identification of Umm al-Hafriyyat with *Irisağrig* are mainly of an archaeological nature (see below §6), but Frayne’s arguments based on *TCL 5 5676* (Text 1), who in this followed Wilcke and Nissen, remain a good starting point. This text is an annual account balancing the performances of Ur-Ninsu, a chief plot manager from Umma. Individual receipts, which concerned the section in which the boat towing towards and from *Irisağrig* was recorded, were entered into this annual account (see Fig. 1), and part of them could be found among *UTI 4 2896* (Text 2), *SNAT 459* (Text 3), *UTI 5 3455* (Text 4), and *BM 106562* (Text 5). The whole dossier (except for *BM 106562*, unpublished at that time) was discussed by Steinkeller (2001: 73-74, 84), who reached the following main conclusions concerning *Irisağrig*:

a) The watercourse identified by Jacobsen and other scholars as the eastern branch of the Euphrates, at least its stretch between KAsahar and Apišal, was the Tigris.

b) One of the cities laying on the Tigris was Irisaĝrig, as can be deduced from YOS 4 56,<sup>4</sup> a text that had been previously discussed by Heimpel (1990: 207-210). According to this text, governors and chief temple administrators of cities laying on the banks of the Tigris and the Euphrates (gú i<sub>7</sub> Idigna gú i<sub>7</sub> Buranun-na-šè) delivered different goods on the occasion of the installation of a statue of Šulgi.

c) *TCL* 5 5676: x.11-21 (Text 1) and the above-mentioned related Texts 2-5 record four days of towing from Umma to Irisaĝrig. As the average towing time from Umma to KAsahar (possibly located at or near site no. 781) was five days, Irisaĝrig must have been located downstream of KAsahar. On the other hand, since Irisaĝrig was an independent province during the Ur III period, it would have been located to the north of the Adab province.

d) Based on their dimensions and surface material, Steinkeller identified the best candidates for Irisaĝrig located to the north of Adab and downstream of KAsahar as sites nos. 1032, 1056 and 1071 of Adam's catalog.

### 3. The Ur III Sources Concerning the Location of Irisaĝrig

After the publication of these works, the corpus of Ur III texts at our disposal has kept growing, particularly with texts from Umma that provide some additional data. *UTI* 6 3700 records a trip of ten or more days needed to tow a boat upstream from Umma to Irisaĝrig, to float it downstream and to load barley onto it.<sup>5</sup> The text is dated to the twelfth month of ŠS 2, and has the same seal impression and receiving official as Texts 1-5. It may have recorded the same trip as Texts 1-5, though in a much more simplified way. Whether it was the same trip or not, it is important to keep in mind that these receipts documented *all* the workdays completed under the responsibility of a given foreman, and not only the number of days towing upstream and floating the boats downstream. Thus, even if not explicitly stated, they could also account for the time needed to load, unload, and transfer the goods transported, the time to move the boats over weirs or bridges, the time needed to plait reeds into a raft, or even the time used to accomplish side-trips to other close localities where additional goods were loaded or unloaded.

Other texts recording trips from Irisaĝrig should be probably understood in the light of this remark. Thus, *BPOA* 2 2390 probably recorded the two-three days needed to float the boats downstream from Irisaĝrig to Umma, plus one-two days

4. [120]+140.0.0 kaš ninda gur, énsi Umma<sup>ki</sup>, 208.0.0 énsi Adab<sup>ki</sup>, 1768.0.0 énsi Irisaĝ-rig<sup>ki</sup>, 33.4.0 šabra <sup>d</sup>Al-la-tum, 52.0.0 I-mi-id-DINGIR, 39.0.0 šabra <sup>d</sup>Utu Larsam<sup>ki</sup>, 169.0.0 énsi Šuruppag<sup>ki</sup>, 78.0.0 šabra <sup>d</sup>Na-na-a, 1866.4.0 šabra <sup>r</sup>Uri<sup>5</sup><sup>ki</sup>-ma, 52.0.0 šabra Ri-ba-a, 56.0.0 šabra <sup>d</sup>Inanna 13.0.0 Ur-<sup>d</sup>Ba-ú, 23.2.0 <sup>d</sup>Šul-gi-ì-lí, šu-nígin 1 guru<sub>7</sub> 1127.0.0 kaš ninda gur, máš-da-ri-a kù-sig<sub>17</sub> <sup>r</sup>kù<sup>1</sup>-babbar gu<sub>4</sub> udu, u<sub>4</sub> alam <sup>d</sup>Šul-gi-e in-gub-ba-gen<sub>7</sub>-àm tùm-dam, ezem-mah-šè tùm-dam, gú i<sub>7</sub> Idigna gú i<sub>7</sub> Buranun-na<sup>1</sup>-šè.

5. *UTI* 6 3700: 5 ĝuruš u<sub>4</sub> 10 ([+13<sup>2</sup>)-šè], kar Umma<sup>ki</sup>-ta, Iri-<saĝ>-rig<sup>ki</sup>-[šè], má gíd-da má diri<sup>1</sup> (SI)-ga, še má-a si-ga, ugula Gú-TAR, kišib A-rá-ĝu<sub>10</sub>. ŠS 2/xii. Seal: Ur-<sup>d</sup>Suen, dub-sar, dumu Ur-<sup>ĝis</sup>[gigir], šà-[tam].



needed to make a raft.<sup>6</sup> Likewise, *BPOA* 1 1418 (Š 35/xii)<sup>7</sup> and 1785 (Š 35)<sup>8</sup> recorded the same two (a-rá 2-àm) round trips between Irišaĝrig and Nippur undertaken for the transportation of reeds. The whole operation employed 12 workers during 35 days, a total that no doubt accounted for the two round trips. However, 17-18 days seem excessive for a round trip between Irišaĝrig and Nippur. As a reference, we may consider that round trips from Umma to Nippur took about 14-15 days (Steinkeller 2001: 78). Since Irišaĝrig lay at a distance of about four days upstream and two days downstream from Umma (see below), we would expect that round trips between Irišaĝrig and Nippur would have taken about eight-nine days; in fact, according to a text published by R. Kutscher (1970: 43 3 [Š40/xii]: 24-28), a round trip by boat from Irišaĝrig to Saĝdana/Puzriš-Daĝān took ten days.<sup>9</sup> What probably made the difference in *BPOA* 1 1418 and 1785 was the inclusion in the account of the time needed for the transportation of the reeds from a storehouse in Irišaĝrig (ca. one day), the making of the raft and the loading of the reeds on it (ca. one day), the unloading and counting of the reeds in Nippur (ca. one day), and eventually other side-trips in the area of Irišaĝrig or Nippur.

An alternative answer to the problem of the long trips recorded in *BPOA* 1 1418 and 1785 could also be that Irišaĝrig did not lay on the ancient course of the Tigris, but somewhere else to the East, far away from Nippur, and upstream from Umma but on a different watercourse. Nevertheless, this possibility should be discarded, since the extant written sources point to a location of Irišaĝrig in the vicinity of Nippur. In addition, according to *YOS* 4 56, and as suggested by Heimpele (1990: 213), Irišaĝrig was on the Tigris or very close to it.

The distance of four days upstream from Umma to Irišaĝrig is well fixed by Texts 1-5, in which a detailed description of a round trip from Umma to Irišaĝrig is provided. Every single operation has been recorded in these texts, so we can be confident that the four days accounted as the time needed to travel from Umma to Irišaĝrig were indeed the days needed to tow the boats upstream and nothing else.

6. *BPOA* 2 2390 (not collated): 20 lá 1 ĝuruš u<sub>4</sub> 4-šè, Iri-saĝ-rig<sup>ki</sup>-ta, Umma<sup>ki</sup>-šè má-lal-a gi kěš-rá<sup>?</sup> (“da”), ki Ur-E<sub>11</sub>-e-ta, ĝiri Lugal-iti-da. Š 34/i. Seal: Lugal-ti-da, dumu Ĝiri-né, àga-ús énsi.

7. *BPOA* 1 1418 (collated): 6 ĝuruš u<sub>4</sub> 35-šè, má-lal-a gi Iri-saĝ-rig<sup>ki</sup>-ta, a-rá 2-àm im-de<sub>6</sub>, ugula Lú-<sup>d</sup>Šára, ĝiri Unken-né. ŠS 2/xii. Seal: [Unken]-né, [dub]-sar, [dumu] Ur-<sup>gi</sup>šigir.

8. *BPOA* 1 1785 (collated): 12 ĝuruš u<sub>4</sub> 35-šè, má-lal-a Iri-saĝ-rig<sup>ki</sup>-ta, Nibru<sup>ki</sup>-šè a-rá 2-kam íb-gíd, ugula Lugal-<sup>d</sup>Ištaran, kišib Lugal-iti-da. ŠS 2. Seal: Lugal-iti-da, dumu Ĝiri-né, àga-ús énsi.

9. This interesting text of uncertain provenance was published in translation, accompanied by two photos of the tablet. The transliteration that follows is based both on the translation and the pictures, on which the edges of the tablet cannot be seen: 73.2.0 zì gur lugal, šà-bi-ta, 6.0.0 gur Lugal-EZEMxX-ki-e, 30.0.0 gur Ūlu-di, mu <sup>d</sup>Nanna-ki-áĝ-(šè), 11.0.0 gur Iš-pu-ga-ru, 5.0.0 gur Šu-UK<sup>2</sup>.NI, 5.0.0 gur Ur-mes, 8.2.0 gur é-dub-ba-šè, Lú-<sup>d</sup>Nanna dub-sar, 0.1.0 še-ba má-gíd-e-ne, Lugal-ì-ti, 0.3.4 kar-ta, ĝiri AN.GÀR Ur-mes šu ba-ti, 0.1.5 gur kar-ta, ĝiri Im-ma-si, Ur-mes šu ba-ti, éren šuku má bala, 0.4.0 á lú huĝ-ĝá, <sup>rev.</sup>(...) / (...)bí-Ma-ma-šè<sup>?</sup> (“for trips between E... and the bank of the Tabbimama canal”), 3 má 0.0.1-ta u<sub>4</sub> 1-kam, u<sub>4</sub> 10-šè zì-bi 1.0.0 gur, 5 ĝuruš 5 síla-ta, u<sub>4</sub> 1-kam u<sub>4</sub> 10-šè, zì-bi 0.4.1, Iri-saĝ-rig<sup>ki</sup>-ta, Saĝ-da-na-šè, 0.0.3 AN<sup>?</sup>.GÀR, 0.0.3 Ur-<sup>d</sup>Nin-gublaga<sup>?</sup>, 0.0.3 En-um-ì-lí, 0.0.3 NE.NI-x-x, 3 síla á lú huĝ-ĝá zì (íl<sup>?</sup>), kar-(rá<sup>?</sup>), šu-níĝin 71.0.4 3 síla zì gur (lugal), zi-ga-àm, lá-ì 2.1.1 7 síla gur, níĝ-kas<sub>7</sub> AK Kab-DU-a ŠU.DU<sup>8</sup>.(A<sup>?</sup>), zì <sup>d</sup>Nanna-ki-áĝ. Š 40/i.

The score of Texts 1-4 has been offered by R. K. Englund (2010: 96-98), who took Texts 2-4 as the individual receipts entered into Text 1 (*TCL* 5 5676: r.iv.11-21), the balanced account of Ur-Ninsu. Englund thus restored the broken first lines of Texts 2 and 3 as “[1-2] ĝuruš u<sub>4</sub> 4-šè,” which added to 1 ĝuruš u<sub>4</sub> 4-šè in Text 4 would make the total of 4 ĝuruš u<sub>4</sub> 4-šè recorded in the balanced account of Text 1. The consideration of Text 5, which for that same trip records 8 ĝuruš u<sub>4</sub> 4-šè, and eventually also *UTI* 6 3700 (5 ĝuruš u<sub>4</sub> 10[+13<sup>?</sup>-šè]), suggests a slightly different scenario:

a) Four or five work-gangs at least participated in the round trip from Umma to Irisaĝrig, each one under the responsibility of a different foreman (*ugula*) and consisting of one to eight workers: [x] workers supervised by Ur-mes (Text 2); [x] workers supervised by Lugal-emahe (Text 3); one worker supervised by Id-pa’e (Text 4); eight workers supervised by Išarru’a (Text 5); and eventually five workers supervised by Gu-TAR (*UTI* 6 3700).

b) These foremen were not all under the control of a single overseer. Ur-Ninsu, the chief plot manager whose balanced account is recorded in Text 1, was not responsible for the activities of Gu-TAR and Išarru’a; although not necessarily, he could have been responsible for the activities of Ur-mes, Lugal-emahe, and Id-pa’e.

#### **4. The Round Trip from Umma to Irisaĝrig**

The round trip from Umma to Irisaĝrig (or better to Eduru-urin-du’a) took 23 days, during which the following operations were undertaken (see Fig. 1):

- Four days towing the boats upstream from Umma to Irisaĝrig.
- One day transferring and loading barley into the boats at Irisaĝrig.
- Two days towing the boats upstream from Irisaĝrig to the weir of Kiri-ĝeštin, and then floating the boats downstream from here to Eduru-urin-du’a.
- One day transferring barley at Eduru-urin-du’a.
- Seven days carrying barley from Eduru-urin-du’a to the weir of the Amar-Suenītum canal.
- Two days towing the boats upstream from the weir of the Amar-Suenītum canal to Irisaĝrig and moving the boats over.
- Two days towing the boats upstream from Irisaĝrig to the inlet of Tabbi-Mama.
- Two days floating the boats downstream to Umma.
- One day unloading the boats (at Umma).
- One day transferring barley (at Umma).

These operations were mainly discussed by Wilcke (1972: 55-59),<sup>10</sup> when Texts 2-5 had not been published. These and other new texts, some of them from Irisaĝrig, now permit a reconsideration of the trip in the following terms (cf. Fig. 2):

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10. See also Nissen 1975: 17-28; F. Carroué 1993: 67; Frayne 1992: 36-37, 1997: 243; Steinkeller 2001: 73-74.

<p><b>1. TCL 5 5676.r.iv.11-21 (ŠS2)</b> 4 ġuruš <b>u</b>, 4-še<sub>3</sub> kar Umma<sup>ki</sup>-ta Iri-saġ-rig<sup>ki</sup>-še<sub>3</sub> ma<sub>2</sub> gid<sub>2</sub>-da <b>u</b>, 1-še<sub>3</sub> Iri-saġ-rig<sup>ki</sup>-ga še ma<sub>2</sub>-a si-ga</p>	<p><b>2. UTI 4 2896 (ŠS2)</b> [x] ġuruš <b>u</b>, 4-še<sub>3</sub> kar Umma<sup>ki</sup>-ta Iri-saġ-rig<sup>ki</sup>-še<sub>3</sub> ma<sub>2</sub> gid<sub>2</sub>-da <b>u</b>, 1-še<sub>3</sub> še ma<sub>2</sub>-a si-ga</p>	<p><b>3. SNAT 459 (ŠS2)</b> [x ġuruš <b>u</b>] 4-še<sub>3</sub> [kar Umma<sup>ki</sup>-ta Iri-saġ-rig<sup>ki</sup>-še<sub>3</sub> ma<sub>2</sub> gid<sub>2</sub>-da <b>u</b>] 1-še<sub>3</sub> še bala-a u<sub>3</sub> še ma<sub>2</sub>-a si-ga</p>	<p><b>4. UTI 5 3455 (ŠS2xti)</b> 1 ġuruš <b>u</b>, 4-še<sub>3</sub> kar Umma<sup>ki</sup>-ta Iri-saġ-rig<sup>ki</sup>-še<sub>3</sub> ma<sub>2</sub> gid<sub>2</sub>-da <b>u</b>, 1-še<sub>3</sub> še ma<sub>2</sub>-a si-ga</p>	<p><b>5. BM 106562 (ŠS2)</b> 8 ġuruš <b>u</b>, 4-še<sub>3</sub> kar Umma<sup>ki</sup>-ta Iri-saġ-rig<sup>ki</sup>-še<sub>3</sub> ma<sub>2</sub> gid<sub>2</sub>-da <b>u</b>, 1-še<sub>3</sub> še ma<sub>2</sub>-a si-ga</p>
<p><b>u</b>, 1-še<sub>3</sub> Iri-saġ-rig<sup>ki</sup>-ga še ma<sub>2</sub>-a si-ga</p>	<p>Iri-saġ-rig<sup>ki</sup>-ta <b>u</b>, 2-še<sub>3</sub> kun-zida Kiriri-ġeštun-še<sub>3</sub> ma<sub>2</sub> gid<sub>2</sub>-da</p>	<p>Iri-saġ-rig<sup>ki</sup>-ta <b>u</b>, 2-še<sub>3</sub> kun-zida Kiriri-ġeštun-še<sub>3</sub> ma<sub>2</sub> gid<sub>2</sub>-da</p>	<p>Iri-saġ-rig<sup>ki</sup>-ta <b>u</b>, 2-še<sub>3</sub> kun-zida Kiriri-ġeštun-še<sub>3</sub> ma<sub>2</sub> gid<sub>2</sub>-da</p>	<p>Iri-saġ-rig<sup>ki</sup>-ta <b>u</b>, 2-še<sub>3</sub> kun-zida Kiriri-ġeštun-še<sub>3</sub> ma<sub>2</sub> gid<sub>2</sub>-da</p>
<p><b>u</b>, 1-še<sub>3</sub> še bala-a</p>	<p><b>u</b>, 4+{4}-še<sub>3</sub> E<sub>2</sub>-duru<sub>5</sub>-urin-<sup>&lt;du&gt;</sup>-a še bala-a k[tun-z]i-da i<sup>7</sup>-<sup>4</sup>Amar-<sup>3</sup>Suen-ni-tum-še<sub>3</sub> še ga<sub>6</sub>-ġa<sub>2</sub></p>	<p><b>u</b>, 4+{4}-še<sub>3</sub> E<sub>2</sub>-duru<sub>5</sub>-urin-<sup>&lt;du&gt;</sup>-a še bala-a k[tun-z]i-da i<sup>7</sup>-<sup>4</sup>Amar-<sup>3</sup>Suen-ni-tum-še<sub>3</sub> še ga<sub>6</sub>-ġa<sub>2</sub></p>	<p><b>u</b>, 8-še<sub>3</sub> E<sub>2</sub>-duru<sub>5</sub>-urin-<sup>&lt;du&gt;</sup>-a-ta kun-zida i<sup>7</sup>-<sup>4</sup>Amar-<sup>3</sup>Suen-ni-tum-še<sub>3</sub> še ga<sub>6</sub>-ġa<sub>2</sub></p>	<p><b>u</b>, 8-še<sub>3</sub> E<sub>2</sub>-duru<sub>5</sub>-urin-<sup>&lt;du&gt;</sup>-a-ta kun-zida i<sup>7</sup>-<sup>4</sup>Amar-<sup>3</sup>Suen-ni-tum-še<sub>3</sub> še ga<sub>6</sub>-ġa<sub>2</sub></p>
<p><b>u</b>, 2-še<sub>3</sub> kun-zida <sup>4</sup>Amar-<sup>3</sup>Suen-ni-tum-še<sub>3</sub> ma<sub>2</sub> gid<sub>2</sub>-da</p>	<p><b>u</b>, 2-še<sub>3</sub> kun-zida i<sup>7</sup>-<sup>4</sup>Amar-<sup>3</sup>Suen-ni-tum-še<sub>3</sub> ma<sub>2</sub> gid<sub>2</sub>-da</p>	<p><b>u</b>, 2-še<sub>3</sub> kun-zida i<sup>7</sup>-<sup>4</sup>Amar-<sup>3</sup>Suen-ni-tum-še<sub>3</sub> ma<sub>2</sub> gid<sub>2</sub>-da</p>	<p><b>u</b>, 2-še<sub>3</sub> kun-zida i<sup>7</sup>-<sup>4</sup>Amar-<sup>3</sup>Suen-ni-tum-še<sub>3</sub> ma<sub>2</sub> gid<sub>2</sub>-da</p>	<p><b>u</b>, 2-še<sub>3</sub> kun-zida i<sup>7</sup>-<sup>4</sup>Amar-<sup>3</sup>Suen-ni-tum-še<sub>3</sub> ma<sub>2</sub> gid<sub>2</sub>-da</p>
<p><b>u</b>, 2-še<sub>3</sub> Iri-saġ-rig<sup>ki</sup>-ta ka Tab-Ni-Ma-ma-še<sub>3</sub> ma<sub>2</sub> gid<sub>2</sub>-da</p>	<p><b>u</b>, 2-še<sub>3</sub> Iri-saġ-rig<sup>ki</sup>-ta ka Da-mi-[Ma]-ma-še<sub>3</sub> ma<sub>2</sub> gid<sub>2</sub>-da</p>	<p><b>u</b>, 2-še<sub>3</sub> Iri-saġ-rig<sup>ki</sup>-ta ka Da-mi-[Ma]-ma-še<sub>3</sub> ma<sub>2</sub> gid<sub>2</sub>-da</p>	<p><b>u</b>, 2-še<sub>3</sub> Iri-saġ-rig<sup>ki</sup>-ta ka Da-mi-[Ma]-ma-še<sub>3</sub> ma<sub>2</sub> gid<sub>2</sub>-da</p>	<p><b>u</b>, 2-še<sub>3</sub> Iri-saġ-rig<sup>ki</sup>-ta ka Da-mi-[Ma]-ma-še<sub>3</sub> ma<sub>2</sub> gid<sub>2</sub>-da</p>
<p><b>u</b>, 2-še<sub>3</sub> ma<sub>2</sub> diri-ga</p>	<p><b>u</b>, 1-še<sub>3</sub> ma<sub>2</sub> ba-al-la</p>	<p><b>u</b>, 1-še<sub>3</sub> ma<sub>2</sub> ba-al-la</p>	<p><b>u</b>, 1-še<sub>3</sub> ma<sub>2</sub> ba-al-la</p>	<p><b>u</b>, 1-še<sub>3</sub> ma<sub>2</sub> ba-al-la</p>
<p><b>u</b>, 2-še<sub>3</sub> ma<sub>2</sub> ba-al-la še bala-a</p>	<p><b>u</b>, 1-še<sub>3</sub> še bala-a</p>	<p><b>u</b>, 1-še<sub>3</sub> še bala-a</p>	<p><b>u</b>, 1-še<sub>3</sub> še bala-a</p>	<p><b>u</b>, 1-še<sub>3</sub> še bala-a</p>
<p>kišib A-r<sub>2</sub>-ġu<sub>10</sub></p>	<p>ugula Ur-mes kišib A-r<sub>2</sub>-ġu<sub>10</sub></p>	<p>ugula Ur-mes kišib A-r<sub>2</sub>-ġu<sub>10</sub></p>	<p>ugula I<sub>7</sub>-pa-e<sub>3</sub> kišib A-r<sub>2</sub>-ġu<sub>10</sub></p>	<p>ugula I<sub>7</sub>-pa-e<sub>3</sub> kišib A-r<sub>2</sub>-ġu<sub>10</sub></p>
<p>mu ma<sub>2</sub> <sup>4</sup>En-ki ba-ab-du<sub>5</sub></p>	<p>mu ma<sub>2</sub> <sup>4</sup>En-ki ba-ab-du<sub>5</sub></p>	<p>mu ma<sub>2</sub> <sup>4</sup>En-ki ba-ab-du<sub>5</sub></p>	<p>iti <sup>4</sup>Dumu-zi mu ma<sub>2</sub> <sup>4</sup>En-ki ba-ab-du<sub>5</sub></p>	<p>mu ma<sub>2</sub> <sup>4</sup>En-ki ba-ab-du<sub>5</sub></p>
<p>Seal: Ur-<sup>6</sup>Suen dub-sar dumu Ur-<sup>6</sup>giġir ša<sub>3</sub>-tam</p>	<p>Seal: Ur-<sup>6</sup>Suen dub-sar dumu Ur-<sup>6</sup>giġir ša<sub>3</sub>-tam</p>	<p>Seal: Ur-<sup>6</sup>Suen dub-sar dumu Ur-<sup>6</sup>giġir ša<sub>3</sub>-tam</p>	<p>Seal: Ur-<sup>6</sup>Suen dub-sar dumu Ur-<sup>6</sup>giġir ša<sub>3</sub>-tam</p>	<p>Seal: Ur-<sup>6</sup>Suen dub-sar dumu Ur-<sup>6</sup>giġir ša<sub>3</sub>-tam</p>

Fig. 1. The round trip from Umma to Irisaġrig.

4.1. The expedition departed from the quay of the city of Umma, which is located ca. 10 km southeast of Ka'ida and connected to the ancient course of the Tigris through the "Umma canal" (see Steinkeller 2001: 33, 51).

4.2. A trip from the quay of Umma to Irisaġrig took four days towing the boats upstream. The towing rate has been estimated at between 15-20 km per day (Saurén 1966: 26). A good reference for the towing rate in this trip is provided by *Nisaba* 15/2 1036, which establishes the distance between Irisaġrig and the inlet of the Tabbi-Mama canal as 31 km (see §4.7). According to our texts this distance was covered in two days; therefore, four days towing the boats upstream would correspond to 62 km. Nevertheless, the distance would likely have been higher, since the boats towed upstream towards Irisaġrig recorded in Texts 1-5 were empty, while they had already been loaded with barley when towed from Irisaġrig to the inlet of the Tabbi-Mama canal.

4.3. The boats were loaded with barley at Irisaġrig and then towed upstream to the weir of Kiri-ġeštín; from here they were floated downstream to Eduru-urin-du'a. The account of workdays at this point was made in a slightly different way in the balanced account (Text 1) when compared to the individual receipts. In the balanced account nothing is said about towing the boats upstream from Irisaġrig to the weir of Kiri-ġeštín. Text 1 records instead a trip of one day floating the boats downstream from Irisaġrig to Eduru-urin-du'a, and a total of nine workdays transferring the barley at Eduru-urin-du'a and carrying it from this village to the weir of the Amar-Suenitum canal. On their side, Texts 2-5 record two days from Irisaġrig to Kiri-ġeštín, plus eight workdays transferring the barley at Eduru-urin-du'a and carrying it from here to the weir of the Amar-Suenitum canal. To explain these discrepancies, I assume that a two-day trip from Irisaġrig to the weir of Kiri-ġeštín, and then downstream to Eduru-urin-du'a was made. The possibility of a route Irisaġrig→Kiri-ġeštín→Irisaġrig→Eduru-urin-du'a should be excluded, since that would have required a number of workdays not recorded in our texts. Those two days of the trip were thus simply recorded in a different way in Text 1, for whose accountant the important consideration was entering a total of 23 workdays.

4.4. The village of Kiri-ġeštín was located at a distance of two days by boat from Irisaġrig, which included a short trip downstream from Kiri-ġeštín to Eduru-urin-du'a. The distance would thus be about 20 km upstream from Irisaġrig to KAsahar plus ca. 15-20 km downstream from KAsahar to Kiri-ġeštín. The latter place should then have been located very close to Nippur, probably on the course of the Euphrates. It did not belong therefore to the province of Irisaġrig. The same would have been true for Eduru-urin-du'a,<sup>11</sup> which was located not far from Kiri-ġeštín. Both places were connected through a canal that began at the weir of Kiri-ġeštín.

Given the proximity of Kiri-ġeštín to Nippur, we can suggest that this locality had a close relationship with Kar-ġeštín, the quay of Nippur attested in *TJAMC*

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11. The two attestations of <sup>ġi</sup>kiri<sub>6</sub>-ġeštín known to me in texts from Irisaġrig refer to grapevine gardens, and not to a locality: <sup>ġi</sup>kiri<sub>6</sub>-ġeštín SUM.NE.LUM<sup>(ki)</sup> (*Nisaba* 15/2 602: 7, 963: 4), both under the responsibility of Ṭābum, the gardener. To my knowledge, Eduru-urin-du'a is not attested in texts from Irisaġrig.

IOS 36 (u<sub>4</sub> 1-šè Kar-ġeštīn-na-ta šà Nibru<sup>ki</sup>-šè má bala AK).<sup>12</sup> Additional evidence is provided by a series of agricultural texts: a-šà <sup>ġi</sup>8 Kiri-ġeštīn-na and a-šà Urin-dù-a are attested in *UET* 3 1364,<sup>13</sup> a tablet from Ur that also records a-šà Ma-al-ku<sup>ki</sup>, a field that is found as well in one text from Irisaġrig (*Nisaba* 15/2 269);<sup>14</sup> the field Kiri-ġeštīn and its village are also mentioned in *UET* 3 1371. All these texts suggest that the fields of Kiri-ġeštīn, Eduru-urin-du'a and Malkum were all in the same broad area between Irisaġrig and Nippur, and therefore between the Tigris and the Euphrates. Similarly, these fields would have been important sources of barley, the reason why the trip from Irisaġrig was made.

4.5. The barley collected at Eduru-urin-du'a was then carried by foot to the weir of the Amar-Suenītum canal. This arduous operation lasted for seven days, although such information does not help so much to calculate the distance between Eduru-urin-du'a and the weir of the Amar-Suenītum canal. The length of this land trip depended on several variables, such as the difficulty of natural or man-made obstacles, the cargo volume, the number and kind of boats moved, and the number of workers involved in the operation. In any case, seven days of transportation probably implied a big cargo and various boats involved in the operation. From the weir of the Amar-Suenītum canal, the boats were towed upstream to Irisaġrig during two days.

4.6. The weir of the Amar-Suenītum canal<sup>15</sup> was an obstacle that had to be surmounted in the trip from Umma to Nippur, as *BPOA* 1 1045 shows,<sup>16</sup> so the weir could have been located either on the stretch between Kasahar and Nippur, or on the Tigris. On the other hand, *SACT* 1 154 suggests that the Amar-Suenītum canal flowed in the area of Nippur; in fact, this text records the offering of one sheep made at the bank of this canal in honor of the goddess Ninisina, when the statue arrived at Nippur from Umma.<sup>17</sup> Therefore, if the weir of the Amar-

12. For this text and the quay of Nippur, see Steinkeller 2001: 62-63.

13. *UET* 3 1364 is a balanced account that concerns properties confiscated by the king Ibī-Suen from Ennum-ilī and his two brothers Nūr-ilī and Bēlī-qarrād (K. Maekawa 1996: 136-137).

14. *Nisaba* 15/2 269 records a-šà agar<sub>4</sub> Ma-al-ku-um, a field that also according to this text belonged to the city of Malkum (iri Ma-al-ku-um<sup>ki</sup>, also attested in *Nisaba* 15/2 688).

15. The Amar-Suenītum canal should be distinguished from the Amar-Suenake-ġara canal, which belongs to the Umma province (see Carroué 1993: 67, and Steinkeller 2001: 57 n. 142). It is poorly attested in Ur III sources: besides the texts discussed here (Texts 1-5, *SACT* 1 154, and *BPOA* 1 1045), a place called Amar-Suen(ī)tum is also recorded in *AAICAB* I/1 Ashm. 1924-665: r.iii.9. On the basis of the misidentification of the Amar-Suenake-ġara canal with the Amar-Suenītum canal, the location of the latter was discussed by Sauren 1966: 97-104, Nissen 1972: 47, 1975: 27-28, Edzard and Farber 1974: 254-255, and Frayne 1997: 241-243. Wilcke (1972: 57-58) suggested that the Amar-Suenītum canal could be the same Amar-Suen canal attested in *SEpM* 4 (A. Kleinerman 2011: 121), which accordingly took off from the Iturungal and flowed through the border area between Isin and Larsa; nevertheless, this hypothesis does not fit well with *SACT* 1 154, which shows that the Amar-Suenītum canal flowed in the area of Nippur (see below).

16. *BPOA* 1 1045: 4 ġuruš u<sub>4</sub> 15-šè, A-pi<sub>4</sub>-sal<sub>4</sub><sup>ki</sup>-ta, Nibru<sup>ki</sup>-šè má zì KAL ġid-da, i<sub>7</sub> <sup>d</sup>Amar-<sup>d</sup>Suen-ni-tum-a má bala AK, ù A-pi<sub>4</sub>-sal<sub>4</sub><sup>ki</sup>-šè, má sù gur-ra, bala énsi Adab<sup>ki</sup>-šè, kišib Gu-du-du, ugula Lú-<sup>d</sup>Šára. ŠS 3. Seal: Inim-<sup>d</sup>Šára, dub-sar, dumu Da-da-ga.

17. *SACT* 1 154: 1-7: 1 udu niga gú i<sub>7</sub> <sup>d</sup>Amar-<sup>d</sup>Suen-<ni>-tum-ma-šè gaba ri-a, ġiri Hi-ir-šum sagi, 1 udu niga šà é-gal, ġiri A-tu sagi, <sup>d</sup>Nin-ísin<sup>si</sup> Umma<sup>ki</sup>, u<sub>4</sub> Umma<sup>ki</sup>-ta ì-im-ġen-na-a, <sup>d</sup>Nanše-ád-gal maškim (...). AS 4/xi/3. For this text, see W. Sallaberger

Suenītum canal were on the Tigris, it would have been located somewhere close to Adab, from where the canal would branch off towards Nippur. Nevertheless, this possibility would imply that the Tigris and the Euphrates were connected at some other point between the Iturungal and the KAsahar canal, which Steinkeller demonstrated was not the case (2001: 57). As a consequence, the only other possibility is to locate the weir of the Amar-Suenītum canal ca. 10 km north from Nippur,<sup>18</sup> which meant towing upstream 10-15 km to KAsahar, and then ca. 20 km downstream to Irisaḡrig, a distance that could be covered in two days by boat. This route, tentatively accepted here as the most plausible one, runs into the difficulty of the short distance between the presumed locations of the weir of the Amar-Suenītum canal and Eduru-urin-du'a; such a short distance does not fit well with the seven days needed to transport the cargo and the boats from one place to the other, unless a very large cargo of cereals was involved.

4.7. The expedition travelled from Irisaḡrig to the inlet of the Tabbi-Mama canal.<sup>19</sup> Other texts from Umma suggest that frequent trips were made to this place.<sup>20</sup> Likewise, royal envoys came to Irisaḡrig, to the bank of the Tabbi-Mama canal, probably with the mission of visiting Tell al-Wilayah (see below §4.8).<sup>21</sup> The inlet of this canal had a weir (kun-zi-da ka i<sub>7</sub> Ta-bi-Ma-ma: *Nisaba* 15/2 500), a water-outlet (a-è-a ka i<sub>7</sub> Ta-bí-Ma-ma: *Nisaba* 15/2 159, 248, 295a-b), and a chapel with blind workers attached to its garden (si<sub>12</sub>-a ḡ<sup>i</sup>s<sup>i</sup>kiri<sub>6</sub> bára ka i<sub>7</sub> Ta-bí-Ma-ma: *Nisaba* 15/2 78).

1993-I: 153, 1993-II: Tab. 50A, who also points out that the return journey was recorded in S. H. Landon, *Babyl.* 7, 77 9 (= M. Van De Mieroop, *RA* 79, 26 13).

18. From this point, the Amar-Suenītum canal would have flowed towards Nippur, but I cannot say whether it ran parallel to the east or the west bank of the Euphrates.

19. The name of this canal is attested in Ur III texts as Tab-NI-Ma-ma (Text 1), Da-mi-Ma-ma (Texts 2-5), Tab-bí-Ma-ma (*BCT* 2 45), Ta-bí-Ma-ma (*Nisaba* 15/2 78, 159, 248, 261, 295a-b, 315, 346), and Ta-bi-Ma-ma (*Nisaba* 15/2 500, collated from a photo kindly provided by D. I. Owen); in lexical sources it appears as Tab-bi-<sup>d</sup>Ma-mi (Ḫḫ XXII Sec. 7 A iii.1 and Ḫg B VI 20 = *MSL* 11, p. 27 and 40) and Tab-bi-<sup>d</sup>Ma-ma (OB Nippur For. Ḫḫ XX-XXII 358 = *MSL* 11, p. 107), always in the same section as the Mama-šarrat canal. Frayne (2013: 189) suggests Tell Hamayma (= Adams no. 1152) as a probable location for the town of Tabbi-Mama, but in my view this is not possible, since that site is ca. 16 km away from Irisaḡrig, which does not fit with the distance (31 km) established by *Nisaba* 15/2 1036 for the inlet of the Tabbi-Mama canal (see below).

20. The inspection text *BCT* 2 45 (Umma) shows that trips to the inlet of the Tabbi-Mama canal were frequent: 15 ḡuruš, ugula Ba-sa<sub>6</sub>, 11 ḡuruš ugula Ur-mes, 13 ḡuruš ugula Uš-ḡu<sub>10</sub>, 16 ḡuruš ugula Lugal-iti-da, 10 lá 1 ḡuruš ugula Ur-ama-na, 4 ḡuruš ugula Lú-igi-sa<sub>6</sub>-sa<sub>6</sub>, 15 ḡuruš 1 tu, ugula Gú-TAR, 20 lá 1 ḡuruš, ugula Unken-né, kuru<sub>7</sub> AK má gid-da, má bala AK, ka Tab-bí-Ma-ma, pa<sub>4</sub>-<sup>r</sup>x-x-šè<sup>1</sup>, u<sub>4</sub> 1-kam. Another trip to the inlet of the Tabbi-Mama canal was recorded in Kutscher, *BWATH* 6, 43 3: r. 1-3 (Š 40/xii), although we cannot say where was the trip made from (see n. 9). See also n. 24.

21. Provisions (fish and soup) for PN, lú-kin-gi<sub>4</sub>-a lugal u<sub>4</sub> gú i<sub>7</sub> Ta-bí-Ma-ma-šè im-ḡen-na-a “PN, royal envoy, when he came to the bank of the Tabbi-Mama canal” were recorded in *Nisaba* 15/2 261, 315, and 346.

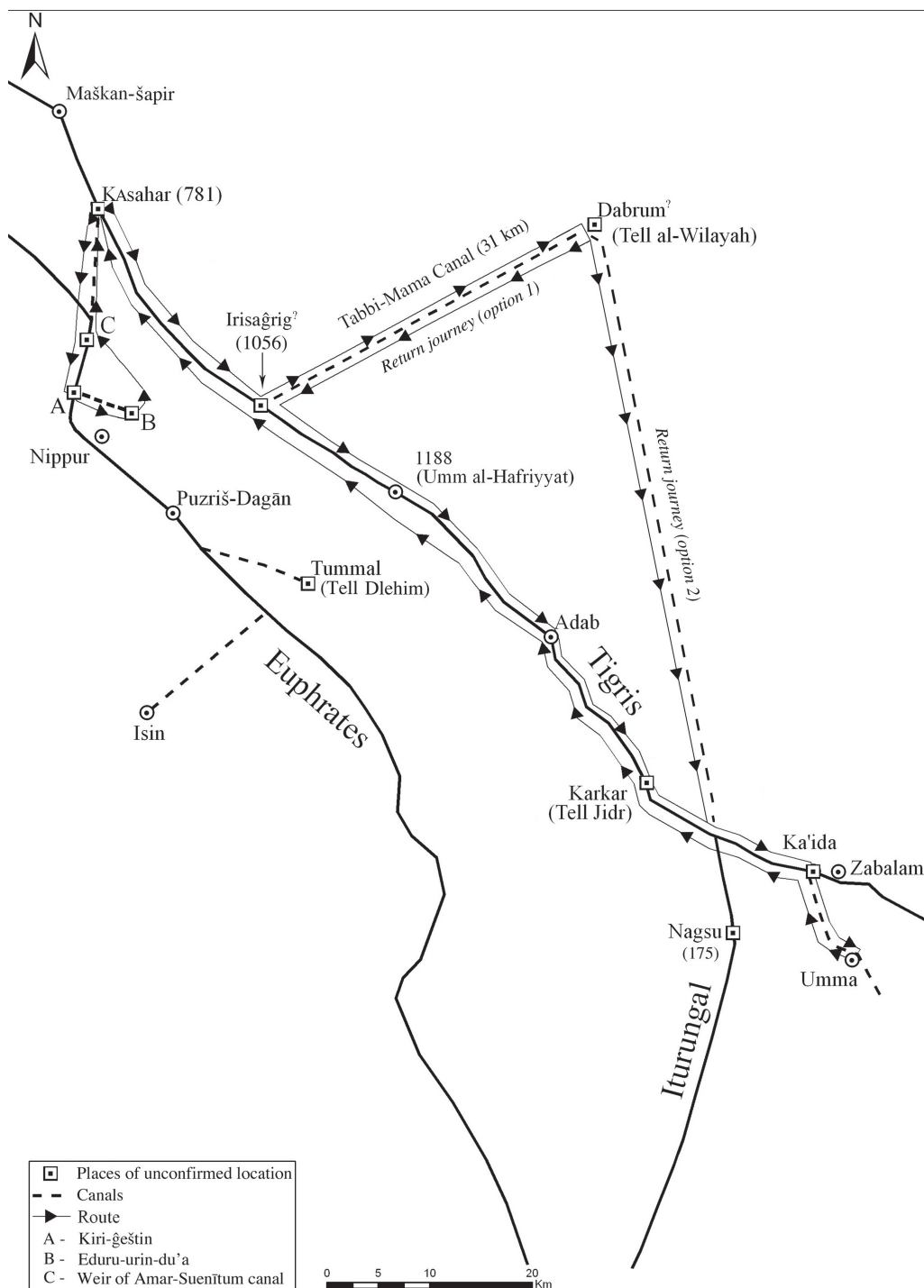


Fig. 2. Tentative reconstruction of the round trip from Umma to Irisaġrig, based on Steinkeller 2001: 40, Map 1.

According to Texts 1-5, the inlet of the Tabbi-Mama canal was located upstream from Irisaġrig, at a distance of two days by boat. Such distance can now be ascertained as 31 km thanks to *Nisaba* 15/2 1036.<sup>22</sup> This text recorded the length of watercourses probably in order to calculate the amount of work needed in their maintenance:<sup>23</sup>

[i]š-tu ʿIri<sup>1</sup>-saġ-ʿrig<sup>7ki</sup>, 2 da-na 1200+360 nindan ús, a-na ka i<sub>7</sub> Ta-bí-Ma-ma, iš-tu ka i<sub>7</sub> Ta-bí-Ma-ma, 5 da-na 600+240 nindan ús, a-na ʿka<sup>1</sup> ʿi<sub>7</sub><sup>1</sup> ʿEn-líl, iš-tu ka i<sub>7</sub> ʿEn-líl, 2 da-na 1200+480 nindan, a-na ʿkiri<sup>6</sup> Lú-šu-ki-na, šu-níġin 10+1 da-na 480 nindan ús, iš-tu Iri-saġ-rig<sup>7ki</sup>, a-na ʿkiri<sup>6</sup> Lú-šu-ki-na.

“From Irisaġrig to the inlet of the Tabbi-Mama canal: 2 *danna* and 1560 *nindan* long (= 30.96 km). From the inlet of the Tabbi-Mama canal to the inlet of the Enlil canal: 5 *danna* and 840 *nindan* long (= 59.04 km). From the inlet of the Enlil canal to the orchard of Lušukina: 2 *danna* and 1680 *nindan* (= 31.68 km). Total: 11 *danna* and 480 *nindan* from Irisaġrig to the orchard of Lušukina (= 121.68 km).”

The distance of 31 km between Irisaġrig and the inlet of the Tabbi-Mama canal virtually excludes the location of the latter to the west of Irisaġrig, since the strip of land between the Tigris and the Euphrates in the area where Irisaġrig was supposed to be (see §5) was only about 13-14 km; moreover, the expedition was just coming from the western area of Irisaġrig, so it would not make much sense to head back there. A location of the inlet of the Tabbi-Mama canal toward the southeast, along a watercourse parallel to the Tigris, should also be excluded, since that would put the inlet only about 2-3 km north of Adab, while texts clearly point at its location within the Irisaġrig province. Finally, if the inlet of the Tabbi-Mama canal were on the Tigris, it should be located upstream from Irisaġrig, and therefore virtually at Maškan-šapir, a location that would have made this trip quite unreasonable. Toward the east of Irisaġrig, a distance of 31 km fits perfectly with Tell al-Wilayah,<sup>24</sup> a site whose archives and calendar show a clear relationship with Irisaġrig. Therefore, we can tentatively suggest that Irisaġrig and Tell al-Wilayah

22. I am very grateful to D. I. Owen, who kindly sent me excellent pictures of this tablet. The text had been previously published in *CUSAS* 3 1497, but the tablet had not been restored at that time, so the transliteration was incomplete.

23. As S. Rost pointed out to me, rather than dredging, the work on these long watercourses would be the maintenance of their banks.

24. Archaeological excavations at Tell al-Wilayah were undertaken in 1958 (T. Madhlum 1960: 62-92; S. A. Rashid 1963: 82-106) and 1999-2000 (S. Y. Hussein, M. Altaweel, and Z. Rejeb 2009a: 3-42, 2009b: 113-166 [with a contribution by B. Studevent-Hickman]). The site was extensively looted after 2003 and is now virtually lost to archaeology. It has been tentatively identified with Keš (J. N. Postgate 1976; M. Powell 1980: 51-52) or with Dabrum (Steinkeller 2001: 40 Map 1, and *forthcoming*). Textual information on the relative position of Dabrum is mainly provided by the Utuġeġal inscription *RIME* 2.13.6.4, and by the Ur III text *TCL* 5 5675: r.v.35-38 (AS 4): 14 ġuruš u<sub>4</sub> 56-šè, á-bi u<sub>4</sub> 820, Umma<sup>ki</sup>-ta Nibru<sup>ki</sup>-šè má-lal-a de<sub>6</sub>-a Da-ab-ru-um-ta Nibru<sup>ki</sup>-šè má-lal-a de<sub>6</sub>-a, ù bala-a gub-ba. These are most probably the same trips as those recorded in *CM* 26, 205 39: 7 ġuruš u<sub>4</sub>-25-šè, Dab<sub>6</sub>-ru-um<sup>ki</sup>-ta, Nibru<sup>ki</sup>-šè, gi lá-a a-rá 3-àm de<sub>6</sub>-a, gi kéš-rá, ù má ba-al íb-ġar, šà bala, ugula A-gu-gu, kišib nam-šà-tam, Ur-<sup>d</sup>Šul-pa-è. AS 4. Seal: Ur-<sup>d</sup>Šul-pa-è, dub-sar, dumu Lugal-[kù-ga-ni]. The Utuġeġal inscription and the Ur III texts better support the identification with Tell al-Wilayah proposed by Steinkeller, particularly in the light of the water connection discussed above. A route from Umma to Dabrum would have also been recorded in *BCT* 2 45 (see n. 20), which dealt with trips from Umma to the inlet of the Tabbi-Mama canal.



were connected by the Tabbi-Mama canal.<sup>25</sup> Note in this regard that a canal in direction of Tell al-Wilayah probably ran from site no. 1056 (see Adams 1981: 163, Fig. 31), proposed below as the most likely location for *Irisağrig* (see §6). For the time being, we cannot ascertain the reason why this trip to the inlet of the Tabbi-Mama canal / Tell al-Wilayah was made.

4.8. The last stage of the trip, from the inlet of the Tabbi-Mama canal to Umma, took two days floating the boats downstream. The expedition possibly towed the boats back to *Irisağrig* through the Tabbi-Mama canal, and then down to Umma through the Tigris. This is a plausible route, although a three-day trip would be expected.

A different possibility would be a route that directly connected the inlet of the Tabbi-Mama canal with Umma, as had been already suggested by Wilcke (1972: 58). If so, the expedition could have followed the long watercourse of 59 km mentioned in *Nisaba* 15/2 1036, which connected the inlet of the Tabbi-Mama canal with the inlet of the Enlil canal.<sup>26</sup> Those 59 km fit very well with the distance between Tell al-Wilayah and the confluence of the Iturungal with the Tigris (for the Iturungal, see Steinkeller 2001: 41-49), and with the distance that is supposed to be covered in two days floating the boats downstream as recorded in Texts 1-5. We could thus speculate that a Tigris branch passed through Tell al-Wilayah, connecting this city with the southern area of Karkar, and with *Irisağrig* through the Tabbi-Mama canal; the weir at the inlet of this canal, recorded in *Nisaba* 15/2 500 (see §4.7), would also be in this way much better explained. Nevertheless, we have not been able to document traces of an ancient watercourse running from Tell al-Wilayah to the stretch of the Tigris between Karkar and Ka'ida.

### 5. Looting in the *Irisağrig* Area

In addition to textual data, archaeological surveys and satellite imagery are important sources of information in the search for *Irisağrig*. The survey conducted by Adams (1981) is still the most crucial archaeological evidence for the area in which the city was located. On the other hand, given the fact that the *Irisağrig* tablets come in all cases from illegal excavations, satellite imagery will help us to correlate looting with plausible locations of the city.

The traces of illegal excavations undertaken in the area north of Adab, on the ancient course of the Tigris, fit the chronological pattern for the appearance of Ur III tablets from *Irisağrig* on the antiquities market. To my knowledge, the first

25. The existence of a Tigris branch that connected this river with Tell al-Wilayah was already suggested by Postgate (1976: 80) and accepted as plausible by Adams (1981: 158-159). Unfortunately, as Adams informed Postgate and wrote later (Adams 1981: 37, 159), Tell al-Wilayah is within a cultivated zone, a fact that conditioned the coverage of the survey and made it impossible to trace third millennium watercourses. More recent research on SPOT and Corona imagery seems to point in this direction as well, suggesting "that there may have been several Tigris channels in the area in the early second millennium, with Maškan-šapir and, further south, Wilaya, as the two large associated settlements" (E. C. Stone and P. Zimansky 2004: 16). The forthcoming publication of C. Hritz's book, *Readings of Past Landscapes: Ancient Landscapes of Southern Mesopotamia*, will no doubt help to clarify this point.

26. It is uncertain whether this canal can be identified with the Enlil canal attested in Umma sources: *Aleppo* 201, and possibly *MVN* 16 757 (i7 «AN»<sup>d</sup> En-líl-lá).

tablet from the archives of Irisağrig that appeared on-line was auctioned through Ebay in April 2004 (BDTNS 167825; Ebay code 3720919179); beginning early in 2005, many other tablets from Irisağrig were offered for sale by this and other auction houses and art galleries. Some months before, Jordanian customs officials had confiscated a large number of archaeological items, including several cuneiform tablets. According to the editors of the catalog of these objects (R. Menegazzi 2005: 79), the tablets were kept in five different containers, some of them marked with a label indicating the date of confiscation. One of these containers, dated to 7 July 2003, held 167 tablets that corresponded to the group denominated Amman IV. These texts were identified as coming from Irisağrig by G. Pettinato in the above-mentioned catalog (Menegazzi 2005: 79-81). The edition of this group of tablets has been prepared by D. I. Owen (2013a-b).

The illegal diggings on Irisağrig were therefore closely related to the invasion of Iraq, which lasted from 19 March to 1 May 2003.<sup>27</sup> According to Stone (2008:

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27. Tablets from Irisağrig excavated or purchased before 2003 and related to the dossiers and typology of texts that began to appear on the market in 2004 are not known. The only possible exceptions are the texts of the so-called Tūram-ilī archive, published by Van De Mieroop (1986) and S. Garfinkle (2002: nos. 1-6; 2012: nos. 78-138). In fact, this archive, which forms a homogeneous group of texts purchased for the Yale Babylonian Collection in a single lot (Goetze 1953: 32), used the same calendar as the texts from Irisağrig, showing as well strong prosopographical relationships with six texts from this city published by Owen and by Garfinkle (*Nisaba* 15/2 349, 538, 540, 679, 680, and 899 = *CUSAS* 22 nos. 205-210). As a consequence, it has been proposed that the Tūram-ilī archive could also come from Irisağrig (Garfinkle 2012: 41; Owen 2013a: 64-65). Even if this is clearly possible, the problem of homonymy with Tūram-ilī, already pointed out by M. Widell (2003: §8.a.1), needs to be studied in detail in the light of the new texts from Irisağrig. Thus, for example, in addition to the calendar and the occurrence of Tu-ra-am-ì-lí (ugula) dam-gàr in the texts from Irisağrig (*CUSAS* 22 nos. 205-210), the strongest link between these texts and the Tūram-ilī archive seems to be based on *CUSAS* 22 no. 115 (kù-babbar ki En-ú-ta Tu-ra-am-ì-lí dam-gàr šu ba-ti; Tūram-ilī arch.), 121 (kù-babbar mu Tu-ra-am-ì-lí dam-gàr-šè ki En-ú-ta Ì-lí-ra-bí dam-gàr šu ba-ti; Tūram-ilī arch.), and *Nisaba* 15/2 540 (= *CUSAS* 22 no. 207: kù-sig<sub>17</sub> ki Tu-ra-am-ì-lí dam-gàr-ta En-ú-a dub-sar kù-ga šu ba-ti; Irisağrig). Nevertheless, it should be noted that another text from Irisağrig (T. Ozaki, *JAC* 24, 57 3 = *Nisaba* 15/2 955: še ki En-ú-a Tu-ra-am-ì-lí šu ba-ti; seal: Tu-ra-am-ì-lí, dumu Šu-<sup>d</sup>Nin-šubur, dub-sar) implies that at least one of the Tūram-ilī's from this city is a son of Šu-Ninšubur, and not a son of Baza'a, as was the merchant of the Tūram-ilī archive (*CUSAS* 22 nos. 111 and 133; see R. H. Mayr 2002: 61 no. 27a-b). Also in this regard, *CUSAS* 22 nos. 110 and 134, previously published by S. M. T. Taher (2010), are texts that in my opinion should be counted among the tablets from Irisağrig apparently related to the Tūram-ilī archive, within the same group of *CUSAS* 22 nos. 205-210.

The same possibility has been argued for the texts of the SI.A-a archive. In this case two texts are presented as coming from Irisağrig and belonging to the SI.A-a archive: *CUSAS* 22 nos. 203 and 204 (= *Nisaba* 15/2 11 and 1028a). The link of *CUSAS* 22 no. 203 (seal: SI.A-a, dub-sar, dumu DIĞIR-ba-ni) with the SI.A-a archive seems in fact assured by *MVN* 8 152 (= *Sale Documents* 133\* = *CUSAS* 22 no. 4), where SI.A-a dumu DIĞIR-ba-ni is attested; the prosopographical relationships adduced by Garfinkle for *CUSAS* 22 no. 204 with the SI.A-a archive are, in my opinion, more questionable. Accepting anyway that both texts could belong to the SI.A-a archive, the main problem is nevertheless, in my view, that their provenance from Irisağrig is not certain. Moreover, the calendar used in the SI.A-a archive is only partly coincidental with the Tūram-ilī archive (Widell 2003) and, accordingly, with the Irisağrig calendar. As it will be seen below, several sites from the area where Irisağrig was located have been looted, and these two texts could come from any of them. In this respect, we also note that prosopographical coincidences and similar calendars do not always assure an identical provenance: thus, for example, looted texts from the Aradğu archive, initially thought to be from Nippur (*TCCBI* 2-2, nos. 2-58), are now known to come from a nearby locality (Studevent-Hickman *forthcoming*).

135-137), small and medium sites were intensively looted immediately before the war, and looting was resumed at about one-third of them during the summer of 2003. The intensity of looting strongly decreased in 2004-6. One of the areas where sites dated to the Ur III period were more affected by looting was precisely, according to Stone's research, the area north of Adab, along the ancient course of the Tigris (2008: 131, Fig. 4).

To verify the degree of looting in the area where *Irisağrig* was supposed to be, we examined satellite imagery of a strip of land of c. 40 km<sup>2</sup> (c. 20 km long and 2 km wide), located c. 17 km north of Adab along the ancient course of the Tigris (see Figs. 4-5). The set of images used in this study were the following:

a) Quickbird panchromatic at a resolution of 0.61 m; images taken on June 10 and 15, 2003.

b) Quickbird pan-sharpened at a resolution of 0.61 m; images taken on June 10 and 15, 2003.

c) Worldview panchromatic at a resolution of 0.5 m; images taken on August 13, 2009.

After a detailed search of the area, the following sites with traces of looting were detected (from south to north):<sup>28</sup>

<i>Adams' Survey</i>	<i>Dimensions (Adams' Survey)</i>	<i>Occupation (Adams' Survey)</i>	<i>Distance from Umma</i>	<i>Figs.</i>	<i>Longitude WGS84</i>	<i>Latitude WGS84</i>
<b>1188</b>	1,050 NW × 630 × 2.5	ED II–III. Mainly Sarg. Ur III and Isin-Larsa limited to the higher, NW part of the site.	62.0 km	6-7	45,4876	32,0778
<b>1180</b>	350 diam. × 3.2	Small Uruk site. Few Larsa sherds, may be strays from 1188. Mainly NB–Achaem.–Parth., limited Sas.	63.5 km	8	45,4719	32,0864
<b>1179</b>	240 diam. × 3	Traces of Uruk occupation. Isin-Larsa–OB–Kassite.	64.8 km	9	45,4616	32,0932
<b>1174</b>	180 NW × 110 × 2.8	Small Uruk settlement likely. Traces ED I. Primarily OB–Kassite, with a smaller Sas.–Early Islamic occup.	66.2 km	10	45,4487	32,1003

28. The traces of looting at site no. 1032 are unclear, but it is considered here because of its location, dimensions, and occupation.

Adams' Survey	Dimensions (Adams' Survey)	Occupation (Adams' Survey)	Distance from Umma	Figs.	Longitude WGS84	Latitude WGS84
<b>1071</b>	460 WNW × 300 × 1.5	Small Uruk occupation. Mainly Ur III–OB.	72.8 km	11-12	45,3906	32,1332
<b>1069</b>	270 E × 140 × 1.9	Small Uruk occupation. Mainly Isin-Larsa–OB. Less Kassite.	73.1 km	13	45,3899	32,1362
<b>1067</b>	220 E × 150 × 2	Probably small Uruk occupation. Mainly NB–Achaem.–Parth.	73.5 km	14	45,3889	32,1404
<b>1066</b>	150 N × 130 × 1.8	Sassanian. Mainly Early Islamic.	73.7 km	15	45,3845	32,1388
<b>1056</b>	900 N × 250-300 × 2.4	ED I and possible Jemdt N. (central part of site). Traces ED II-III. Dominant Sarg.–Ur III–Isin-Larsa.	75.8 km	16-17	45,3694	32,1539
<b>1032</b>	770 WNW × 380	Early/ Middle Uruk and ED I limited to SE. Jemdet N. occup. much more extensive. ED II-III. Dominant Sarg.–Ur III–Isin-Larsa.	80 km	18-19	45,3567	32,1826

Fig. 3. Looted sites at the *Irisağrig* area.

## 6. Conclusions

Considering that towing a boat upstream from Umma to *Irisağrig* took four days, a distance that according to *Nisaba* 15/2 1036 could be calculated at at least 62 km (see §4.2 and §4.7), the first strong possibility for the location of *Irisağrig* is Umm al-Hafriyyat (Adams no. 1188), a site located precisely 62 km away from Umma. This large site (1,050 NW × 630 × 2.5) was excavated in 1977 by McG. Gibson within the Nippur Regional Project of the Oriental Institute. Archaeological work stopped after 1977, but Gibson's team continued to visit the site regularly. The site had been extensively looted before 1977 (Gibson 1977/8: 1; Adams 1981: 164, 276). Later on, in the Chicago Annual Report of 2000-1, Gibson wrote that illegal excavations had taken place at Umm al-Hafriyyat (Gibson 2000/1: 4). In 2002-3 he reported that "the tell looked like a waffle, full of recently dug holes" (Gibson 2002/3: 6). Images from the QuickBird satellite taken on 3 June, 2003, show in fact an amazing density of pits in two zones of the site, which had essentially the same extension in 2009 (Figs. 6-7). Nevertheless, the following points

argue against the possibility of the identification of Umm al-Hafriyyat with *Irisağrig*:

a) According to McG. Gibson and A. McMahon (1995: 3), there was no settlement on Umm al-Hafriyyat during the later part of the Early Dynastic nor the earlier half of the Sargonic period. This fact is not consistent with textual data, as *Irisağrig* is well documented in texts dating to the ED IIIb.

b) The stratigraphic pit excavated at the highest point of the site, in Area A, showed “evidence of more than four meters depth of Isin-Larsa occupation, but resting on a thin Ur III level that in turn laid on sterile soil” (Gibson 1977/8: 2).

c) Gibson also noted that “the site was not a very large one in any period, although the entire site was huge”; in his words, “the site was a small one that shifted its location through time” (Gibson 1995/6: 2).

d) The unpublished Sargonic tablet MS 4267B, probably coming from Umm al-Hafriyyat, mentions Maškan-ili-Akkade (*[ra-b]i-a-nu [g]u-ti-e a-na Maš-gán<sup>ki</sup>-ni-diğir-A-ga-dè<sup>ki</sup> è-li-ku-[nim]*), “the Gutian chieftains who came to Maškan-ili-Akkade”: A. Westenholz 2010: 458-460), which was perhaps the ancient name of the site (see also F. Pomponio, M. Stol, and A. Westenholz 2006: 16; Steinkeller *forthcoming*).

As noted above (§4.2), the estimation of 62 km was based on a trip from *Irisağrig* to the inlet of the Tabbi-Mama canal when the boats had been already loaded, but the boats would have been empty when towed upstream from Umma to *Irisağrig*. Therefore, the location of *Irisağrig* a few kilometers upstream from Umm al-Hafriyyat is still a good possibility. On the basis of the material identified by Adams in the surface surveys and the evidence of looting, and in agreement with the proposals made by Steinkeller (2001: 74), the other three best possibilities for the location of *Irisağrig* are sites 1071, 1032 and 1056.

Site no. 1071 is 73 km north of Umma. It is reported to mainly have an Ur III–Old Babylonian occupation (Adams 1981: 173, 271). The image of June 2003 shows some pits on its higher area (Fig. 11). The looting of this tell appears to have stopped at that time, since no remarkable differences can be appreciated on the picture taken in August 2009 (Fig. 12). This site would be a good candidate for *Irisağrig*, were it not for its small size (460 WNW × 300 × 1.5).

Site no. 1032 is located 80 km north of Umma. In words of Adams, it consists of “large, low hummocks and much debris on intervening plain surface. Later canal branches cross the site at intervals, with debris also found on their low spoil banks.” It is a site difficult to distinguish using satellite imagery, and traces of looting are unclear (Figs. 18-19). Occupation is reported during Early/Middle Uruk, Jemdet Naşr, Early Dynastic I, Early Dynastic II-III, and mainly during the Sargonic, Ur III, and Isin-Larsa periods (Adams 1981: 172, 270).

Site 1056 is 76 km upstream from Umma. It is the largest of the three sites here considered (900 N × 250-300). Surveys have reported occupation during the Jemdet Naşr (possible), Early Dynastic I, and Early Dynastic II-III (traces) periods, although the dominant components in surface collections belong to the Sargonic, Ur III and Isin-Larsa periods (Adams 1981: 173, 271). We should also note

that a canal could have run from this site towards Tell al-Wilayah (see Adams 1981: 163, Fig. 31), which fits with the suggested course of the Tabbi-Mama canal (see §4.7). The image of June 2003 (Fig. 16) shows some pits on its central and higher area. Images of August 2009 (Fig. 17) show that looting had extended in the same area, which may perhaps be understood as a symptom of a previous “successful” looting.

A definitive solution to the problem of the identification of Irisaḡrig will only be given by means of new surveys or archaeological excavations. For the time being, everything seems to point to sites no. 1032 and 1056, and preferably the latter, as the location of the ancient city of Irisaḡrig.

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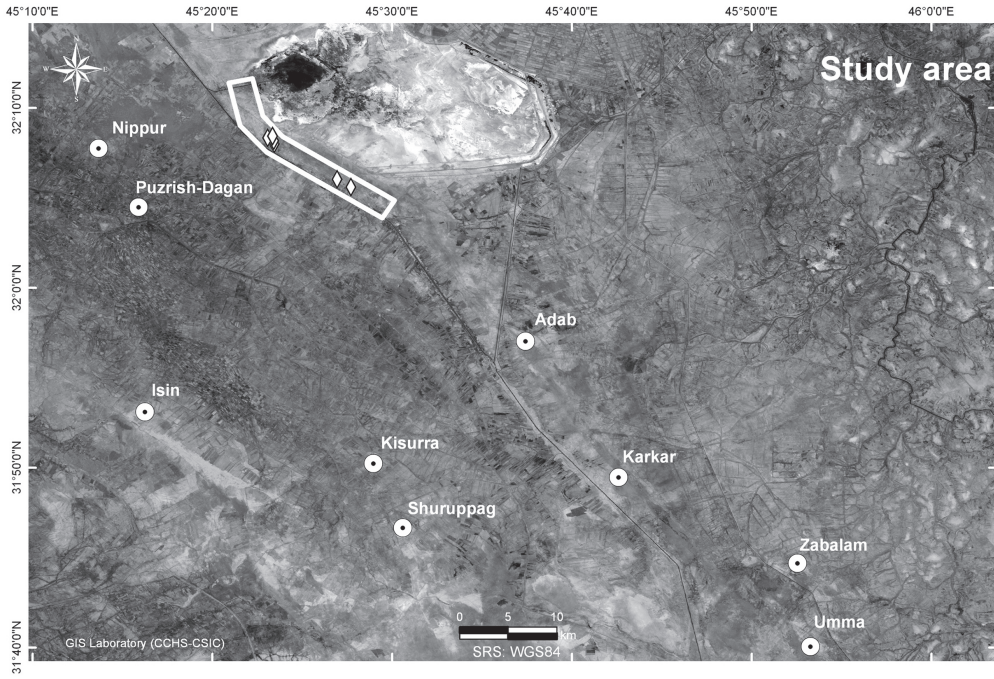


Fig. 4. General view of the study area.

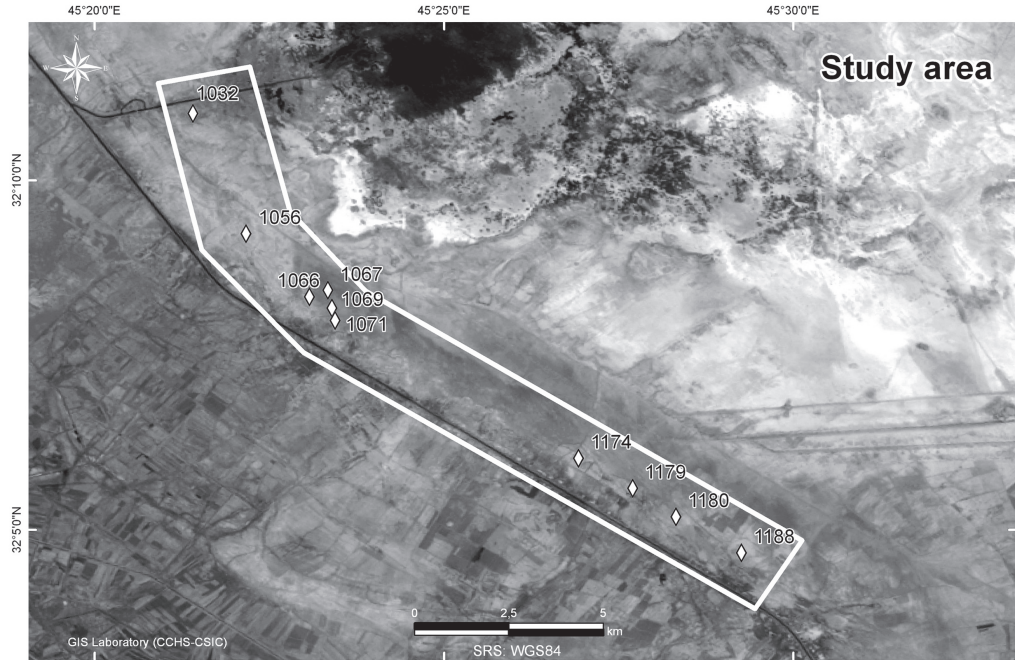
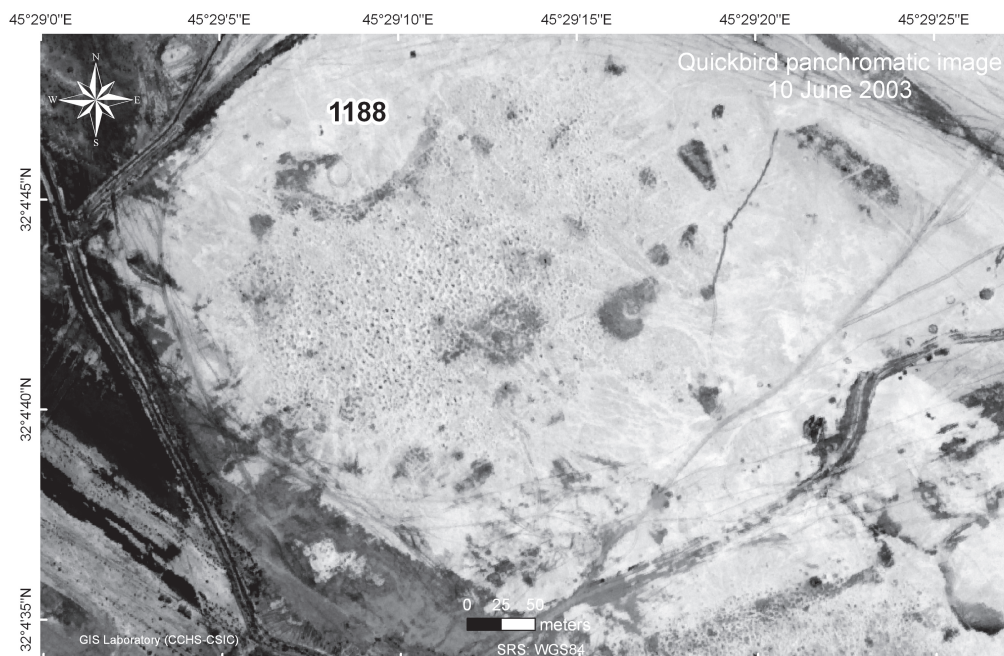
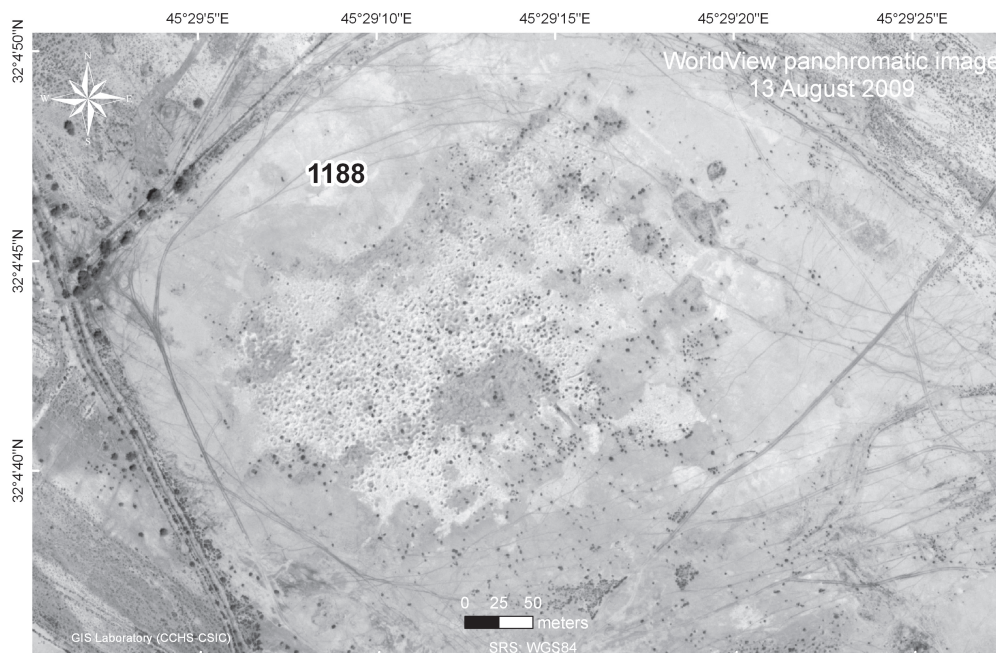


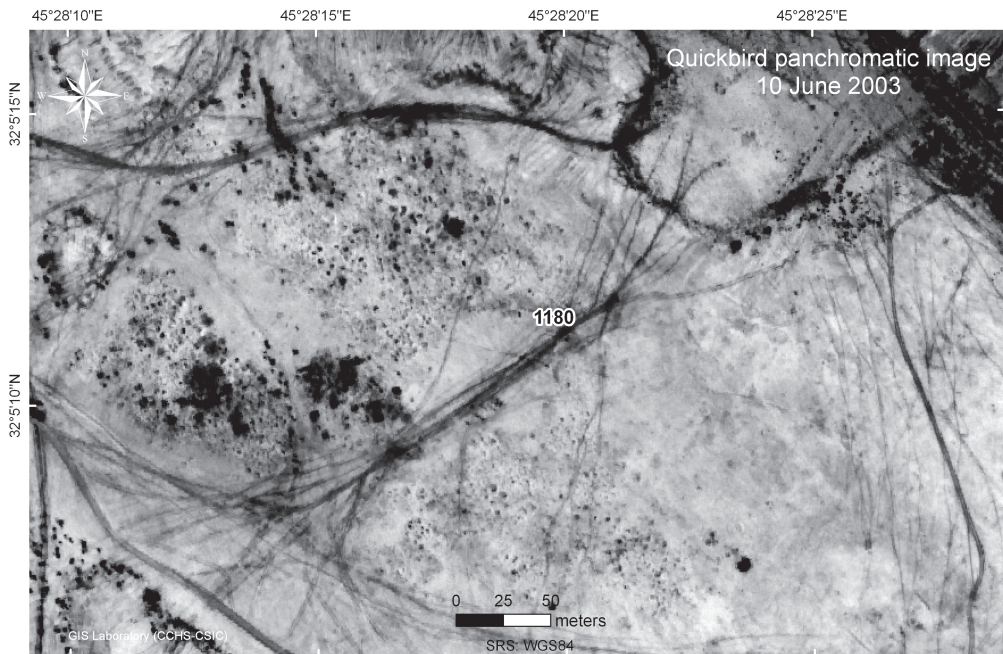
Fig. 5. Sites illegally excavated in the area of Irisaâgriç.



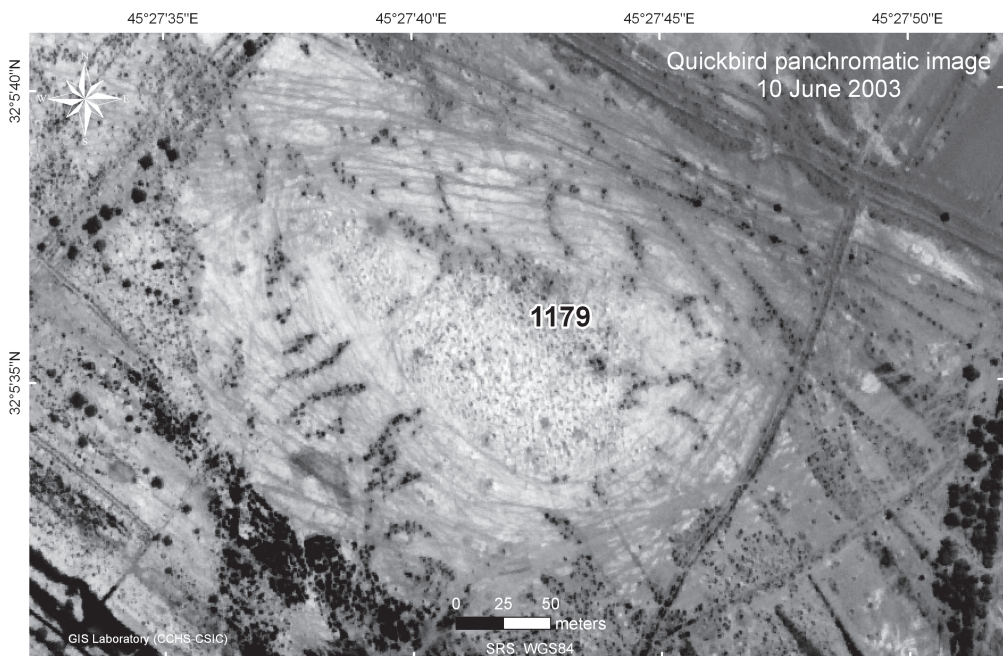
*Fig. 6. Site Adams no. 1188 (Umm al-Hafriyyat). June 10, 2003.*



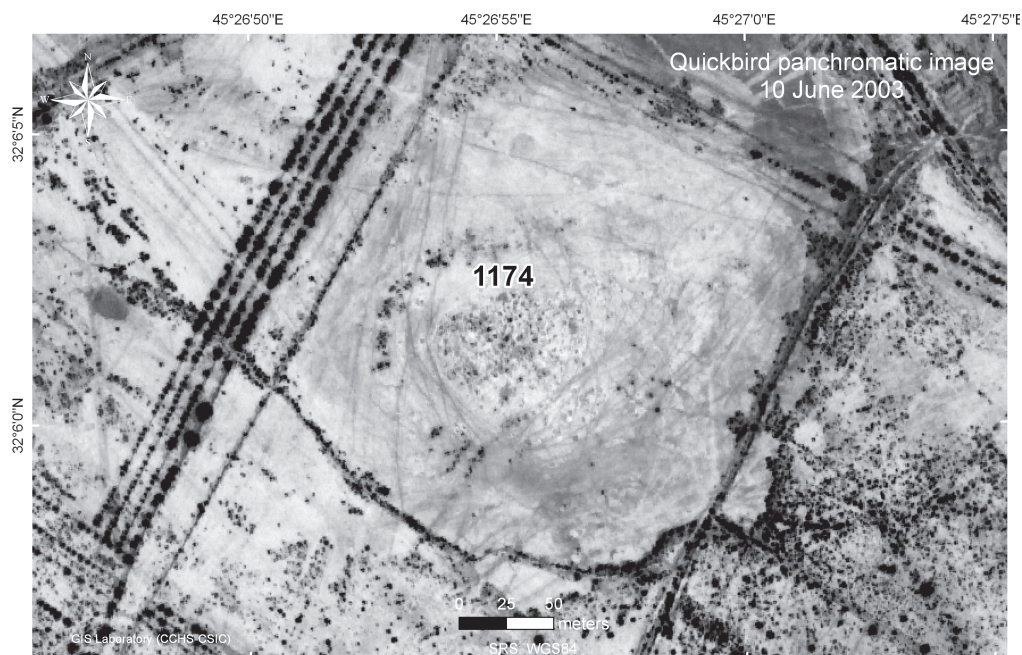
*Fig. 7. Site Adams no. 1188 (Umm al-Hafriyyat). August 13, 2009.*



*Fig. 8. Site Adams no. 1180. June 10, 2003.*



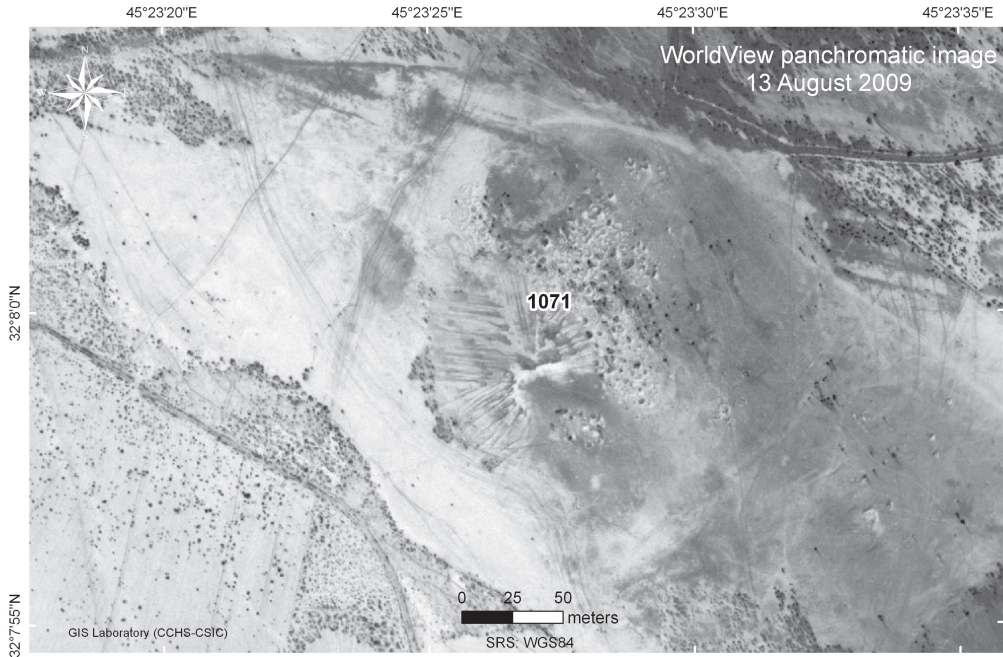
*Fig. 9. Site Adams no. 1179. June 10, 2003.*



*Fig. 10. Site Adams no. 1174. June 10, 2003.*



*Fig. 11. Site Adams no. 1071. June 10, 2003.*



*Fig. 12. Site Adams no. 1071. August 13, 2009.*



*Fig. 13. Site Adams no. 1069. June 10, 2003.*

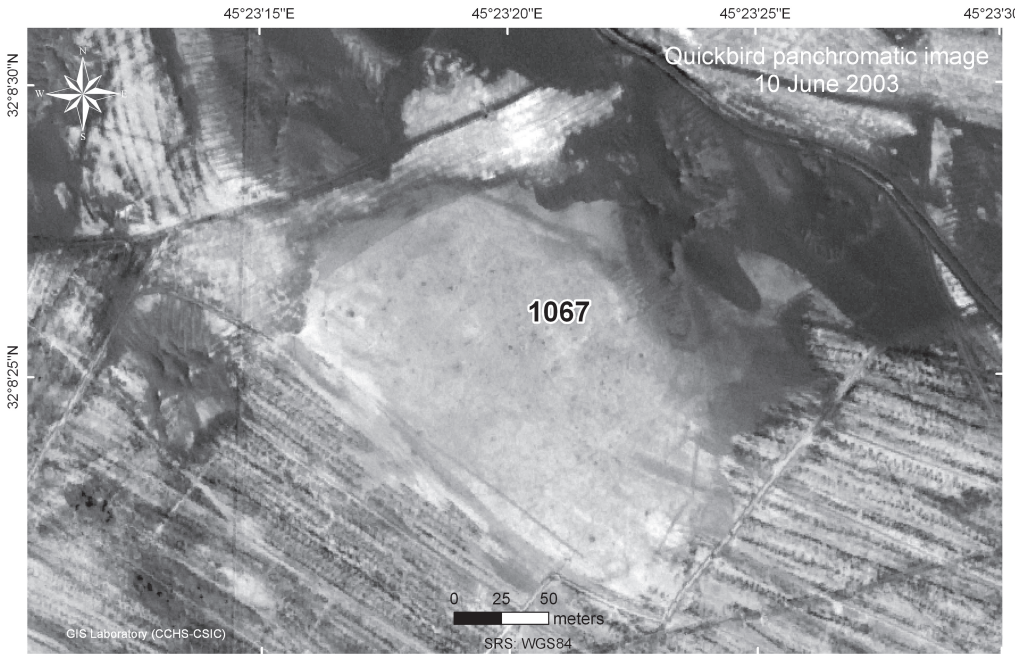


Fig. 14. Site Adams no. 1067. June 10, 2003.

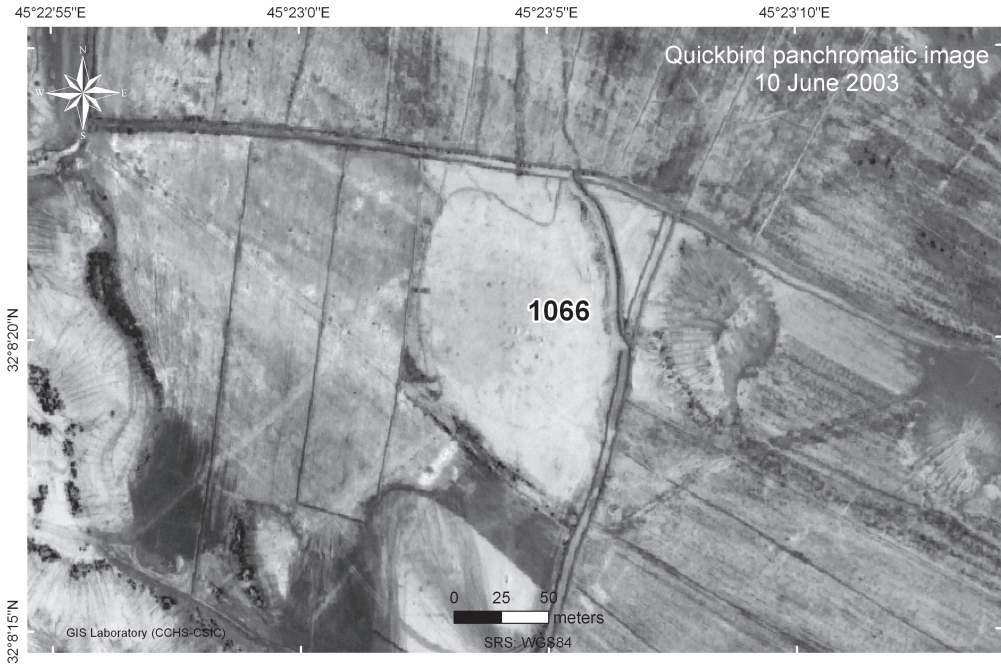
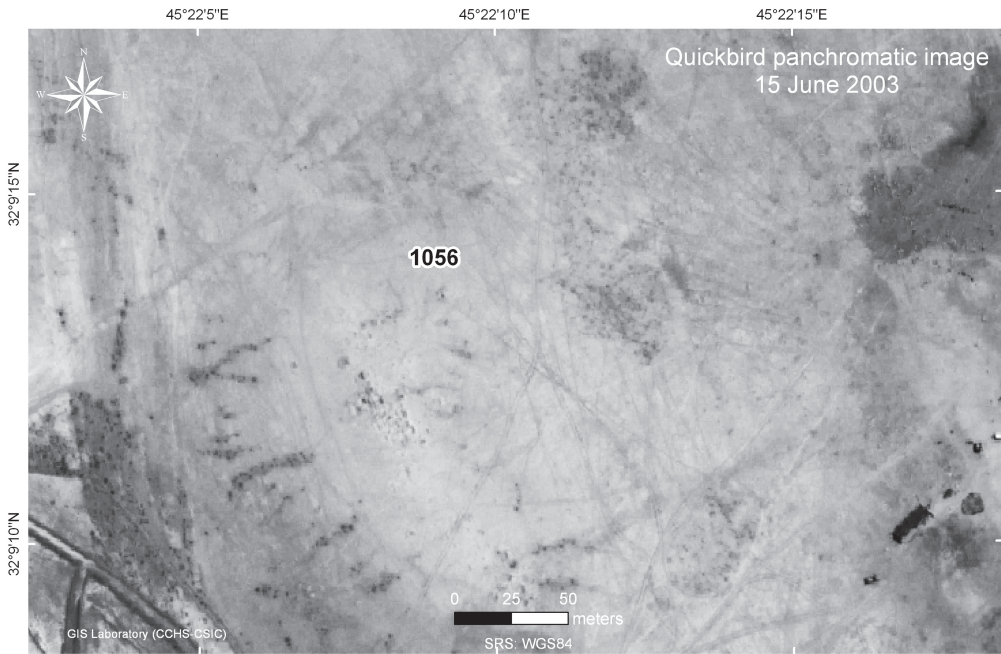


Fig. 15. Site Adams no. 1066. June 10, 2003.

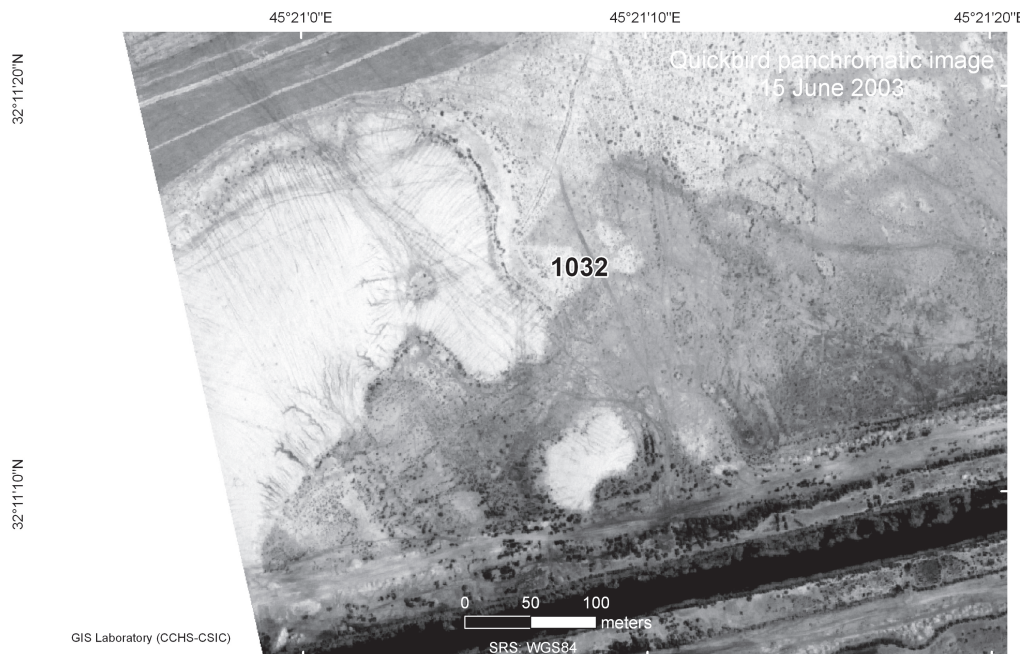


*Fig. 16. Site Adams no. 1056. June 15, 2003.*

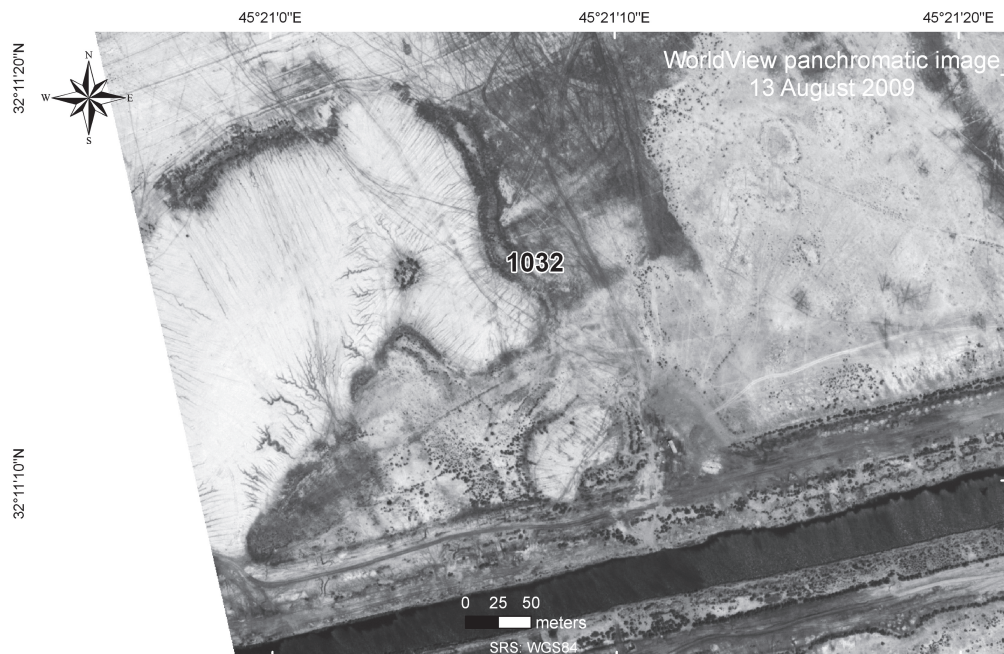


*Fig. 17. Site Adams no. 1056. August 13, 2009.*





*Fig. 18. Site Adams no. 1032. June 15, 2003.*



*Fig. 19. Site Adams no. 1032. August 13, 2009.*