

AN ORDINANCE 89923

AMENDING CHAPTER 35 OF THE CITY CODE THAT CONSTITUTES THE COMPREHENSIVE ZONING ORDINANCE OF THE CITY OF SAN ANTONIO BY CHANGING THE CLASSIFICATION OF AND REZONING CERTAIN PROPERTY DESCRIBED HEREIN.

* * * * *

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF SAN ANTONIO:

SECTION 1. Section 35-3007 of the Unified Development Code which is Chapter 35 of the City Code and constitutes the comprehensive zoning ordinance of the City of San Antonio is hereby amended so that it shall hereafter include the following described changes of classification and the rezoning of the hereinafter designated property to-wit:

CASE NO. Z97261-U

The rezoning and reclassification of property from "B-2" ERZD Business Edwards Recharge Zone District to "P-1(B-2)" ERZD Planned Unit Development Business Edwards Recharge Zone District on the property listed below as follows:

Lots 8, 11 through 14 and Lot 21, NCB 16332
Stone Oak Parkway and Gallery Circle

Provided that the Aquifer Studies Office recommendation are followed as set out below:

1. Prior to the release of any building permits the owner/operator of any Category 2 property shall obtain a Letter of Certification from the Watershed Protection and manage Protection and Management Department of the San Antonio Water System.
2. All land uses shall be in conformance with the table of permitted uses at the time the zoning is approved by City Council. If the proposed use is listed as requiring special City Council approval, the owner/operator shall apply for re-zoning for the particular use. If the land use is listed as prohibited, that land use will not permitted.
3. For areas using on-site sewage facilities, the owner, prior to installation, is required to obtain approval of a site specific design (which meets Bexar County On-Site Sewage Regulation) for conditions unique to that lot. The on-site sewage facilities will be installed and maintained property.
4. Cub Cave, Bear Cave, Hornet's Last Laugh Pit and Pendulum Pit shall remain open with a buffer zone designed according to the criteria contained in Sec.34-920 (b) of Ordinance No. 81491 or other approved criteria. The calculations for determining the buffer zone around the caves shall be submitted to and approved by SAWS prior to the commencement of construction. The caves may be buffered by having the caves surrounded by a greenbelt and/or conservation easement.

5. SAWS Aquifer Studies staff will work with TNRCC and the owner/operator of the Tetco located at Stone Oak Parkway and Huebner Road in an effort to bring the site into compliance with the TNRCC approval letter date December 21, 1995.
6. All abandoned wells or improperly plugged wells shall be plugged in accordance with the San Antonio Water Code.
7. All properties containing any portion of the 100-year floodplain, which have not yet been platted, shall have a 60 foot buffer zoned adjacent to and outside the 100-year floodplain. The buffer zone shall consist of a no-build zone and should be left in a natural condition.
8. Prior to the release of any building permits for additional developments, the following shall be submitted to the Aquifer Studies Division of the San Antonio Water System:
 - A. A Water Pollution Abatement Plan shall be submitted for each particular development/use within the area being considered for rezoning,
 - B. A set of site specific plans which must have a signed Engineers Seal from the State of Texas,
 - C. A letter from the Texas Natural Resource Conservation Commission approving each Water Pollution Abatement Plan,
 - D. A copy of the approved Water Pollution Abatement Plan.
9. Landscaped areas shall be sensitive to minimizing water needs (i.e. use of native plants). The owner/operator of this development and each purchaser or occupant of an individual lot within this development shall be informed in writing about best management practices of pesticide and fertilizer application. Preventing Groundwater Pollution, A Practical Guide to Pest Control, available from the Edwards Aquifer Authority (210/222-2204), or equivalent information produced by recognized authorities such as the Soil Conservation Service, Texas Department of Agriculture, U. S. Department of Agriculture, etc. shall be used.
10. The storage, handling, use and disposal of all over the counter hazardous materials within this development shall be consistent with the labeling of those materials. Failure to comply with the label warnings may constitute a violation of Federal Law.
11. The City of San Antonio shall inspect all future construction of service laterals and sewer mains for proper construction according to State and City Regulations and Code.

12. If any solution opening, caves, sinkholes, or wells are found during the excavation, construction, or blasting, the developer shall notify the Texas Natural Resource Conservation Commission at (210) 490-3096 and the Aquifer Studies Division of the San Antonio Water System at (210) 704-7392.
13. The Aquifer Studies Division staff shall have the authority to inspect the site to ensure that the approved recommendations are being strictly adhered to during and after construction of the project.

SECTION 2. All other provisions of Chapter 35, as amended, shall remain in full force and effect, including the penalties for violations as made and provided in Section 35 - 1024.

SECTION 3. The Director of Planning shall change the zoning records and maps in accordance herewith and the same shall be available and open to the public for inspection.

SECTION 4. This ordinance is not severable.

PASSED AND APPROVED this 10th day of June 19 99


M A Y O R
Howard W. Peak

ATTEST:


City Clerk

APPROVED AS TO FORM:


City Attorney

99 - 24

Zoning Case No.: Z97261-U

Date: May 4, 1999

Council District: 9

Appeal: No

Applicant: City of San Antonio

Owner: Robert R. & Kelly
C. Lemke Boyd Bradfield

Zoning Request: "B-2" ERZD Business Edwards Recharge Zone District to "P-1(B-2)" ERZD
Planned Unit Development Business Edwards Recharge Zone District.

Property Location:

Lots 8, 11 thru 14 and 21, NCB 16332
Stone Oak Parkway and Gallery Circle

Properties are located 1065 feet northwest of the intersection of Stone Oak Parkway and N. Loop
1604 East, having a total of 550 feet on Stone Oak Parkway and a maximum depth of 650 feet.

Applicants Proposal:

Business Planned Unit Development

Staff Recommendation:

Approval. The zoning requested is in conformance with the Stone Oak Master Plan and the
Principals used in designating zoning within the Stone Oak area. Having existing "B-2" zoning
to the north, south, east and west in this general area of Stone Oak Parkway, it will developed in
to a business district.

Zoning Commission Recommendation:

Approval

VOTE:

FOR	<u>7</u>
AGAINST	<u>0</u>
ABSTAIN	<u>0</u>

Z97216-U

ZONING CASE NO. Z97261-U

Applicant: City of San Antonio

Zoning Request: "B-2" ERZD Business Edwards Recharge Zone District to "P-1(B-2)" ERZD Planned Unit Development Business Edwards Recharge Zone District

Julie Rogers, SAWS, stated based on the environmental assessment of the property, and the proposed land uses, staff recommends approval of the intended land uses for all areas except for properties which have been removed from this zoning request and any and all properties requiring City Council approval, as long as the applicant agrees to abide by all recommendations.

Staff stated there were 19 notices mailed out to the surrounding property owners, 0 returned in opposition and 1 returned in favor.

Everyone present, for and against having been heard and the results of the written notices having been received, the Chairman declared the public hearing closed.

COMMISSION ACTION

The motion was made by Commissioner Plummer and seconded by Commissioner Clamp to recommend approval as long as the applicant abides by SAWS recommendations for the following reasons:

1. Property is located on Lots 8, 11 thru 14 and 21, NCB 16332 at Stone Oak Parkway and Gallery Circle.
2. There were 19 notices mailed, 0 returned in opposition and 1 returned in favor
3. Staff recommends approval.

AYES: Earl, Williams, Galloway, Clamp, Falcone, Plummer, Galvan

NAYS: None

THE MOTION CARRIED.

RESULTS OF NOTICE FOR COUNCIL HEARING

To be provided at Council hearing.

SAN ANTONIO WATER SYSTEM
Interdepartment Correspondence Sheet

RECEIVED
98 JAN 13 PM 3:15

To: Zoning Commission Members

From: Kirk M. Nixon, Manager, Aquifer Studies Division, San Antonio Water System

Copies To: Rebecca Quintanilla Cedillo, Vice President of Planning, San Antonio Water System, Scott R. Halty, Director, Watershed Protection and Management Department, Julie Rogers, Planner III, Aquifer Studies Division, File

Subject: Zoning Case Z97261 (Stone Oak)

Date: January 13, 1998

SUMMARY

A request for a change in zoning has been made for an approximate 6974 acre tract located on the city's north side. The requested change in zoning is from "Temporary R-1 ERZD" to:

- "R-A ERZD" for approximately 695 acres of agricultural use;
- "R-1 ERZD" and "R-5 ERZD" for approximately 5058 acres of single-family residential development which includes street right-of-ways, drainages, floodplain, and San Antonio River Authority Flood Control Basins;
- "R-3 ERZD" for approximately 212 acres of multi-family residential development;
- "O-1 ERZD" for approximately 7 acres of office development;
- "B-1 ERZD" for approximately 42 acres of business development;
- "B-2 ERZD" for approximately 488 acres of business development; and
- "B-3 ERZD" for approximately 472 acres of business development.

The change in zoning is being requested by the City of San Antonio. Much of the area covered by the zoning request has previously been determined to be Category 1 properties. However, many areas have not received a category determination and may be Category 2 properties.

LOCATION

This tract was annexed by the city on December 31, 1997 as part of City Council District 9. The property is bordered on the south by Loop 1604, on the east by US Hwy 281, on the west by Blanco Road and on the north by residential and undeveloped land. The entire 6974 acre subject area lies within the Edwards Aquifer Recharge Zone (Figures 1 and 2).

SITE ASSESSMENT

An investigation was made by the San Antonio Water System (SAWS), Aquifer Studies Division to assess the existing geologic conditions and observe any potential environmental concerns.

The undeveloped portions of the site are covered with trees, brush and natural grasses. The Edwards Group, which underlies the majority of the area, is made up of two geologic formations. The lower portion is the Kainer Formation, which is approximately 280 feet thick. The upper portion is the Person Formation which overlies the Kainer Formation and is approximately 190 feet thick (Appendix A). The Kainer Formation is exposed over most of the property. The Person Formation is exposed in several areas in the southern portion of the site. The Glen Rose Limestone, which underlies the Edwards Group, is also present in a few areas in the northern portion of the site. The entire site is crossed by numerous northeast-southwest trending faults. Many exposures of the Edwards Group are likely to exhibit solution features and fractures. The majority of these features are likely to be soil-filled thus limiting their recharge capabilities. Several potential recharge features are discussed below.

The property displays low to moderate topographic relief in the southern portion of the site and moderate to high topographic relief in the northern portion of the site. Drainage from the site flows to the south towards either Mud Creek in the eastern portion of the site or to Panther Springs Creek in the western portion of the site.

The property has been under development since 1983. Approximately 45 to 50% of the site has already been developed. Much of the remaining properties are covered by approved Water Pollution Abatement Plans (WPAP). A list of the developments with approved WPAPs is attached as Appendix B. Known developments for which we have no WPAP on file to review are included in a list attached as Appendix C. Staff will work with the TNRCC to acquire copies of these files. There exists a possibility that some WPAP's for developments may still be outstanding.

Aquifer Studies staff conducted site investigations for all areas of the site which have been through the WPAP or platting process. Staff will continue to conduct WPAP and/or platting site investigations for any future developments in addition to any individual zoning cases which may come about.

A thorough investigation was made of potential environmental concerns such as abandoned water wells, caves and other significant recharge features, sedimentation/filtration basins, areas approved for use of on-site sewage treatment facilities and areas which have land uses which may require City Council approval. Many of the areas discussed below are identified on Figure 2.

Abandoned water wells. SAWS Water Quality Division staff reviewed files and conducted site investigations to determine if there were any abandoned water wells within the area covered by this zoning case. These investigations identified four abandoned wells. Two of these wells, Well 2 and Well 4 on Figure 2, are scheduled to be plugged under a SAWS permit. However, the remaining two wells are not currently scheduled for plugging. Water Quality Division staff will be working with the landowners to get these wells properly plugged.

Caves and other significant recharge features. The Aquifer Studies Division database of significant recharge features and the Caves of Bexar County, 2nd Ed. by George Veni, 1988, were reviewed to

determine what significant recharge features were present in the area of the zoning case. In addition Allan Clark of the United States Geological Survey was contacted regarding his knowledge of features in this area.

Three caves listed in Veni (1988) were found and are shown as Pendulum Pit, Cub Cave and Bear Cave in Figure 2. All three of these caves are still in their natural condition. One cave listed in Veni (1988), Hornet's Last Laugh, was not found and its approximate location is shown in Figure 2. Cub Cave, Bear Cave and Hornet's Last Laugh Pit are located within the 100 year floodplain behind a flood control dam on Mud Creek. A small unnamed cave located in Panther Springs Creek was previously inspected by Aquifer Studies staff. However, this feature has been approved for closure by the TNRCC. Hairy Tooth Cave has been preserved within a single-family residential subdivision by the use of a green space area and security fencing around the feature. More information on Cub Cave, Bear Cave, Hornet's Last Laugh Pit and Pendulum Pit from Veni (1988) is included as Appendix D.

Numerous other moderate recharge features have been observed within the area of the zoning case. These include solution cavities, sinkholes and fractured rock zones. Some of these features have been preserved. However, numerous moderate features have been closed within this area. Based on the general geologic conditions in this area, more moderate recharge features are likely to be found.

Sedimentation/filtration basins. The six existing sedimentation/filtration basins located within the area of the zoning case were inspected. The basin at the Tetco Service Station located at the intersection of Huebner Road and Stone Oak Parkway was approved by the Texas Natural Resource Conservation Commission (TNRCC) as a temporary basin and was to be replaced by a permanent sedimentation/filtration basin prior to December 21, 1997. According to Lynn Bumgardner of the TNRCC, as of December 30, 1997, no plans have been submitted or approved for replacement of the temporary basin.

On-site sewage facilities. After a review of files on record, three areas were found which are approved by Bexar County and/or TNRCC for use of on-site sewage treatment facilities. The Heights at Stone Oak II, Parcel "E" is constructed or under construction. Cobblestone Hill and the Bill Morris Subdivision have not yet started construction. This information was confirmed by Renee Green of Bexar County Public Works.

Uses requiring City Council approval. An inventory was made of properties which appear to require City Council approval according to the city's Uniform Development Code (UDC) Permitted Uses Table. Some of these sites include, but are not necessarily limited to, a metal product fabrication facility, an oil change facility, two veterinary clinics, two dry cleaners, a hospital, an equestrian center and a golf course and country club. The metal product fabrication facility (Strand Services) uses steel rebar to fabricate structural reinforcement for concrete products. According to the UDC, this type of use appears to require Industrial zoning and City Council approval. In addition, there is one service station with an automatic car wash already in operation and one service station under construction. New underground storage tank facilities, such as service stations, are prohibited by ordinance over the Edwards Recharge Zone.

ENVIRONMENTAL CONCERNS

The environmental concerns associated with this rezoning case and future development activities on the Edwards Aquifer Recharge Zone are as follows:

1. The use of on-site sewage facilities.
2. The presence of three caves.
3. The presence of four on-site water wells.
4. The presence of a pollution abatement measure at the Tetco Service Station located at the intersection of Stone Oak Parkway and Huebner Road which is not in compliance with the TNRCC approval letter.
5. The build-up of hydrocarbons and other pollutants on streets, parking lots and other paved areas which are then carried off in the first flush of stormwater run-off.
6. Improper use of pesticides, herbicides, or fertilizers needed for landscape maintenance which may be carried off in the first flush of stormwater run-off.
7. The proper construction of the sewer mains and service laterals to prevent wastewater from entering the subsurface.

ENVIRONMENTAL RECOMMENDATIONS

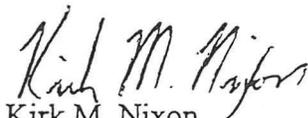
The following are recommendations put forth to address the environmental concerns raised by the construction of this development on the Edwards Aquifer Recharge Zone:

1. Prior to the release of any building permits the owner/operator of any Category 2 property shall obtain a Letter Of Certification from the Watershed Protection and Management Department of the San Antonio Water System.
2. All land uses shall be in conformance with the table of permitted uses at the time the zoning is approved by City Council. If the proposed use is listed as requiring special City Council approval, the owner/operator shall apply for re-zoning for that particular use. If the land use is listed as prohibited, that land use will not be permitted.
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4. Cub Cave, Bear Cave, Hornet's Last Laugh Pit and Pendulum Pit shall remain open with a buffer zone designed according to the criteria contained in Sec. 34-920 (b) of Ordinance No 81491 or other approved criteria. The calculations for determining the buffer zone around the caves shall be submitted to and approved by SAWS prior to the commencement of construction. The caves may be buffered by having the caves surrounded by a greenbelt and/or conservation easement.
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13. The Aquifer Studies Division staff shall have the authority to inspect the site to ensure that the approved recommendations are being strictly adhered to during and after construction of the project.

Based on the environmental assessment of the property, and the proposed land uses, staff recommends approval of the intended land uses for all areas except for properties which have been removed from this zoning request and any and all properties requiring City Council approval, as long as the applicant agrees to abide by all recommendations made in this document.

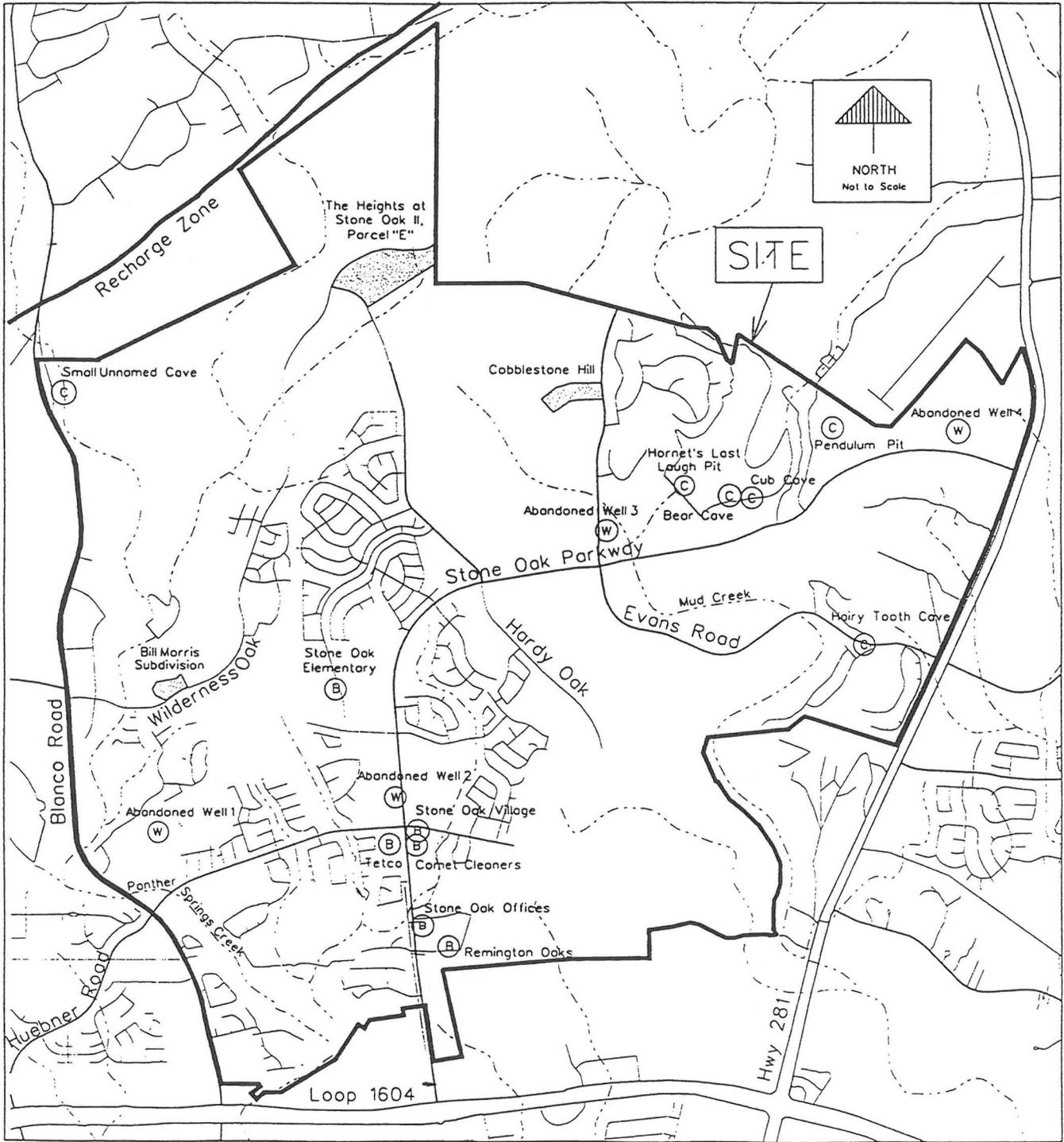

Kirk M. Nixon
Manager, Aquifer Studies


Scott R. Halty
Director, Watershed Protection & Management

APPROVED:


Rebecca Quintanilla Cedillo
Vice President, Planning

KMN:JPR



Stone Oak Zoning Case Z97261

- (B) Existing Sedimentation/Filtration Basins
- (C) Caves and Other Significant Recharge Features
- (W) Abandoned Water Wells
- [Stippled Box] Areas Approved for Use of On-Site Sewage Facilities

Figure 2

APPENDIX A

Stratigraphic Column
from
Geologic Framework and Hydrogeologic Characteristics of the
Edwards Aquifer Recharge Zone, Bexar County,
U.S. Geological Survey,
William G. Stein and George B. Ozuna, 1995

Table 1. Summary of the lithologic and hydrologic properties of the hydrogeologic subdivisions of the Edwards aquifer outcrop, Bexar County, Texas

[Hydrogeologic subdivisions modified from Maclay and Small (1976); groups, formations, and members modified from Rose (1972); lithology modified from Dunham (1962); and porosity type modified from Choquette and Pray (1970). CU, confining unit; AQ, aquifer]

Hydrogeologic subdivision	Group, formation, or member	Hydrologic function	Thickness (feet)	Lithology	Field identification	Cavern development	Porosity/permeability type				
Upper Cretaceous	Upper confining units	Eagle Ford Group	CU	30 - 50	Brown, flaggy shale and argillaceous limestone	Thin flagstones; petroliferous	None	Primary porosity lost/low permeability			
		Buda Limestone	CU	40 - 50	Buff, light gray, dense mudstone	Porcelaneous limestone with calcite-filled veins	Minor surface karst	Low porosity/low permeability			
		Del Rio Clay	CU	40 - 50	Blue-green to yellow-brown clay	Fossiliferous; <i>Ilymatogyra arietina</i>	None	None/primary upper confining unit			
Lower Cretaceous	Edwards aquifer	Edwards Group	Person Formation	I	Georgetown Formation	Karst AQ; not karst CU	2 - 20	Reddish-brown, gray to light tan marly limestone	Marker fossil; <i>Waconella wacoensis</i>	None	Low porosity/low permeability
				II	Cyclic and marine members, undivided	AQ	80 - 90	Mudstone to packstone; <i>miliolid</i> grainstone; chert	Thin graded cycles; massive beds to relatively thin beds; crossbeds	Many subsurface; might be associated with earlier karst development	Laterally extensive; both fabric and not fabric/water-yielding
				III	Leached and collapsed members, undivided	AQ	70 - 90	Crystalline limestone; mudstone to grainstone; chert; collapsed breccia	Bioturbated iron-stained beds separated by massive limestone beds; stromatolitic limestone	Extensive lateral development; large rooms	Majority not fabric/one of the most permeable
				IV	Regional dense member	CU	20 - 24	Dense, argillaceous mudstone	Wispy iron-oxide stains	Very few; only vertical fracture enlargement	Not fabric/low permeability; vertical barrier
				V	Grainstone member	AQ	50 - 60	<i>Miliolid</i> grainstone; mudstone to wackestone; chert	White crossbedded grainstone	Few	Not fabric/recrystallization reduces permeability
				VI	Kirschberg evaporite member	AQ	50 - 60	Highly altered crystalline limestone; chalky mudstone; chert	Boxwork voids, with neospar and travertine frame	Probably extensive cave development	Majority fabric/one of the most permeable
				VII	Dolomitic member	AQ	110 - 130	Mudstone to grainstone; crystalline limestone; chert	Massively bedded light gray, <i>Toucasia</i> abundant	Caves related to structure or bedding planes	Mostly not fabric; some bedding plane-fabric/water-yielding
				VIII	Basal nodular member	Karst AQ; not karst CU	50 - 60	Shaly, nodular limestone; mudstone and <i>miliolid</i> grainstone	Massive, nodular and mottled, <i>Exogyra texana</i>	Large lateral caves at surface; a few caves near Cibolo Creek	Fabric; stratigraphically controlled/large conduit flow at surface; no permeability in subsurface
					Lower confining unit	Upper member of the Glen Rose Limestone	CU; evaporite beds AQ	350 - 500	Yellowish tan, thinly bedded limestone and marl	Stair-step topography; alternating limestone and marl	Some surface cave development

APPENDIX C

Names of known developments with no
WPAPs on file with Aquifer Studies Division

Big Springs P.U.D. for Big Spring LTD
 Big Springs Office Park
 Cactus Bluff U-3 **
 Cactus Bluff U-4 **
 Cactus Bluff Commercial
 Cactus Bluff U-5 & 6
 Champions Subdivision
 Champions Equestrian Center #
 Club @ Sonterra, The
 Cobblestone Hill PUD
 Comet Cleaners-Stone Oak Pkwy. #
 Crown of Life Lutheran Church
 Enclave @ Sonterra, The
 Fairways of Sonterra U-2 & 3
 First National Bank of La Grange
 Forest @ Stone Oak U-1
 Forest @ Stone Oak U-2 & 3
 Glen @ Stone Oak
 Heights @ Stone Oak II Parcel A (AKA-The
 Overlook PUD)
 Heights @ Stone Oak II PUD
 Heights @ Stone Oak
 Hidden Mesa **
 Independence Hill Sub. U-1
 Independence Hill Sub. U-2
 KCG Sub.
 Knights Cross
 Las Lomas Phase I
 Las Lomas Phase II
 Luby's North Point
 Mesa Grande
 Mesa Bluff U-1, 2 & 3
 Mesa Vista
 Mesa Grande U-4 & 6
 Mesa Cielo
 Mesa Verde U-1, 2, 3 & 4
 Mount Arrowhead
 Mount Arrowhead U-1 & 2
 Oaks of Sonterra U-2,3,4 & 5
 Parkway Plaza #
 Promontory Pointe @ Stone Oak II PUD
 Pumps @ Sonterra (Tetco) #
 Remington Oaks Medical Bldg.
 Restaurants @ Stone Oak
 Rolling Hills Academy

Seventh @ Sonterra
 Sonterra Apartments
 Sonterra Subdivision
 Southwestern Bell Mobile
 Springs @ Stone Oak
 Stone Canyon U-2
 Stone Mountain
 Stone Oak 7.5 Acre Tract
 Stone Oak Center
 Stone Oak Center, LTD
 Stone Oak Center U-1
 Stone Oak Centre U-2
 Stone Oak Convenience Store North
 Stone Oak Convenience Store South
 Stone Oak Elementary School
 Stone Oak Fire Station
 Stone Oak High School U-2
 Stone Oak Meadows PUD U-2
 Stone Oak Medical Office Building
 Stone Oak Middle School
 Stone Oak Office Center
 Stone Oak POA Fill Site
 Stone Oak Veterinary Clinic ** #
 Stone Oak Village #
 Stone Oak Villas
 Stone Valley PUD
 Stonehue
 Stonewood U-1A **
 Stonewood U-1B & 1C **
 Stonewood U-3
 Summit @ Stone Oak, The
 Trails of Arrowhead (Crest Oak?)
 Valvoline #
 Woods @ Sonterra U-4A, The
 WorldCom
 Zyskind-Finch/Hills of Stone Oak U-1

** Proposed zoning is not in agreement with approved use in WPAP

Proposed use requires City Council approval

Church of Jesus Christ of Later-Day Saints
Greensview @ Sonterra
Highlands, The
Holy Trinity Catholic Church
North Central Baptist Hospital
Sonterra U-1
Stone Oak Bank
Stone Oak Presbyterian Church
Strand Services

APPENDIX D

Cave Descriptions
from
The Caves of Bexar County, Second Edition,
Texas Memorial Museum,
George Veni, 1998

and Russell (1962a:5); Reddell and Smith (1966:2-3); Veni (1978a:5); White (1948:47, map); Widener (1959:80).

BEAR CAVE (BCS #5)

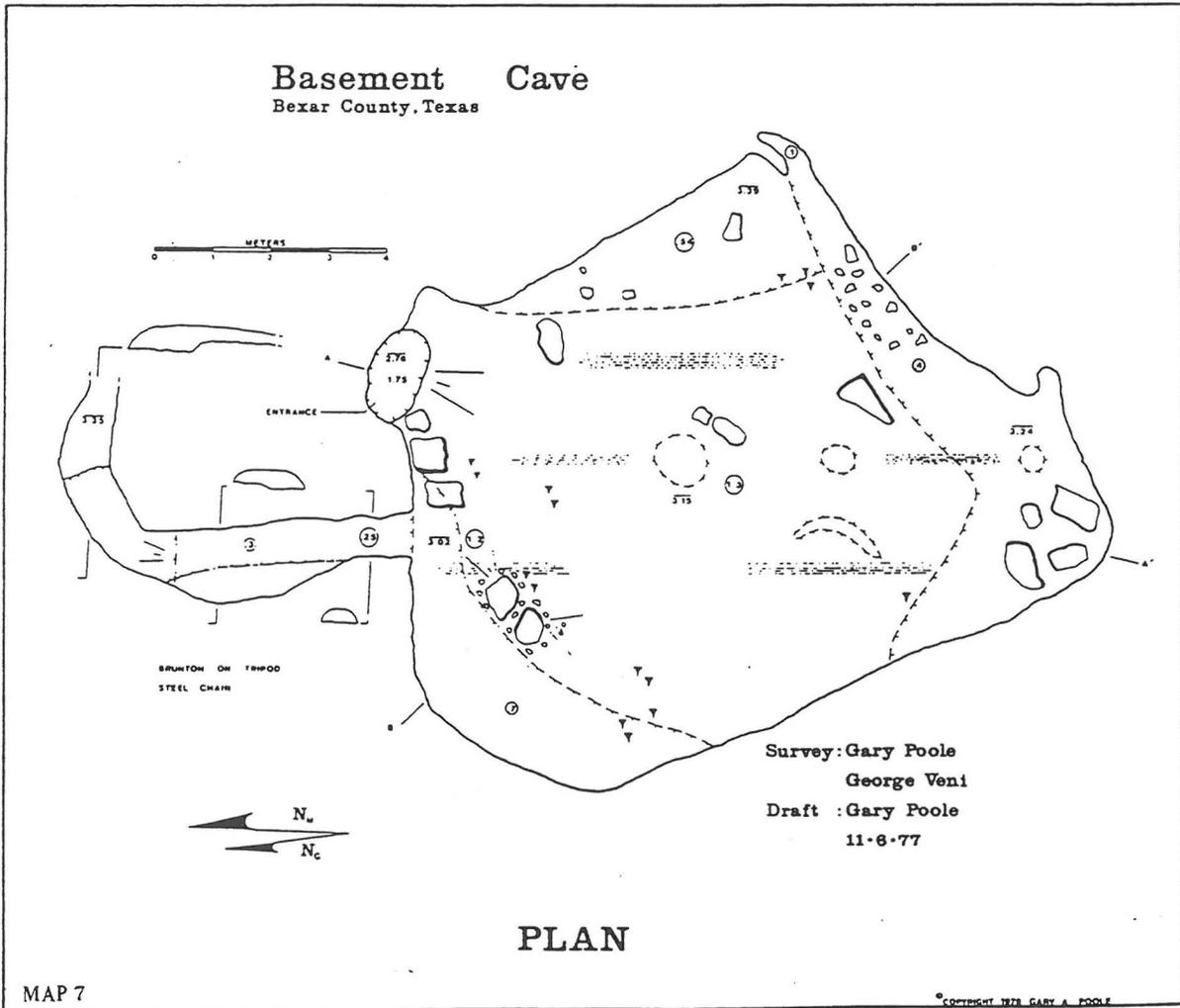
Alternate names: Bexar Cave; Big Bexar Cave; Big Bear Cave

Location: Bulverde 7.5' (100, 395)'

Description: Bear Cave originally had two vertical entrances, the larger of which was 4 m in diameter and 7 m deep. Three meters to the northwest was the smaller entrance, a 2.6 m free climb. Following the filling and subsequent reopening of the cave entrance, the rock span separating the two entrance pits was destroyed creating one large pit. Both drops entered an irregular room measuring about 25 m long and 10 m wide. This room is now littered with boulders and gravel. Exiting from the southern part of this room is a low-ceilinged decorated area known as the Baby Bottle Branch. The main room, however, extends northward through a cluster of large, highly

weathered columns before reaching the 6 m drop into the Bat Room. This room is 11 m in diameter, 8 m high, and has a guano-covered breakdown floor that contains a small maze of passages. These breakdown crawls lead to some solutionally developed passages which continue unexplored but require enlargement. The north side of the Bat Room narrows and drops 8 m. Opposite this drop, on the far north wall near the ceiling, the cave continues down a 45-degree slope of a 2 m long by 0.5 m diameter tube. The tube ends at the top of a 4 m dome. From the base of the dome, Bear Cave continues another 30 m northward via a 2 m high passage lined with cave coral. (See Map 9; Photos. 1-2.)

History: Known for many years, the cave was named after some bones found in it that are believed to be from a bear. The whereabouts of the bones or information as to identification and dating are not known. On 1 August 1965 the cave was surveyed by R. Cuzzi, James Jasek, R. Szalwinski, and R. Summar. On 11 February 1973 Virginia Bias, Bob Burdic, Bob

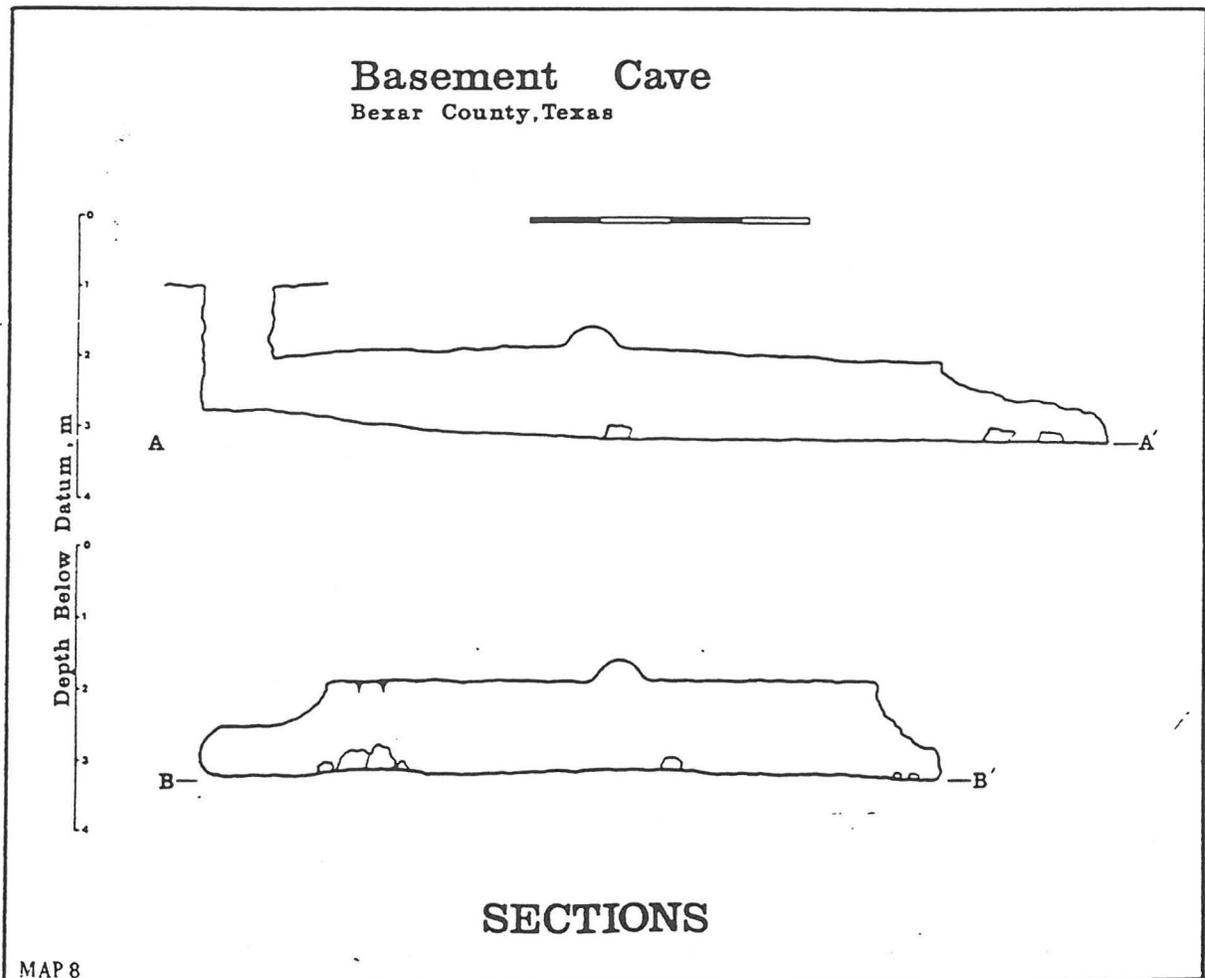


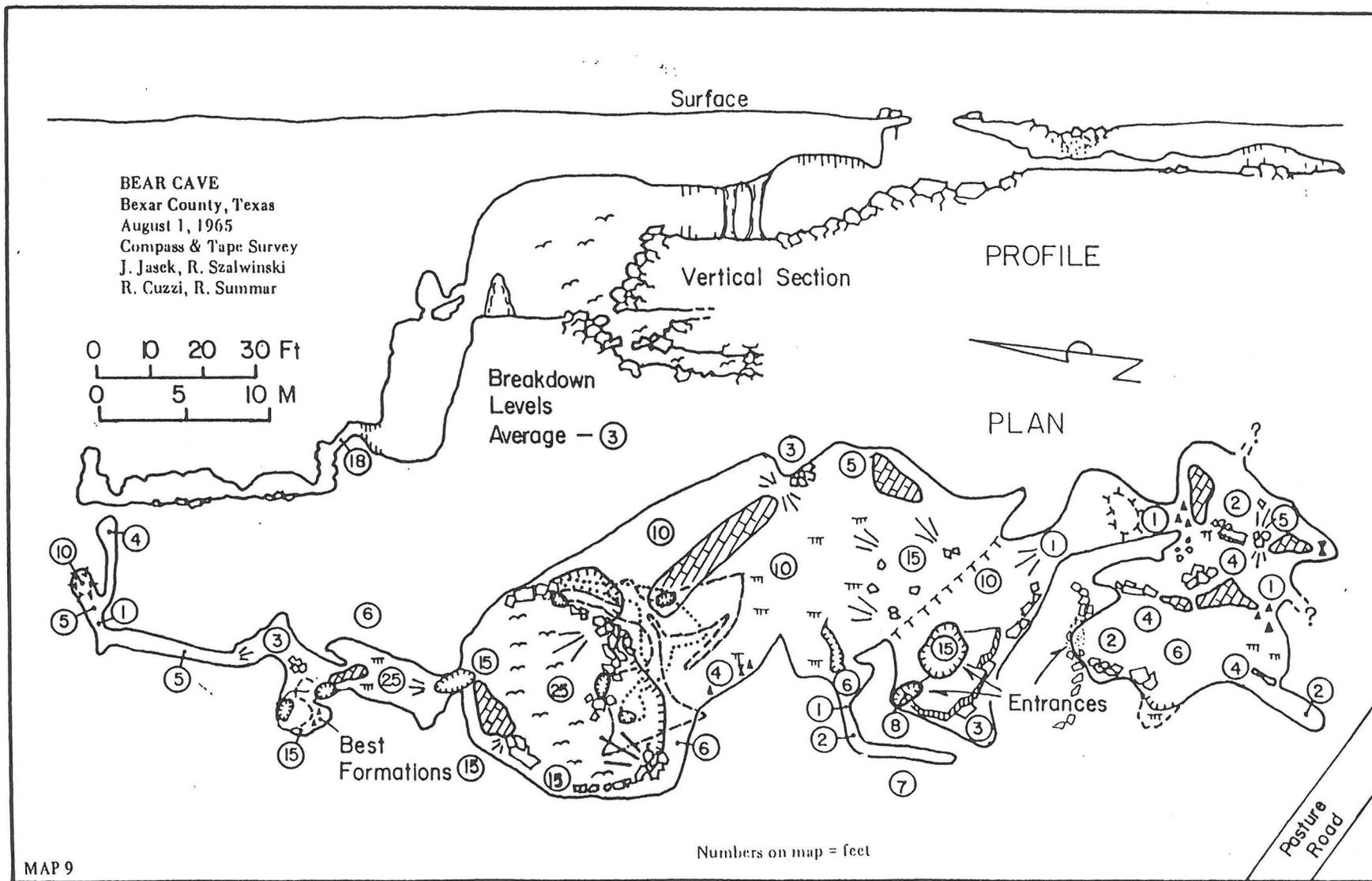
Meyer, Greg Passmore, Kelly Price, and Phil Winkler dug into the formation room at the south end of the cave. They thought it to be a new discovery and named it the Baby Bottle Branch. This entrance was sealed, however, at the owner's request. In the spring of 1973 the San Antonio River Authority completed construction of an aquifer recharge dam on Mud Creek, 60 m downstream from the cave. Bear Cave was to serve as a major recharge point into the Edwards Aquifer. Winkler reports that on 16 June 1973 the cave flooded, draining most of the water behind the dam, and became a bubbling, frothing, utterly disgusting cauldron of water, mud, and guano. The flood washed the cave clean, and some new, minor passages in the breakdown had been opened. Bear Cave was often used for vertical and rescue training. On 22 September 1984 an overweight individual became stuck in the smaller pit entrance, necessitating a minor rescue. As a result, the developers of the expanding Stone Oak Subdivision became concerned about liability and filled the cave entrances

with large boulders, sand, and gravel. The entrances were graded over so well that no sign of them remained. In the spring of 1985 floodwaters washed open the filled entrances. As of December 1985, construction workers for the housing development state they must refill the entrance at the request of the Texas Water Commission.

Biology: The fauna of Bear Cave included a typical representation of troglophiles in a cave containing a large bat population. Bats were roosting in the cave when it was sealed. Since the cave has reopened, bats have again taken roost inside. Collections have been made in the cave on 3 July 1968 by James Reddell and A. Richard Smith, and on 15 June 1985 by Randy M. Waters. In 1982 a large eastern coral snake, *Micrurus fulvius*, was observed in the entrance room. The following is a fauna list for the cave:

- Snails—*Helicodiscus eigenmanni* (troglophile)
- Spiders—*Cicurina varians* (troglophile)
- Neoleptoneta* sp. (troglophile)





Meioneta sp. (troglophile)
Achaearanea porteri (troglophile)
 Harvestmen—Prob. *Leiobunum townsendii*
 (troglóxene)
 Mites—Undetermined material
 Millipedes—*Abacion texense* (accidental)
 Springtails—*Pseudosinella violenta* (troglophile)
 Cave crickets—*Ceuthophilus* sp. (troglóxene)
 Ground beetles—Carabidae genus and species
 Water scavenger beetles—Hydrophilidae genus and
 species
 Darkling beetles—*Zopherus haldemanni*
 (troglóxene)
 Flies—*Leptometopa* n.sp. nr. *latipes* (troglophile)
Trichobius major (bat ectoparasite)
 Snakes—*Micrurus fulvius* (eastern coral snake)
 (accidental)
 Bats—Undetermined material

Geology: Bear Cave developed as a phreatic chamber
 which was intersected by Mud Creek and converted
 to a significant site of point recharge for the Edwards

(Balcones Fault Zone) Aquifer. Water first entered
 the cave through the Baby Bottle Entrance and
 possibly by another sink, later eradicated by the main
 entrance collapse. Bear Cave's dam-modified drainage
 basin encompassed 21 sq kms. Sealing of the cave will
 effectively eliminate its recharge capacity and greatly
 diminish the utility of the nearby recharge dam.

Technique: The entire cave can be free climbed, but
 the entrance pit is often rigged for short rappels and
 ladder climbs for training purposes. For this, a 20 m
 rope is needed. Caution is needed due to loose rocks
 and gravel that surround the pit, a result of the
 attempt to fill it. A handline is helpful at the 8 m
 drop, north of the Bat Room, and in crawling up and
 out of the steeply sloping crawlway beyond it.

Bibliography: Anonymous (1976b:34; 1978i:2;
 1979r:3; 1979v:3; 1979v:6; 1980a:74); Kastning
 (1974:126); Litsinger (1973a:16); Orozco (1974c:
 32-33; 1974d:19-20); Palit (1984a:14; 1985b:87;
 1986:16); Passmore (1977:7); Poole (1978a:2);
 Veni (1978a:5; 1984a:3; 1985); Winkler (1973e:2;
 1973g:248).



Photo 1.—Wayne Russell in entrance of Bear Cave, 1969 (Roger V. Bartholomew).

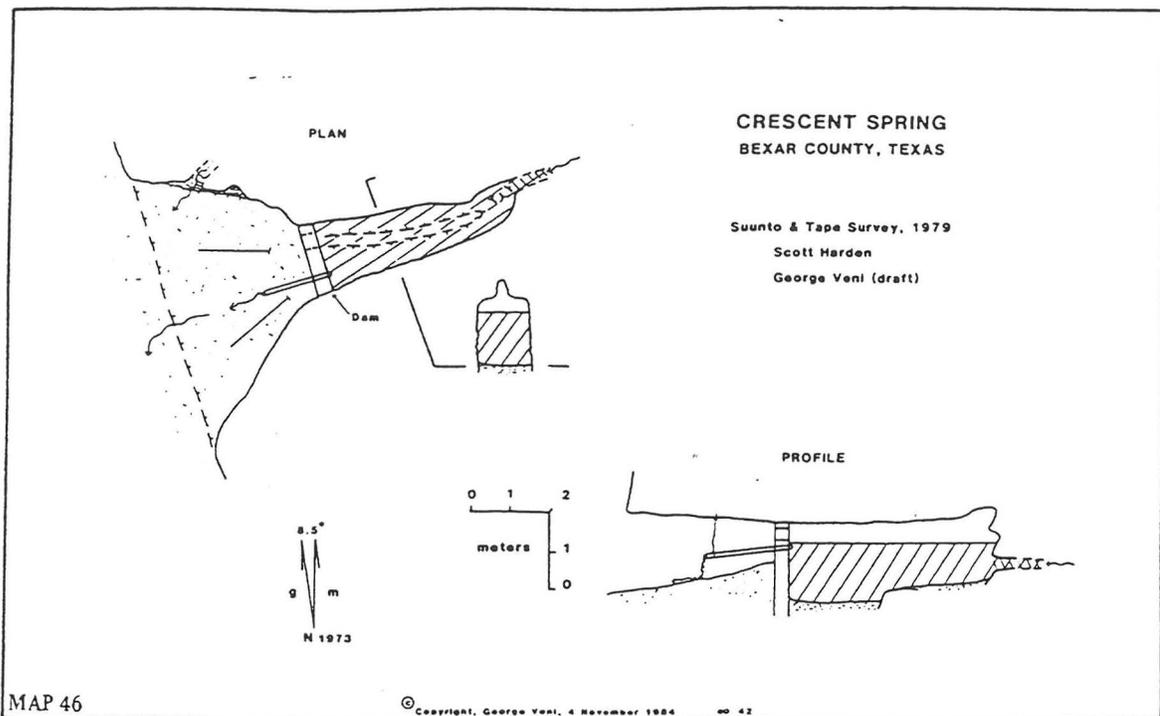


Photo. 9.—Kurt Menking peeking past dam into Crescent Spring (George Veni).

the owner's urging, cavers dug a small sink to a depth of 1 m. Willard Schwartz resumed the excavations on 29 October 1978 and uncovered a natural bridge that obstructed further progress at a depth of 1.6 m. On 5 November 1980 David Radsdorf, Danny Vail, and Randy M. Waters continued the digging effort; after removing a large breakdown block, they found a small hole into the cave's first chamber. Enlisting the aid of Brad Westberry and a jackhammer, the crew returned the next day and removed the natural bridge to gain access into the room. Waters then led Radsdorf and Pat Martain on the first exploration of the cave.

Geology: The cave has developed in the Edwards Limestone and is only one of two Bexar County caves intersected by a fault. Its tightly sealed entrance aided in speleothem growth by maintaining the cave's humidity and in preventing weathering through aeration.

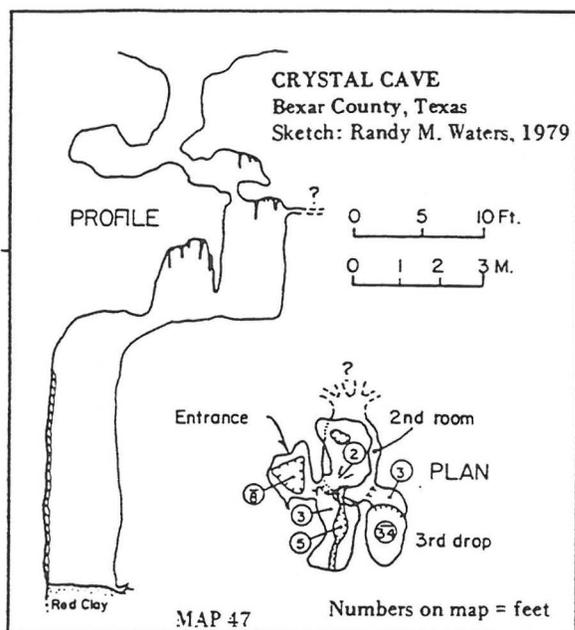
Technique: A rope or ladder is needed for the 9 m deep pit. A tree near the entrance is the only available anchor.

Bibliography: Anonymous (1978g:7; 1979l:3); Boyer (1979:46).

CUB CAVE (BCS #16)

Location: Bulverde 7.5' (101, 392)

Description: A 14 m diameter collapse sinkhole opens southward into a 20 m diameter, 8.5 m high room. A



1 m diameter hole near the room's western wall leads down to three levels of passages. The passages are primarily spaces between collapsed blocks and the cave wall. Five meters below the entrance to the lower levels is the first level which extends north 12 m and is 3 m wide by 1.5 to 3 m high. Continuing straight down 4 m past the first level the passage opens to the south-bound second level. This level is 15 m long, 2 m wide, and up to 2 m high. Midway along its length are two 0.6 m diameter pits which drop 3 m to the third level which heads north 16 m, varying in width from 0.5 to 1.0 m and in height from 1 to 3 m. All levels pinch in breakdown or flowstone-covered breakdown. (See Map 48.)

History: The discovery and exploration of Cub Cave coincide with the discovery of Bear Cave about 100 m away. The first documentation of the cave is on a 1964 location map of Bear Cave by James Jasek. The overhanging entrance has occasionally been used for vertical and rescue training. The cave was surveyed by Allan Cobb and Joe Ivy on 17 August 1985.

Biology: The cave serves as an animal shelter. Allan Cobb collected snails and flies in the cave on 17 August 1985. Other observed fauna includes spiders, harvestmen (prob. *Leiobunum townsendii*), cave crickets (*Ceuthophilus* sp.), and a slimy salamander (*Plethodon glutinosus albagula*). Fresh bat guano was present in the third level but no bats were seen.

Geology: The cave developed as a single phreatic chamber in the recharge zone of the Edwards (Balcones Fault Zone) Aquifer. The chamber was later intersected by Mud Creek, resulting in the large entrance and breakdown floors.

Bibliography: Anonymous (1976b:34; 1978i:2; 1979v:3; 1979y:6); Kastning (1974:126); Orozco (1974d:19-20); Palit (1984a:14; 1985b:87); Veni (1978a:5; 1985); Winkler (1973e:2).

CUEVA CAVE (BCS #17)

Location: Longhorn 7.5' (471, 455)

Description: Two 1.3 m diameter vertical entrances drop 2 m into the northeast corner of the cave. The single room is 12 m in diameter, 2 m high, and ends in dirt fill. (See Map 49; Photo. 10.)

History: Known since the early 20th century, the cave was said to be much more extensive than that presently accessible, extending as far as 1.6 km to Canyon Creek Country Club. In 1962 during the development of the City of Hollywood Park, a large volume of dirt and rocks were dumped into the cave, sealing any passageways. Although no map or written report confirms this, it is said that members of the St. Mary's University Speleological Society surveyed the cave in the 1960s. The cave was resurveyed on 10 October 1983 by Carmen S. Goyette, George Veni, and Randy M. Waters. The present owner has been excavating the cave in search of the rumored extensive passages. The cave's close proximity to Cueva Lane inspired the street name, which in turn inspired the cave name.

Biology: The cave was almost devoid of life when surveyed in 1983. A diligent search by George Veni and Carmen Goyette on 10 October 1983 discovered an epigeal pillbug, a troglobitic isopod (*Trichoniscidae* genus and species 1), and a troglobitic millipede (*Speodesmus* sp.), all feeding on decaying wood. The lack of fauna is probably due to the owner's use of pesticides and herbicides in maintaining his yard, situated only 4 m above the cave. Cueva Cave would serve as an excellent site for studying the effects of roadways and urban contaminants such as pesticides, herbicides, and septic systems upon the cave life.

Geology: Cueva Cave is the only known cave in Bexar County with significant bedding dip. The beds strike N84°W and dip 3°S. The cave developed in the recharge zone of the Edwards (Balcones Fault Zone) Aquifer as a collapse chamber (probably of phreatic origin) that has been modified by vadose flow through its entrance sink.

Bibliography: Veni (1985).

DAM CRAWL (BCS #114)

Location: Bulverde 7.5' (327, 086)

Description: This seasonal spring is a single passage averaging 0.8 to 1.0 m wide and 0.35 m high. From an entrance in a small creek cliffbank, the passage extends 6 m northeast, turns west for 4 m, north for

CUB CAVE

Bexar County, Texas

Suunto + Tape Survey
17 August 1985

- Personnel -
Allan Cobb Suunto + Tape
Joe Ivy Book + Draft
Total Depth 28.04 metres
Total Length 74.36 metres

- Legend -

	Large half-buried Breakdown
	Dirt
	Mud
	Guano
	Organic Debris
	Pit
	Floustone
	Solid Limestone
	Cemented Break-Down

1 2 3 4 5
metres

Urn
Pit



5 metres

5 metres

Vertical Profile
Entrance Room

Extended Profile
Lower Levels

© Copyright J.L. Ivy, 25 November 1985. All Rights Reserved. Map II

MAP 48

1 m in diameter, and began digging. After thirty minutes of digging, Harden decided the effort was "hopeless." His words seemed to trigger a rockfall into the void below, and thus the cave was named. Hopeless Cave was surveyed on 10 April 1982 by Kurt Menking, Julia Murrell, Eric Short, George Veni, and Randy M. Waters.

Biology: Harvestmen (prob. *Leiobunum townsendii*) and cave crickets (*Ceuthophilus* sp.) were observed.

Geology: Hopeless is a vertical shaft in the recharge zone of the Edwards (Balcones Fault Zone) Aquifer.

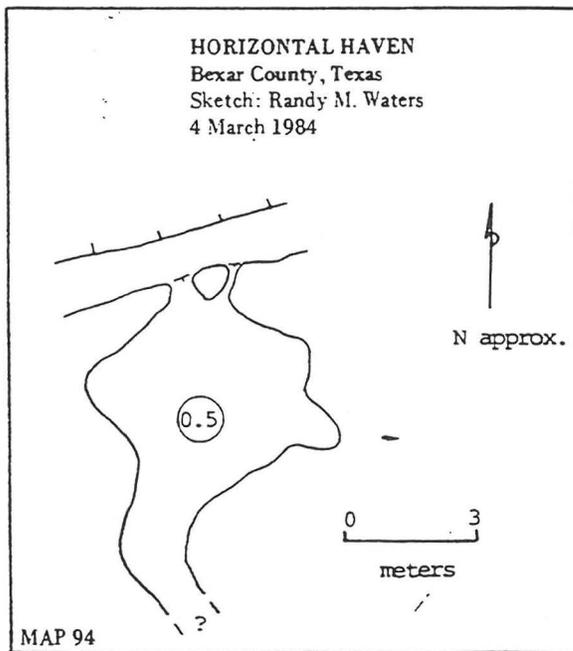
Technique: Caution is needed to avoid dislodging loose rocks in the excavated portion of the entrance.

Bibliography: Veni (1985).

HORIZONTAL HAVEN (BCS #188)

Location: Castle Hills 7.5' (477, 217)

Description: Two small holes extend from a Salado Creek cliffside into the cave. The easternmost hole is impassably small, but the cave entrance, a hole 0.8 m to the west, isn't. The 0.8 m wide by 0.5 m high entrance opens into a room almost 5 m in diameter, yet only 0.5 m high. An unexplored crawlway heads south from the southwest corner of the room. (See Map 94.)



History: This is one of three caves discovered by Randy M. Waters on 4 March 1984 (the others are Crawl and A Prayer Cave, BCS #187, and Sorehead Cave, BCS #186).

Geology: Horizontal Haven and its two neighboring caves formed as small springs for nearby upland drainage. The caves have been hydrologically aban-

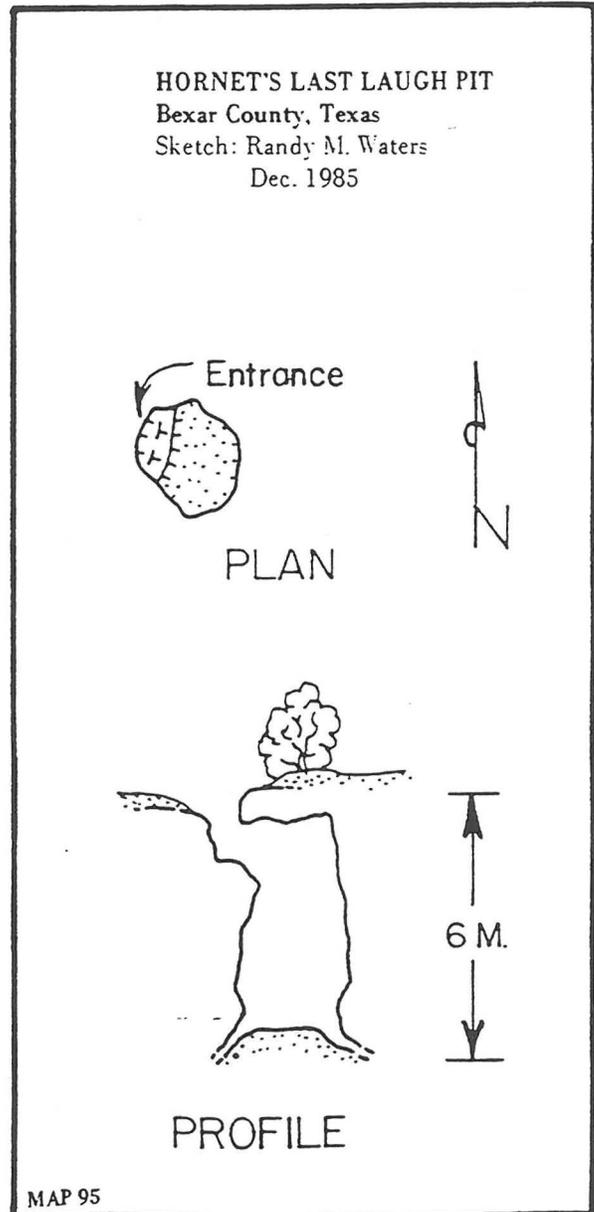
doned as springs owing to the continued incising of Salado Creek. Being at different levels, the caves may reflect distinct periods of the creek's downcutting. The low room in Horizontal Haven may have been formed by ponded water from the creek.

Bibliography: Veni (1985).

HORNET'S LAST LAUGH PIT (BCS #200)

Location: Bulverde 7.5' (108, 397)

Description: The cave entrance is situated in a shallow sinkhole and is about 1.0 m long by 0.5 m wide. The pit drops 2 m to a ledge and then 4 m to a dirt floor. The base of the pit is about 3.5 m in diameter. (See Map 95.)



History: Discovered and explored by Joe Ivy and Randy M. Waters in July 1985, the cave was named after a hornet's nest on a tree branch over the entrance.

Geology: The cave is located in the Mud Creek Dam Reservoir and serves as a site of discrete recharge into the Edwards (Balcones Fault Zone) Aquifer.

Technique: A cable ladder or at least a hand-line is needed.

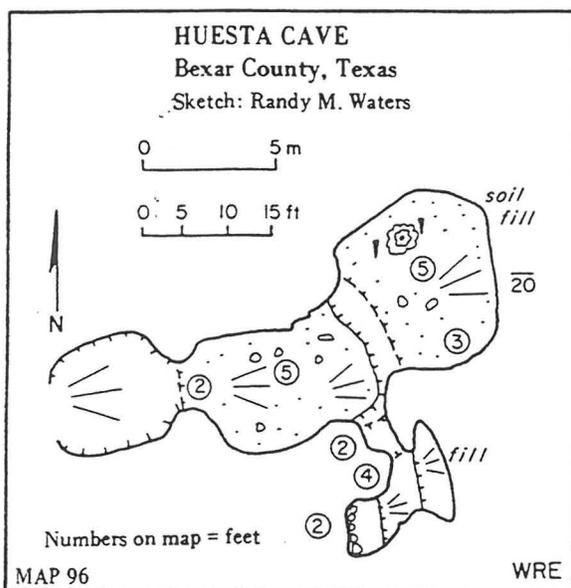
Bibliography: Palit (1985b:87).

HUESTA CAVE (BCS #154)

Alternate name: Wagner Ranch Cave

Location: Helotes 7.5' (538, 179)

Description: In the east corner of a shallow sink the 1.5 m wide by 0.6 m high entrance opens into a 5 m diameter by 1.6 m high room. To the north is a 2 m drop into a room of similar dimensions but decorated with some modest speleothems. Extending south from the first room is a 2 m long crawlway into a short, breakdown-choked passage. (See Map 96.)



History: The cave was originally called Wagner Ranch Cave by cavers who visited it in the early to mid-1960s. During the winter of 1982 San Antonio Grotto members Don Arburn, Kurt L. Menking, Jana Olsen, Bill Swaggerty, and Randy M. Waters were shown what the owners called "Huesta Cave." On that trip Arburn dug open the 2 m long crawlway.

Biology: Many ticks were noted near the entrance during the 1960s.

Geology: Huesta Cave is in the Edwards Limestone.

HUMMINGBIRD CAVE (BCS #42)

Alternate names: Thurman Cave No. 2; Hills and Dales Cave; Hills and Dales Cave No. 2; Hills and Dales Cave No. 1

Location: Helotes 7.5' (432, 043)

Description: A 0.3 m diameter hole located in a clump of bushes drops 2.8 m to a room approximately 4 m in diameter and 0.6 to 1 m high. Three passages extend from this room; two to the south and one to the west, but they shortly become too low. In the floor of the room is a small trench which can be followed to the end of the room where it enlarges and drops 2 m to a lower level. This passage makes a right turn and heads west 8.5 m where it becomes impossibly small. (See Map 97; Photo. 20.)

History: First reported as Thurman Cave No. 2 by Bob Hudson in the mid-1950s, the cave has been known by many names to the residents of Hills and Dales. The cave was mapped in September 1977 by Greg Passmore, Gary Poole, and George Veni. The cave was named after a nearby street.

Biology: Harvestmen (prob. *Leiobunum townsendii*) and cave crickets (*Ceuthophilus* sp.) have been observed in the cave.

Geology: Developed in the Edwards Limestone along a bedding plane, the back portion of the cave has been vadosely entrenched by water draining into the Edwards (Balcones Fault Zone) Aquifer. The water's quality may require monitoring since a septic field was established a few meters from the cave in 1986.

Meteorology: Occasionally a current of air blows from the constriction at the end of the cave.

Bibliography: Anonymous (1973q:12; 1979t:3); Poole (1978d:7); Poole and Passmore (1978:27, 28, 47); Reddell (1961b:1); Reddell and Knox (1962:3-4, 35); Reddell and Russell (1962a:6); Reddell and Smith (1966:4); Veni (1978a:5; 1985); Waters (1976a:15).

IS THAT ALL THERE IS SPRING (BCS #112)

Location: Bulverde 7.5' (326, 064)

Description: This seasonally active spring has an entrance measuring 0.5 m high by 1 m wide. The cave extends 1.5 m to the northwest, turns northeast, and ends within 6 m. (See Map 98.)

History: While checking springs indicated on a topographic map, George Veni and Randy M. Waters discovered this spring and two others (Dam Crawl and Elephant Spring) on 19 November 1978. The spring was surveyed on 10 August 1983 by Joe Ivy and George Veni.

Biology: Spiders, harvestmen (prob. *Leiobunum townsendii*), cave crickets (*Ceuthophilus* sp.), and

1.3 m drop into another 8 m high dome-pit to the west. (See Map 116.)

History: Randy M. Waters was shown the cave in 1977. It was mapped by Carmen Goyette and George Veni on 17 July 1983.

Biology: Harvestmen (prob. *Leiobunum townsendii*) and cave crickets (*Ceuthophilus* sp.) were noted.

Geology: The cave was vadosely developed as a recharge pit into the Edwards (Balcones Fault Zone) Aquifer.

Technique: The narrow entrance makes a cable ladder preferable to a rope.

Bibliography: Veni (1983:98; 1985).

opens into a 10 m deep pit. Near the top of the pit is an unexplored passage approximately 1.5 m high by 0.8 m wide. It extends at least 2 m before curving out of sight. (See Map 117.)

History: The cave was explored on 4 November 1979 by Don Arburn, Kathy Ballard, Tenni Kern, Greg Passmore, and Randy M. Waters. The cave name is for the pendulum motion needed to swing into the unexplored passage.

Geology: The cave is in the recharge zone of the Edwards (Balcones Fault Zone) Aquifer.

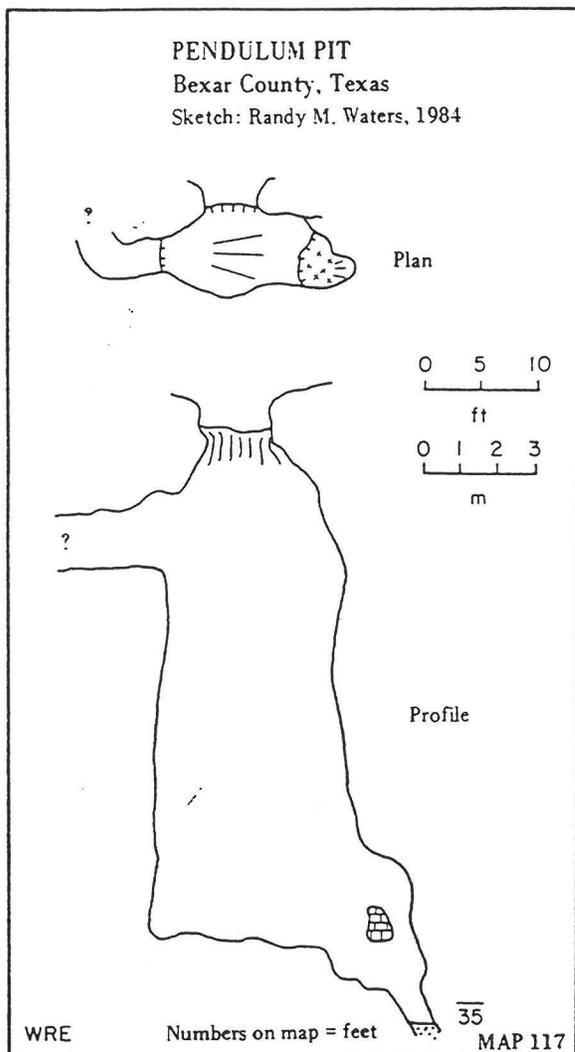
Technique: A rope or cable ladder is needed to explore the pit.

Bibliography: Veni (1985).

PENDULUM PIT (BCS #129)

Location: Bulverde 7.5' (125, 358)

Description: A 1 m high by 1.5 m wide entrance



PERSIMMON PIT (BCS #110)

Location: Castle Hills 7.5' (261, 274)

Description: This is an ovate pit with a small persimmon tree growing along one wall. The cave entrance is approximately 1.1 m long by 0.7 m wide and 4 m deep. A small hole drops 1 m from the pit floor to the end of the cave. (See Map 118.)

History: While lost in the cedar brakes of northern Bexar County, George Veni discovered the pit in the fall of 1976. Three years later he and Randy M. Waters relocated and explored the cave.

Biology: Some harvestmen (prob. *Leiobunum townsendii*) and numerous cave crickets (*Ceuthophilus* sp.) were observed.

Geology: Persimmon Pit drains an area of approximately 400 square meters into the Edwards (Balcones Fault Zone) Aquifer. Development of the pit is vadose and strongly joint controlled.

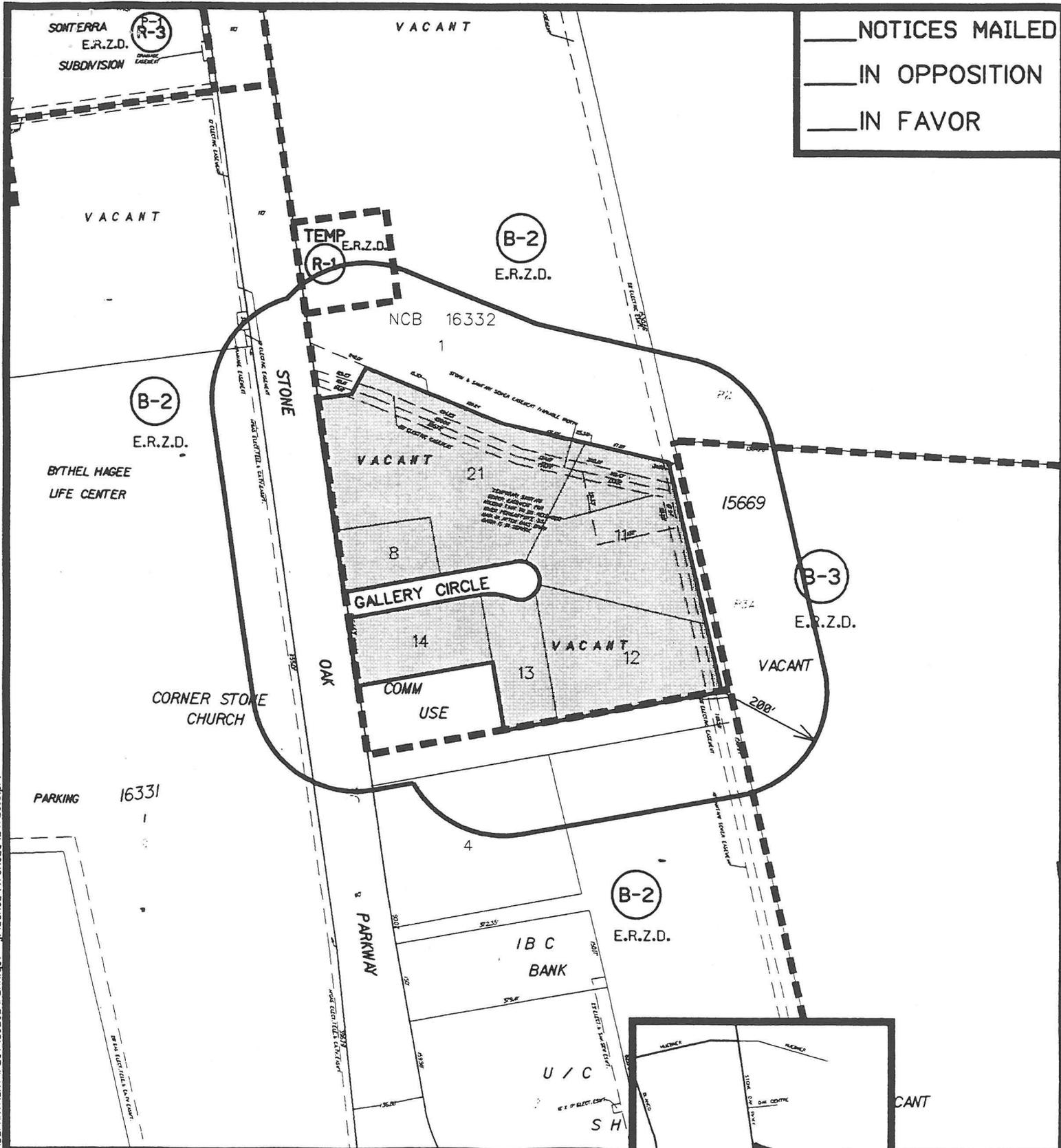
Bibliography: Veni (1985).

PICK-UP-STICKS CAVE (BCS #50)

Location: Bulverde 7.5' (207, 316)

Description: The entrance pit drops 6 m to a short upper level passage, then continues down 9 m further, through a narrow keyhole, to the floor of the cave. Pick-Up-Sticks is one of the most beautiful caves known in Bexar County. It is a single large room 17 m long by 6 m wide and 9 m high. Although the floor is clay and breakdown, the walls and ceiling are covered with flowstone, stalagmites, stalactites, columns, draperies, and many sodastraws, which average 1 m long. The colors of the various speleothems vary from brown through russet, orange, and gold to white. A squeeze through a flowstone curtain at the north end of the cave leads to a 6 m high dome containing a 2 m long sodastraw—the longest

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ZONING CASE Z97261-U
 CITY COUNCIL DISTRICT NO: 9
 REQUESTED ZONING CHANGE
 FROM "B-2"ERZD TO P-1"B-2"ERZD
 DATE JUNE 10, 1999
 SCALE 1" = 250'



DEPARTMENT OF PLANNING
 SAN ANTONIO, TEXAS

Affidavit of Publisher

PUBLIC NOTICE

AN ORDINANCE 89923

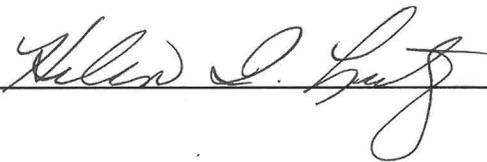
AMENDING CHAPTER 35 OF THE CITY CODE THAT CONSTITUTES THE COMPREHENSIVE ZONING ORDINANCE OF THE CITY OF SAN ANTONIO BY CHANGING THE CLASSIFICATION AND REZONING OF CERTAIN PROPERTY DESCRIBED HEREIN AS LOTS 8, 11 THROUGH 14, AND LOT 21, NCB 16332; STONE OAK PARKWAY AND GALLERY CIRCLE; FROM "B-2" ERZD BUSINESS EDWARDS RECHARGE ZONE DISTRICT TO "P-1(B-2)" ERZD PLANNED UNIT DEVELOPMENT BUSINESS EDWARDS RECHARGE ZONE DISTRICT; PROVIDED THAT THE THIRTEEN (13) RECOMMENDATIONS OF THE AQUIFER STUDIES OFFICE ARE ADHERED TO. "THE PENALTY FOR VIOLATION IS A FINE NOT TO EXCEED \$1,000.00".

STATE OF TEXAS,

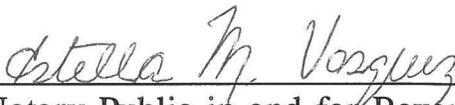
COUNTY OF BEXAR

CITY OF SAN ANTONIO

Before me, the undersigned authority, on this day personally appeared Helen I. Lutz, who being by me duly sworn, says on oath that she is the Publisher of the Commercial Recorder, a newspaper of general circulation in San Antonio, in the State and County aforesaid, and that the Public Notice - An Ordinance #89923 hereto attached has been published in every issue of said newspaper on the following days, to-wit: June 17, 1999.



Sworn to and subscribed before me this 17th day of June, 1999.



Notary Public in and for Bexar County, Texas

