

MUKNAL REMOTE SIPHON

SISTEMA NARANJAL

TULUM, QUINTANA ROO

MEXICO

N20.18832° LATITUDE
W087.48985° LONGITUDE
WGS 84 DATUM

AN UNDERWATER CAVE SURVEY OF THE
MUKNAL REMOTE SIPHON SECTION
OF SISTEMA NARANJAL
SURVEYED
JANUARY 1991 TO APRIL 1994
BY
JAMES G. COKE IV
LORIE CONLIN
CARL SUTTON
THOMAS M. YOUNG
MARCH 2000 TO DECEMBER 2000
BY
JAMES G. COKE IV
BIL PHILLIPS
DRAFTED BY JAMES G. COKE IV

Plan Length: 16,400 Feet (5001 Meters)
Plan Depth: 115 Feet (- 35 Meters)
© J.G. COKE IV, 2001

PRINCIPAL EXPLORERS
J. Coke C. Sutton
L. Conlin C. Weber
B. Phillips T. Young

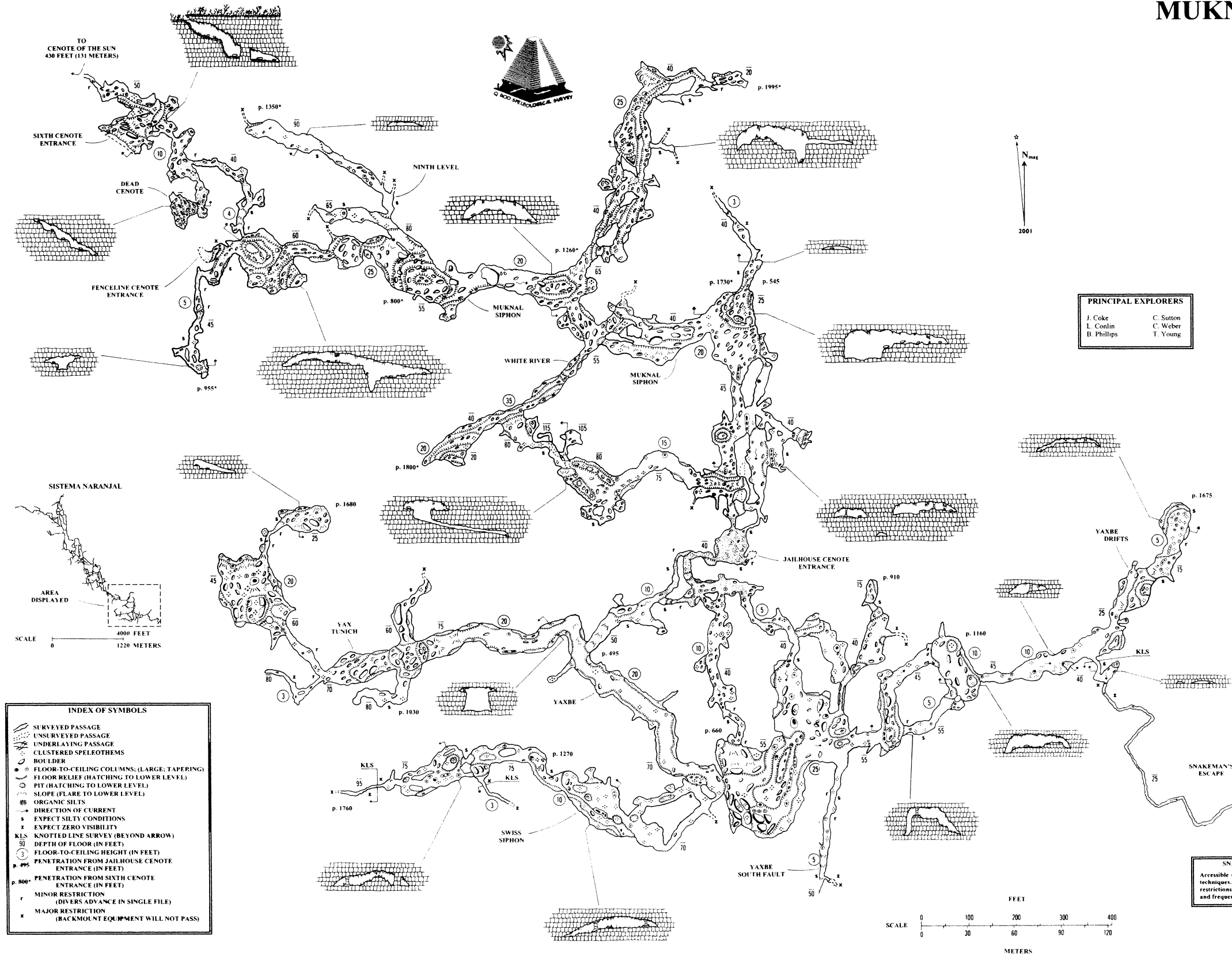
NOTES

In the present geological era, this anchialine limestone cave is completely flooded by fresh and salt waters. Located four kilometers from the coast of the Mexican Caribbean, this remote section of Sistema Naranjal supports an important freshwater drainage system that originates from the North and West. Three off-cave entrances permit immediate access into this siphon cave, which is characterized by fracture and joint controlled passages. Explorations that depart from the main siphon passage should anticipate disorienting flow reversals within offshoot cave passages. A halobline is normally encountered at a depth of 52 feet (15.8 meters). Typical environmental conditions include cream colored silt floors with dark chestnut colored walls and ceilings.

A Suunto compass and digital depth gauge (± 1 foot accuracy) were used to confirm all azimuths and depths within the cave. A fiberglass tape was used to measure all distances, unless noted as KLS. A knotted line survey was incorporated beyond the KLS symbol appearing on the map plan. All distances have been corrected for the plan view.

Cross section and profile representations are enlarged by twice the plan scale; directional arrows associated with these illustrations indicate view. This survey depicts the major features of the cave passage. Only trained individuals using proper equipment and expert technique should enter this fragile cave system.

SNAKEMAN'S ESCAPE
Accessible only by sidemount equipment techniques. Expect numerous passage restrictions, strong siphon conditions, and frequent zero visibility events.



- INDEX OF SYMBOLS**
- SURVEYED PASSAGE
 - ... UNSURVEYED PASSAGE
 - UNDERLYING PASSAGE
 - CLUSTERED SPELEOTHEMS
 - BOULDER
 - FLOOR-TO-CEILING COLUMNS (LARGE, TAPERING)
 - FLOOR RELIEF (HATCHING TO LOWER LEVEL)
 - PIT (HATCHING TO LOWER LEVEL)
 - SLOPE (FLARE TO LOWER LEVEL)
 - ORGANIC SILTS
 - DIRECTION OF CURRENT
 - ⊥ EXPECT SILTY CONDITIONS
 - ⊥ EXPECT ZERO VISIBILITY
 - KLS KNOTTED LINE SURVEY (BEYOND ARROW)
 - 50 DEPTH OF FLOOR (IN FEET)
 - 3 FLOOR-TO-CEILING HEIGHT (IN FEET)
 - 3 PENETRATION FROM JAILHOUSE CENOTE ENTRANCE (IN FEET)
 - p. 495 PENETRATION FROM SIXTH CENOTE ENTRANCE (IN FEET)
 - r MINOR RESTRICTION (DIVERS ADVANCE IN SINGLE FILE)
 - x MAJOR RESTRICTION (BACKMOUNT EQUIPMENT WILL NOT PASS)

Sistema Naranjal, Muknal Remote Siphon part
Tulum
Quintana Roo
AMCS Activities Newsletter 26, p. 18, 2003