



:

*

**

:

.

:

*

**

) :

(-

-)« »

(

- ()

« »

»

)

(

« »

(Moorey,1985: 5)

« »

)« »

- (-

« - »

« - »

:

»

) -

-

(

:

:

-

) II (. _)

) III4 (. _

(.)

(Moorey,1969:132)

(

)

(

- :

_ _ _ _

- :

(:)

:

)

(

()

()

-

)

)

(:)

(

(Horn,1982:8)

)
(
-

« »
« »

:

(:)

-

:

-

()

-

(:)

-

(-)

-

)

(

()

-

(:)

.(Potts, 1994: 151)

:

- -)

(

:

(Moorey, 1994: 343) .

()

).

(

(Read, 1934: 384)

:

(:)

:

.

:

As

-

-

-

-

(- :)

.

(:).

(- :).

(Moorey,1985: 5) .

(:).

:

).

(:

()

(- :) .

:

:

(Moorey,1985: 16) .

()

)

-

(

)

.(:) .

(

(Moorey, 1994:250)

(Maddin,1977:41) .

(:)

(Moorey,1969: 133) .

(Wartime,1973: 881)

()

(Moorey,1985:16)

)
(. -

(Moorey, 1994: 250) .

-

)

(

-

(-)

)

(

(- :)

(:)

(Moorey, 1985: 11).

-

-

:

- (Potts,1994: 153) .

III)
(

)

(Moorey,1994: 252,301

(Read, 1934: 385)

-

- .(Moorey, 1985: 4) . :)

(-
-

(. -) I
)

-

(Moorey,1994:251) .

(
(AN-NA)

II
(.) III

-

)

(

)

(...

)

(...

(Read, 1934: 385)

)

(

-

(Maddin, 1977: 38_41) .

()

(Cleuaziu,1982:15_16)

(Moorey,1994:252)

)

)

(_

(

(Maddin,1977: 38_41)

()

(Read, 1934: 385)

(Maddin, 1977: 39) .

....

:

—

-

-

-

—

.

.

.

:

(:). -

(Wartime, 1973: 880-882) .

()

-

-)

(:

(:) %

-

(Wartime,1973: 882)

)

(

-

-

(Moorey, 1982: 87)

(Moorey, 1985:, 4,16) .

(:)

Moorey,)

(1994: 251

(:)

(Moorey, 1982:97) .

VA

()I

(Potts,1994:147)

(Wertime, 1973: 881)

II-III A

I (.)

(. - -)

/

)

(
) IVB IVAI

III

) VB

(. -

(Potts, 1994: 153_155)

III)

(. - -

(Potts,1994:152)

)

(

)C

-

(.

) B

(.

-

(

)

-

.

.

(Moorey, 1985: 17)

-

/)

II_III A

(

-

IV

:

I

(Potts,1994:152)

II_III A

-

IVAI_IVB

V

-

V I

(I)
(V,IVA2)

(Moorey, 1994: 251)

) V_IVA2
IIIB

M ()
(T.burton brown)
(. .)

M (:)

II
(. -)

D K
-) III

(Potts,1994:148) .

K
II

+

(I_Iv)

II_III

III_Iv

II (Moorey,1969: 134)

IVA

(- :)

IVC_A

(Moorey, 1982: 85_91) II

V

IVC

) VI (-)
(-) IVB

(-) IVA

v

VI

()

-

(:)

)

(.

:

)

(

-

- III

-

- (Wartime,1973:881)

- ()

)

(

(Moorey, 1985: 17)

- ()

Wartime,1973:) .

(881

IVA1 :

IIIA)

- III

(. -

()

-

(Potts,1994: 151) .

IIIb) IVA2

(. -

(Moorey, 1985:17)

)

) IVB

(. -

III) VA

(. -

-) VA

(. -

(:).

(Potts, 1994: 155) .

(Moorey,1969: 134)

IVA2

(Moorey, 1994:253)

:

-

:

()

:

-

)

.(

..

-

..

:

-

.

.

.

...

-

-

:

-

-

-

(Cleuziou, 1982: 15)

()

-
- 4 - Marechal
 - 5 - shalev
 - 6 - paracelse
 - 7 - FARA
 - 8 - Telloh
 - 9 - sar.kar
 - 10- Arsenopyrite
 - 11- Berthoud
 - 12- Menu
 - 13- Malfoy
 - 14- voce
 - 15- Kjul_tepe
 - 16- Tylecote
 - 17- Heskell
 - 18- Iamberg karlovsky
 - 19- Charles

»

» «

» «

«

—

« »

—

«

»

—

—

»

«

»

«

»

«

—

—

— » «

»

«

:

- 1 - Rostoker.
- 2 - Enarjite
- 3 - Tennantite

-
- Maddin, Robert and Stech Tamara and James, D. Muhly; 1977, Expedition Vol. 19 No. 2, p 37-47 »Tin in the ancient near East.
 - Moorey, P.R.S; 1967, Prehistoric copper and bronze metallurgy in western Iran (with special reference to Luristan) IRAN, Vol. VII, P. 131-153.
 - Moorey, P.R.S; 1982, Archaeology and Prechaemenid metal working in Iran, IRAN. Vol. XX. P. 81 – 13.
 - Moorey, P.R.S; 1985, Materials and Manufacture in Ancient Mesopotamia BAR. International series 237, oxford.
 - Moorey, P.R.S; 1994, Ancient Mesopotamia Materials and Industries Clarendon press.oxford.
 - Potts, Timothy, F; 1994, Mesopotamia and the East, printed in Great Britain at Cambridge University Press.
 - Read, T. Thomas; 1934, Metallurgical facies in Archaeological literature, American Journal of Archaeology, vol. 38, No. 3, p. 49-69.
 - Wertimé, A, Theodore; Science, the Beginnings of Metallurgy: A new look, 1973. Vol. 182, No. 4115, p.875-885

- Cleuziou, Serge and Berthoud, Thierry; 1982, Early Tin in the near East, Expedition, Vol.25 No.1, p.14-19.
- Horne, Lee; 1982, Fuel for the metal worker Expedition, vol, 25, No.1, p. 6_13.

