GHAR AL HIBASHI
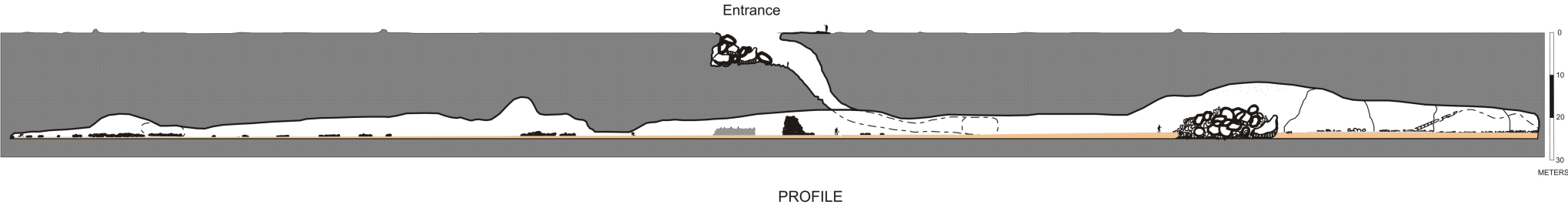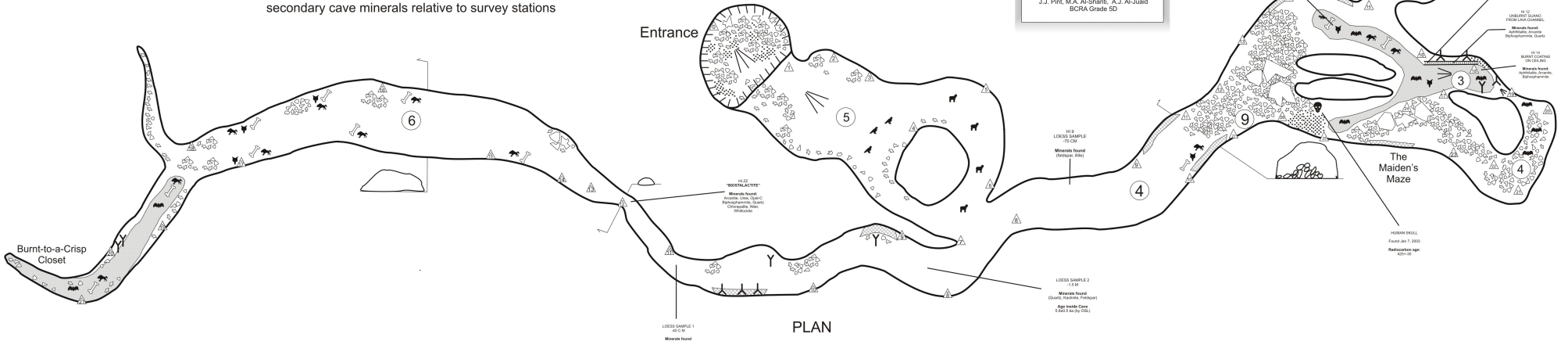
HARRAT BUQUM
KINGDOM OF SAUDI ARABIA

Annotated map with nature and location of
secondary cave minerals relative to survey stations

Nm

2003

Entrance

PLAN

Burnt-to-a-Crisp
Closet

The Maiden's
Maze

HI.ZZ
"BIOSTALACTITE"
Minerals found:
Arcanite, Urea, Opal-C,
Biphosphammite, Quartz,
Chloraputite, Niter,
Whitlockite

HI.9
LOESS SAMPLE
-70 CM
Minerals found:
(feldspar, illite)

LOESS SAMPLE 1
-40 C M
Minerals found:
(Quartz, Kaolinite, Feldspar)
Age Inside Cave
4.5±0.2 ka (by OSL)

LOESS SAMPLE 2
-1.5 M
Minerals found:
(Quartz, Kaolinite, Feldspar)
Age Inside Cave
5.8±0.5 ka (by OSL)

HI.2 BURNT WOLF SCAT
HI.8B ASH
HI.7 BONE
HI.8 VOLCANIC ROCK
Minerals found:
Archydite, Aphthitalite,
Arcanite, Aniusite,
Archerite, Biphosphammite,
Calcite, Carbonate-hydroxylapatite,
Chloraputite, Hydroxylapatite,
Opal, Pyrocoproite, Hoatite,
Pyrophosphatite, Quartz,
Urea, Whitlockite, Palygorskite
(feldspar, clinopyroxene)

HI.12
"BIOSTALACTITE"
Minerals found:
Arcanite, Opal-C, Urea
Biphosphammite

HI.13 BURNT GUANO
FROM LAVA CHANNEL
Minerals found:
Aphthitalite, Arcanite
Biphosphammite

HI.12 UNBURNT GUANO
FROM LAVA CHANNEL
Minerals found:
Aphthitalite, Arcanite
Biphosphammite, Quartz

HI.13
BURNT COATING
ON CEILING
Minerals found:
Aphthitalite, Arcanite,
Biphosphammite

HUMAN SKULL
Found Jan 7, 2003
Radiocarbon age:
420+/-30

Entrance

PROFILE

0
10
20
30
METERS

SYMBOLOGY

Symbol	Description	Symbol	Description
5	Ceiling elevation in meters		Lava levée
⚠	Survey station		Burnt guano zone
◯	Vertical drop		Sediment (loess)
	Slope, descent on wide side		Sand
Y	Stalactite, Stalagmite		Bat guano
	Cross section with arrow showing viewing direction		Rock dove guano
	Breakdown (rock)		Hyena scat
	Cache of animal bones		Wolf scat
	Lava channel		Fox scat
			Sheep/goat scat

0 10 20 30
METERS