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THE CAVES OF LANGTRY

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THE CAVES OF LANGTRY

INTRODUCTION

This report covers an area of about 4 miles in any direction from the small town of Langtry, Texas. Located in Val Verde County and about 60 miles west of Del Rio on the Rio Grande, Langtry is primarily a tourist attraction, well-known as the home of Judge Roy Bean and his "Law West of the Pecos."

The area is one of rolling hills and sharp-cut arroyos and canyons. Several wide creeks, dry except for sudden rains, empty into deep, narrow canyons draining into the Rio Grande. Among the most prominent of these are Osman Canyon and Eagle's Nest Creek, which becomes Mile Canyon at the crossing of US 90. These canyons and their feeder canyons and gullys serve as the chief drainage for the area, with the exception of some water which runs underground by means of the larger of the caves discussed in this report.

Vegetation in the area consists almost entirely of various forms of short grass, yucca, cactus, and, only in the canyon the Rio Grande and the larger creeks, some trees. The grass serves as food for the goats which are the chief source of income for the ranchers working the area. These ranches are usually large and the owners live in Del Rio and travel to the ranches simply to oversee them. For the purpose of this report only four of the ranches in the area have been investigated: those of Walter Babb, Arnem Humphries, J. E. Fisher, and Guy Skiles.

The walls of the canyons of the Rio Grande, the Pecos River, Osman Canyon, and Eagle's Nest Creek are covered with Indian shelter caves, and until recently these were believed to be the extent of the area's attraction to the speleologist. Within the last four or five years, however, the discovery and exploration of the caves described in this report have shifted the focus of attention from the canyon walls to the floors of the canyons their feeders. The six large caves included are among the most interesting the state has to offer both the speleologist and the spelunker. Of the other caves one is a talus cave and another a large water-filled pothole, while the remainder are small pits and fissures.

It is difficult to say whether more large and deep caves will be found in the immediate area to be discussed, but there is little doubt that numerous caves similar to the Babb Caves and the Skiles Caves are to be found. Talks with local artifact and mineral collectors who have explored all or most of the caves included in the report would seem to indicate that no more large caves are to be found, but the area encompasses much land seldom visited even on horseback, and the caves which are known are all near important roads or in major creeks so the accidental discovery of another extensive cave system is always possible, though not likely. A more promising area for cave-hunting in the county appears to lie in the Pandale area where little work has been done but where geologic conditions are ideal for the formation of large and deep caves.

INDEX TO THE CAVES OF LANGTRY, VAL VERDE COUNTY

ALTERNATE CAVE NAMES

Big Tree Cave -- Langtry Lead Cave (# 1)
Crystal Cave -- Langtry Gypsum Cave (# 5)
Gypsum Cave -- Langtry Gypsum Cave (# 5)
Fisher's Cave -- Fisher's Fissure (# 4)
Fisher Sink -- Fisher's Fissure (# 4)
Langtry Cave -- Langtry Gypsum Cave (# 5)
Langtry Caverns -- Langtry Gypsum Cave (# 5)
Langtry Cave # 4 -- Skiles Fissure Cave (# 8)
Quarry Cave -- Langtry Quarry Cave (# 3)
Road Cut Cave -- Langtry East Gypsum Cave (# 6)

Kbo BOQUILLAS FLAGS (Dotted where concealed)

CONTACT BETWEEN BOQUILLAS AND BUDA FORMATIONS

STRIKE AND DIP OF STRATA

STRIKE OF SLUMP OR UNDULATION

STRIKE AND DIP OF PRINCIPAL JOINTS

STRIKE-SLIP FAULT

DIP-SLIP FAULT

SPRING

x3 CAVE ENTRANCE KEYED TO INDEX

LOCATION AND GEOLOGICAL MAP OF THE LANGTRY AREA, TEXAS

BASED ON GEOLOGIC STRIP MAPS ALONG THE RIO GRANDE BY THE INTERNATIONAL B'DRY. AND WATER COMMISSION

Geology of the Caves of the Langtry Area

Little is known of the early Paleozoic history and geology of the Langtry area, since only a few deep oil tests have penetrated into beds of that era. This little affects the study of the surface and near-surface geology in this area since all the outcrops are of Cretaceous age and all the caves are completely in Cretaceous beds.

An important contact in our study of the lithology of the area is that between the Boquillas and the Buda formations; this is also the division between the Comanchean Cretaceous (Lower Cretaceous) and the Gulf Series (Upper Cretaceous). The Comanchean beds consist mainly of medium to massive-bedded limestones of fair purity and high solubility; the Gulf Series, of which the representative member in this area is the Boquillas, consists of impure, often thin-bedded limestones with occasional beds of marls, clays, and shales. The general lithology of the area is given below.

Boquillas Flags (Eagleford). Interbedded dark grey shales and tan to grey thin-bedded flaggy limestones.

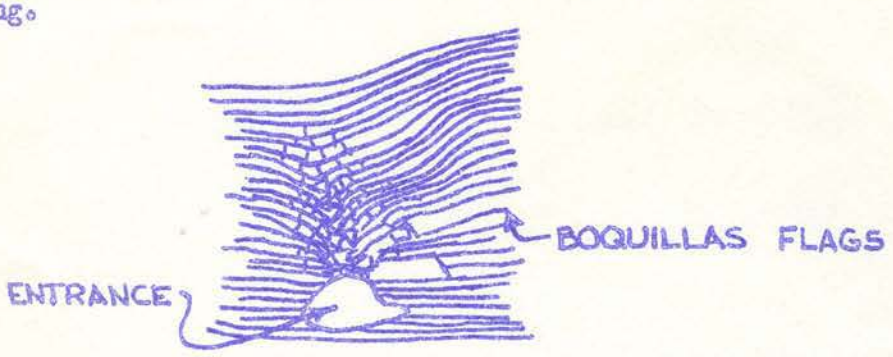
~~~~ unconformity ~~~~

Buda limestone. Chalky white dense medium-bedded limestone with a middle member of brownish-yellow thin-bedded, argillaceous limestone.

~~~~ unconformity ~~~~

Georgetown limestone. Light grey medium to massive bedded, dense limestone, chert common.

Almost all of the cave entrances are near the top of the Buda formation. The first of the two major exceptions, Langtry Lead Cave, is located in an erosion gully which has just reached the top of the Buda, apparently breaching an already existing solution channel. The other, Langtry Quarry Cave, is located in what is apparently a collapse sink into a Buda solution channel. At this latter entrance further collapse seems to be impending as the overlying Boquillas beds are already buckled down into the opening.



The only read significance that can be attached to the large number of entrances in the Buda is that this is the first relatively soluble limestone below the Boquillas which is too thin bedded and too impure to form more than very small caves.

The principle tectonic feature of the area is the Devil's River Uplift, an earth movement which began in early Paleozoic time, almost dying out by the beginning of the Mesozoic. The period continued to a small extent through the Cretaceous period. Evidences of this movement are the strike-slip faults and parallel joints running NNE to SSW; a few of the more prominent of these are shown on the map. The caves included in this report are almost invariably narrow, high fissures which show strong joint control effects. The passage direction roses for Langtry Lead Cave, Emerald Sink, Langtry Quarry Cave, and Fisher's Fissure exhibit strong agreement with the overall surficial joint pattern. There is no apparent solutional development of any set of cross joints, either on the surface or in the caves.

Neither do the joint strikes vary with any particular level in the caves, as may be seen from the maps and profiles. This would seem to indicate that land movements affecting the area took place after the Cretaceous sediments were already lithified.

Aside from very strong joint control, there seems to have been some control on solution by the contact between the Buda and the Georgetown formations. This is probably an especially porous zone since it is an unconformity; i.e., erosion occurred on top of the Georgetown sediments before the Buda was deposited. Other than this there seems to have been little control on the vertical solution of the caves except varying water levels.

The principal drainage of the Langtry area is the Rio Grande and its normally dry feeder canyons. The area receives on the average approximately 15 inches of rain annually, most of which comes in sudden torrential downpours. As a result most of the water rapidly runs off to the Rio Grande except for one important exception--the water which goes underground. Among the caves described in this report, three of the deepest--Langtry Lead, Emerald, and Fisher's Fissure--receive large amounts of water with Langtry Lead probably taking most since its entrance is in the bottom of a deep sink in the bottom of a gully. Emerald also receives a large amount of water during floods since it lies about ten feet above the bottom of the adjacent creek and on its bank. The entrance to Fisher's Fissure is in a short feeder gully to Osman Canyon and certainly takes large quantities of water in floods.

The water that goes underground eventually reaches what is frequently called the "water table". The water does not, however, occur in a particular permeable bed but along solution widened joints. Since the water in one area is not necessarily connected to that of another very near area, the water does not all stand at the same level or even form a smooth slope; the water levels stand only at some fairly general elevation. Too little is known to draw any valid conclusion except to say that underground water is probably flowing toward the Rio Grande into which it issues in seeps and springs. The largest of these is Pump Canyon Spring, just south of Langtry, in Osman Canyon. This spring was issuing 135 gallons per minute in 1939. The direction of ground water flow is borne out by the water levels in Emerald and Fisher's Fissure in relation to the elevation of Rattlesnake Spring and of the Rio Grande, as seen on the correlation chart.

During early Cretaceous time pelecypods, invertebrate shelled animals, were very abundant. Some of these were a peculiar reef-building form, the rudistids. Rudistid reefs were usually relatively small even though their horizontal extent might be a mile or more; they often meandered about with frequent sharp turns. Such reefs were formed in the shallow seas which prevailed in the Langtry area during the Cretaceous. The reefs cut down the force of the wave action considerably on the shoreward side, and it was in this relatively calm haven that other pelecypods lived. Among these were gastropods (snails), pectens (scallops, and various types of oysters.) On death the shells of these animals sank to the bottom where they were covered by mud and later fossilized.

The fossils of these back-reef pelecypods are found exposed in at least two of the caves of the area--Emerald Sink and Fisher's Fissure. In two others--Langtry Lead and Langtry Quarry--many rudistid fossils are found, indicating the remnants of a rudistid reef.

Considering the four localities where fossils were found, it is very probable that a reef ran at least from Langtry Lead to Langtry Quarry with the back reef to the northwest, as shown on the geologic map. Further investigations of the reef must wait for discovery of other caves in the area.

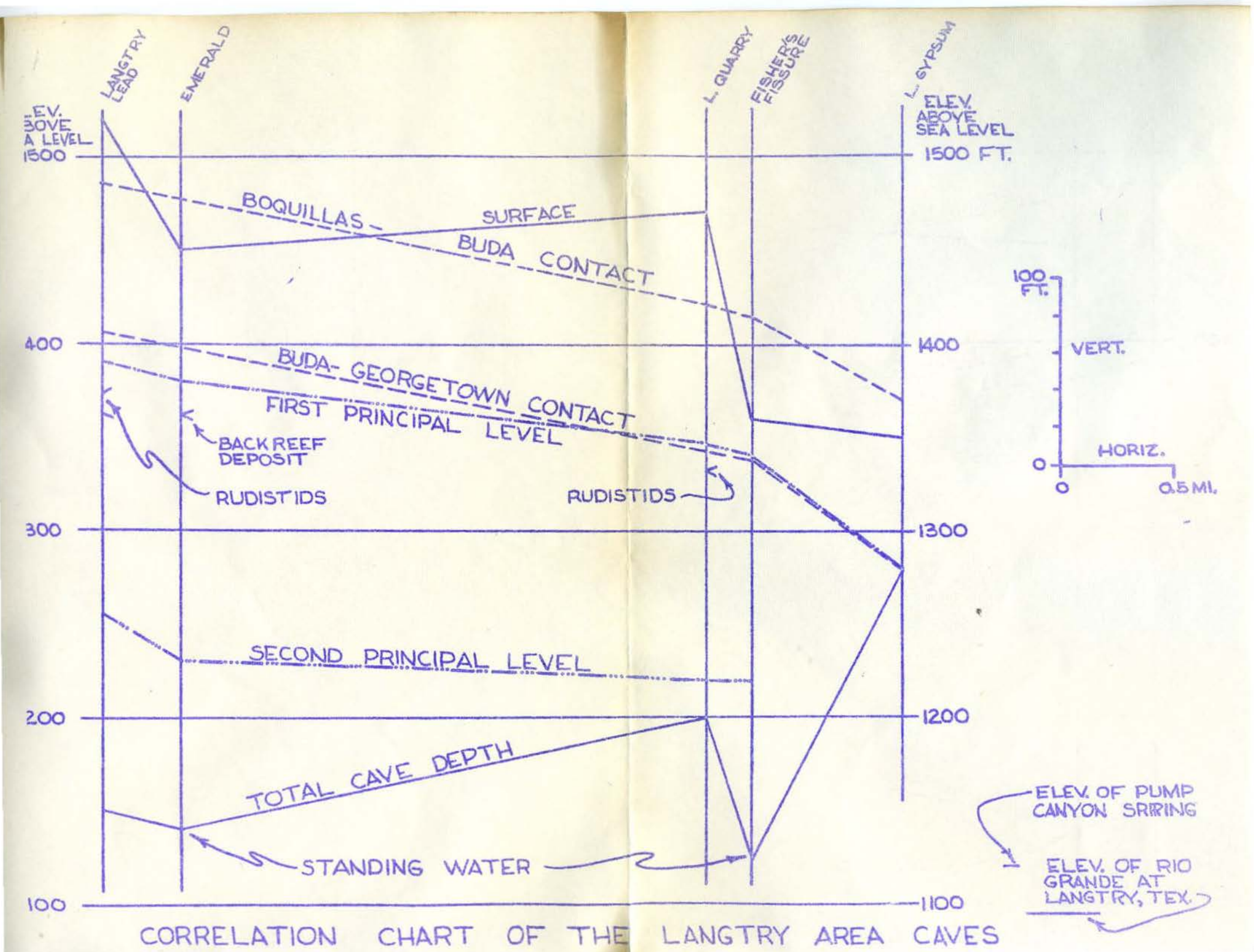
Bibliography:

West Texas Geological Society. Geology of the Val Verde Basin and Field Trip Guidebook, November 5, 6, 7, 8, 1959.

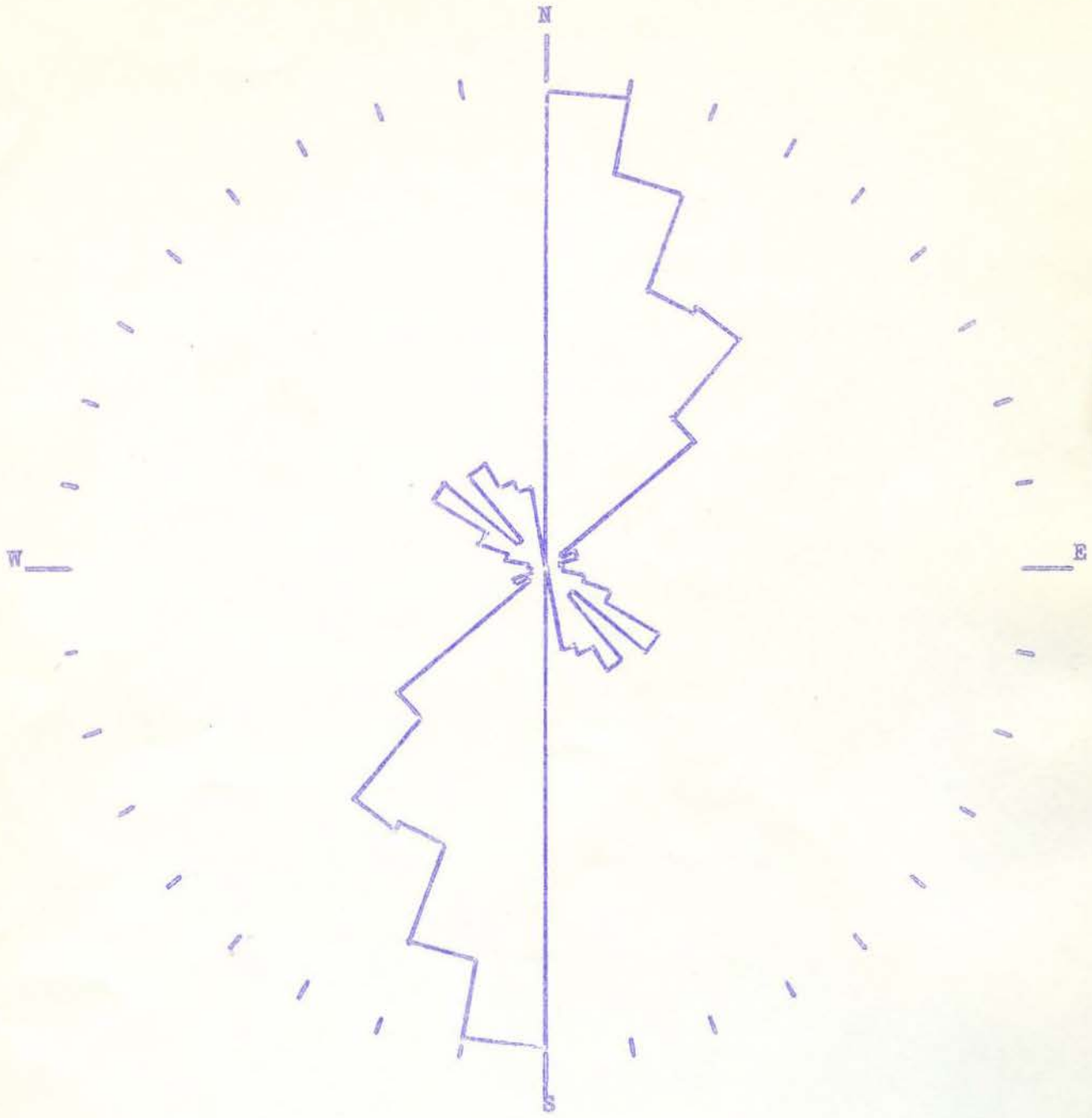
Cox, L. R. (1933) The Evolutionary History of the Rudistids: Proceedings of the Geologists' Association, vol. 44, pp. 379, 388.

Texas Board of Water Engineers. Val Verde County, Texas. Austin, 1940.

The Texas Almanac: 1961-1962.

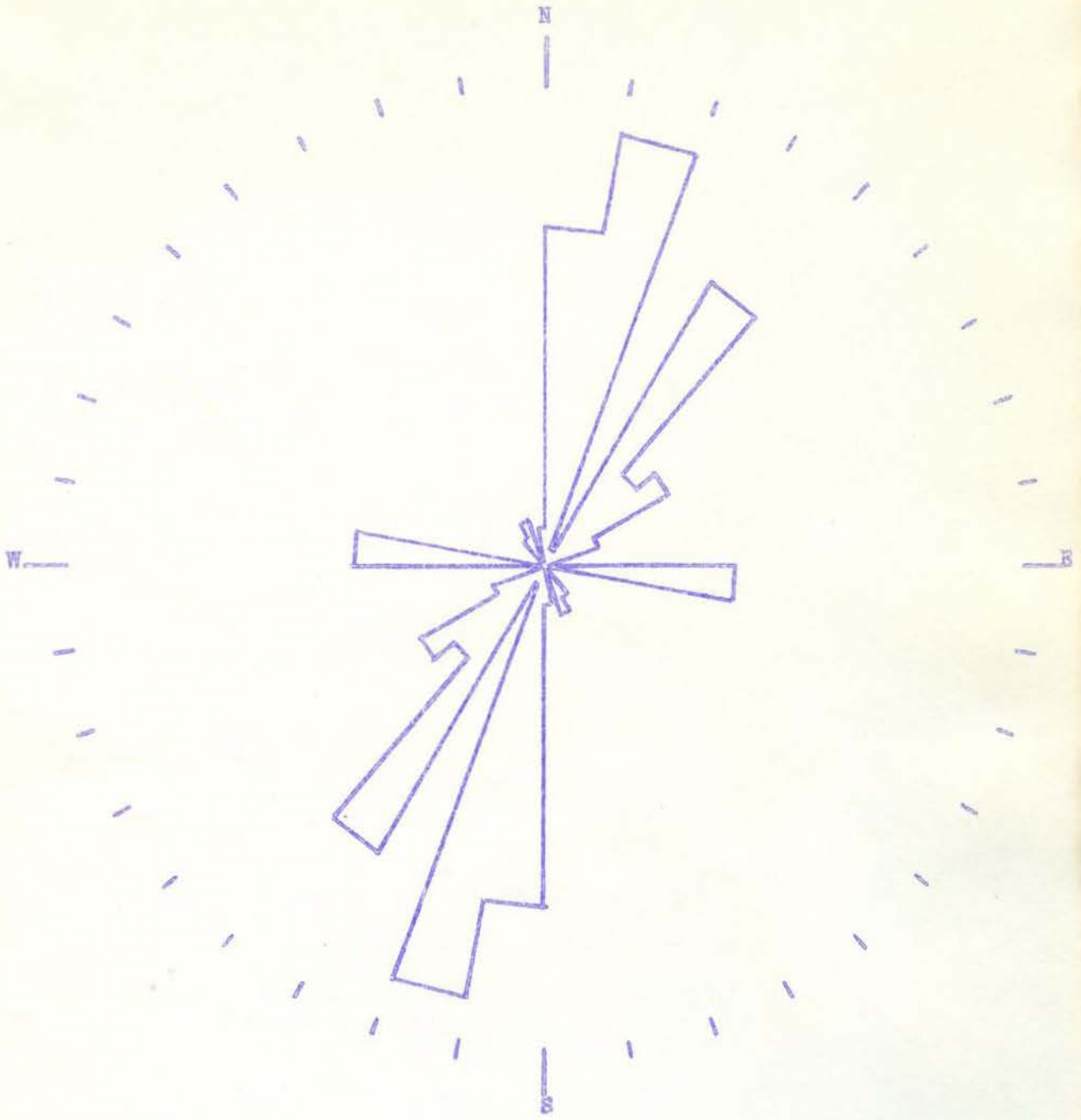


CORRELATION CHART OF THE LANGTRY AREA CAVES



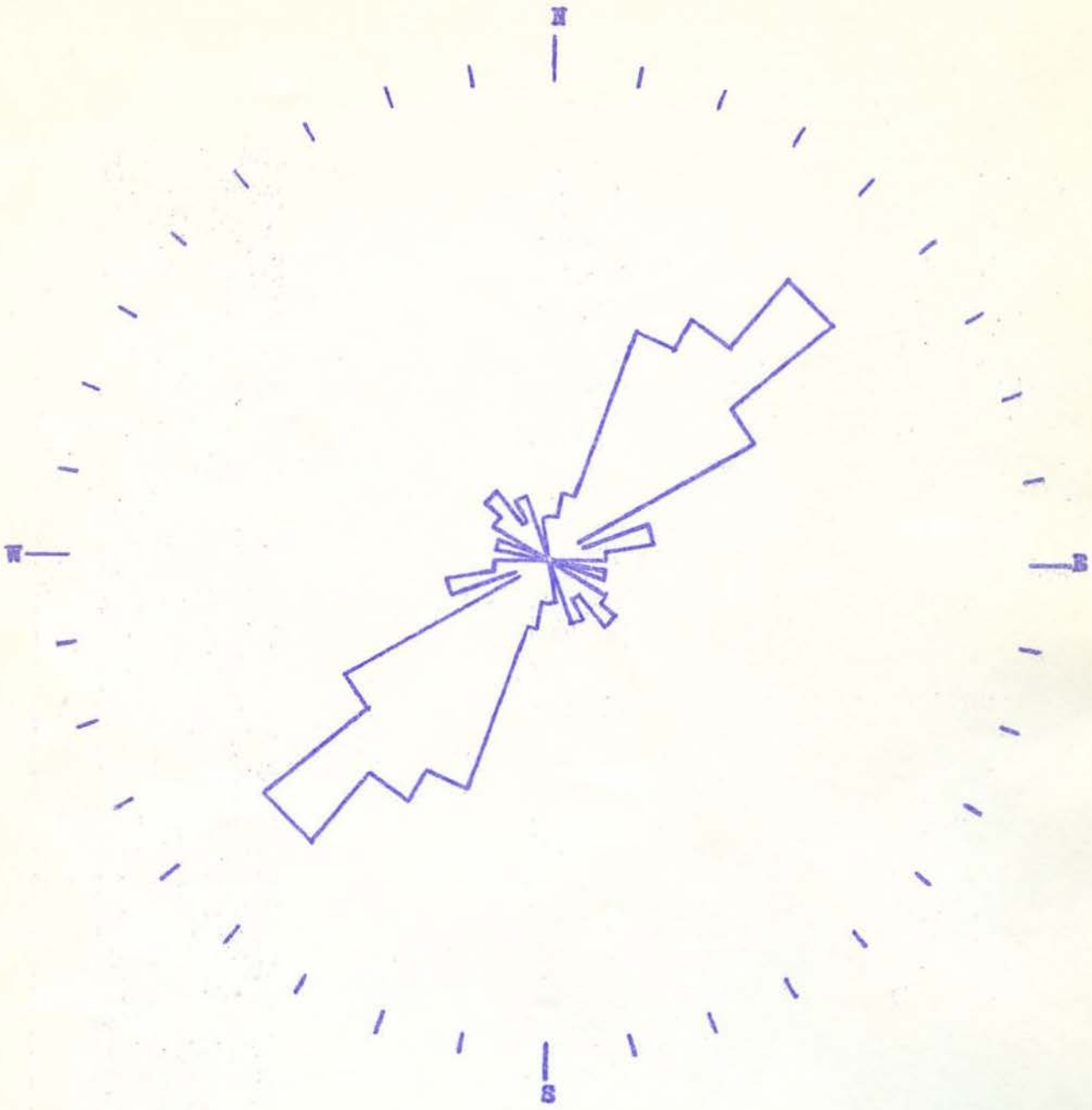
DISTRIBUTION OF 1575 FT OF PASSAGE IN LANGTRY LEAD CAVE

DIAMETER OF ROSETTE 600 FT



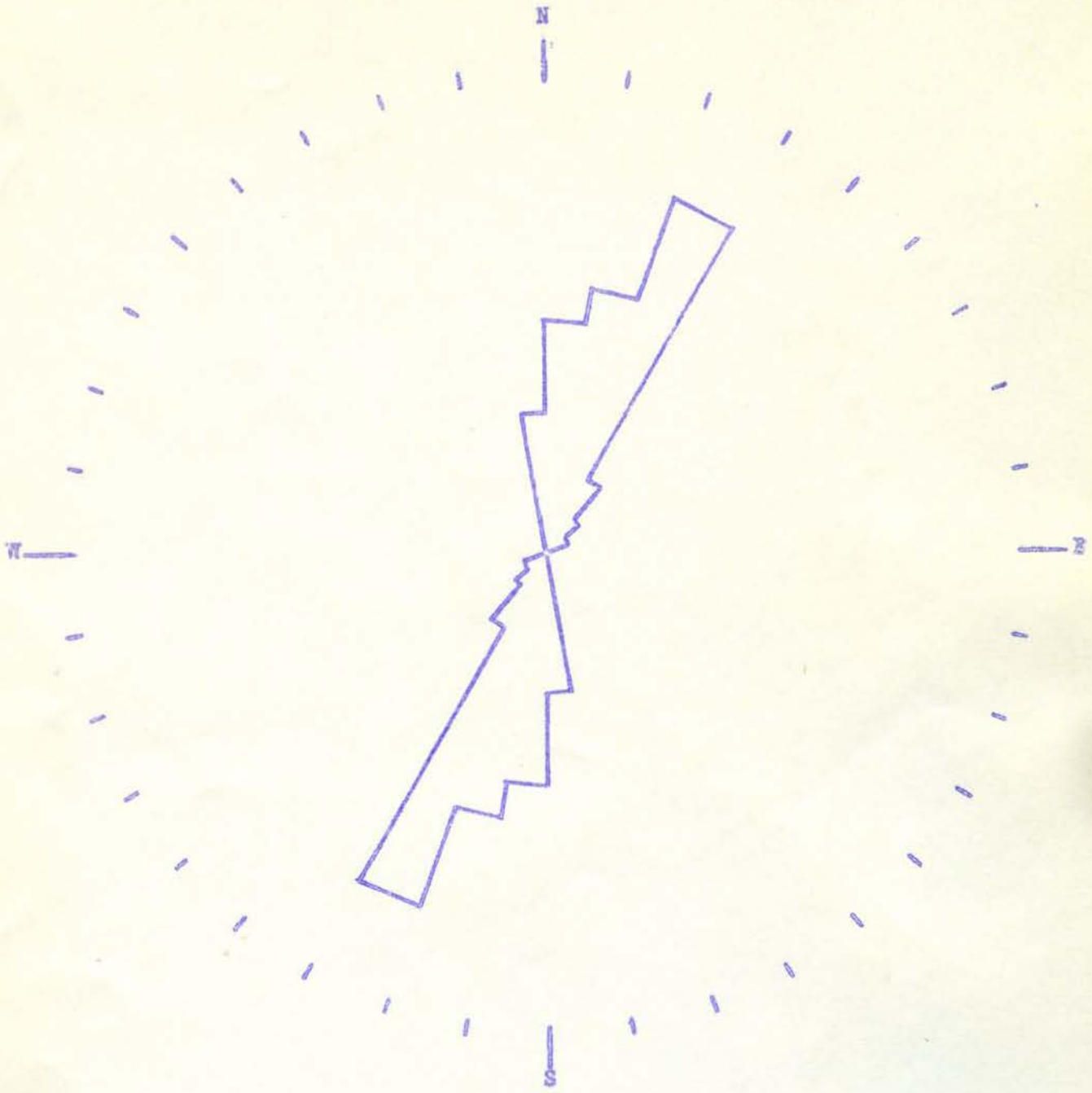
DISTRIBUTION OF 1285 FT OF PASSAGE IN EMERALD SINK

DIAMETER OF ROSETTE 600 FT



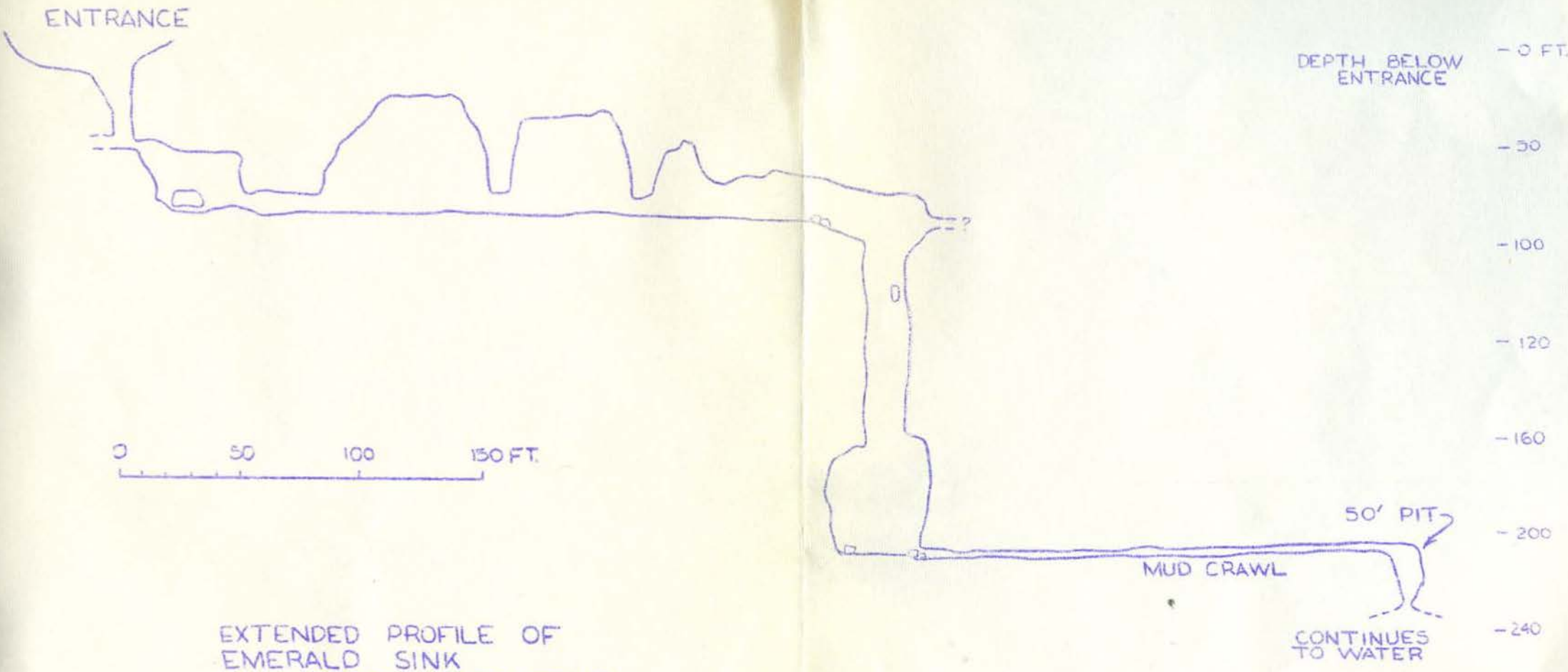
Distribution of 1275 ft of passage in Langtry Quarry Cave

Diameter of rosette 600 ft



Distribution of 508 ft of passage in Fisher's Fissure

Diameter of rosette 300 ft



EXTENDED PROFILE OF
EMERALD SINK
VAL VERDE COUNTY, TEXAS

BRUNTON & TAPE SURVEY BY
R. FRANK, J. REDDELL
P. RUSSELL, D. SMITH, 7-2,3-61
DRAWN BY D. SMITH

LANGTRY LEAD CAVE (LEAD CAVE) (BIG TREE CAVE) Val Verde County (# 1)

Langtry 15' Quadrangle

Owner: Arnem Humphries

Description: The entrance to Langtry Lead Cave is a 45' long, 25' wide sink, its vertical walls dropping about 40' to a floor of shaly limestone which has fallen from the sides and been washed in. A fair-sized arroyo or gully empties into the sink. Until the summer of 1961 a large, dead oak tree grew from the sink; a heavy rain brought down the rotten tree, which now lies at the bottom of the sink. To the south a small crawl barely large negotiate opens into the top of a small room about 15' high. Although the entrance sink is in the shaly Boquillas Flags formation the crawl and remainder of the cave are in a very fine white limestone, ranging from the Buda formation at the entrance through the Georgetown and into the Edwards. The floor of the small room near the entrance is of small rocks and silt, but after about 30' the floor is of bedrock. A duck-under immediately after the small entrance room opens into a 20' high room about 15' in diameter. Both of these rooms are infested with harvestmen and cave crickets. At the end of the room a walking passage leads for a few feet to a 10' drop, about 20' more and then a 20' drop. Here several high domes extend upward to the Boquillas some 30'-40' above the floor of the cave. The passage at this point is essentially a narrow fissure and the drops may be chimneyed with little difficulty. A reddish-brown gypsum encrustation covers the walls of this part of the cave, the size of the crystals ranging from quite small to several inches in length. This passage ends, but is connected to an identical high fissure by a 6' high passage only a few feet long and by a crawl only a few feet in length. The fissure extends in both directions, ending to the north after about 30' and to the south after about 20'. A short duck-under to the right lets one into the same fissure which had ended before. After about 100' the passage leads over breakdown and into the only room of any size in the cave. This is a 100' long, 60' wide, 20'-40' high room, floored with breakdown. Along the right side of the room there is a high fissure-like dome some 30'-40' high and 20' long. At the same end of the room as the entrance into it a parallel fissure to the right takes off, passing over two 15' deep pits, both of which go nowhere, and into a third pit. This leads to a room about 20' in diameter and 20' high, connected to the entrance fissure by a window 15' above the floor. Several very fine gypsum flowers may be seen on the walls and ceiling of the room and the entire walls are covered with large crystals. A small hole leads from the room and spirals down for a few feet. At the end of the spiralling crawl a 6' deep pit drops into a low, wide crawl. A crawl back under the room has not been explored, but appears to take little or no water in floods. The main crawl itself is floored with small gravel and extends for about 100' as a 1'-2' high passage. A 6' drop leads into a 3' high crawl which extends for about 150' before ending in an 18' pit. Although all previous trips had found the crawl so dry as to raise clouds of dust about the explorer the last trip to the cave (July 1961) followed a recent flooding and the crawl was found to contain from 6" to 1' of water, leaving only 4" of air-space over part of the crawl near the entrance. With the exception of a few small pools this was the only water found in the cave. At the bottom of the pit two passages take off, that to the south leading to a room about 40' long, 15' wide, and 10' high. A small pit in turn leads to two smaller rooms, from which a too small drainage channel is cut in the red clay almost filling the rooms. Much silt is also encountered in these rooms. Two chimneys from the larger of the rooms lead to a maze of small crawls about 20' above the floor; selenite needles were found on the clay floor of the crawlway maze. In the other direction from the bottom of the 18' pit a 50' long stoopway leads to the Hall of the Unicorns, a very straight

passage 200' long. Along the right side of the passage clay fill remains despite the violent floods to which the cave is subject. A climb of some 8' at the end of the Hall leads to a crawl over clay fill to a small room about 10' in diameter and height. Much digging would be required to extend the cave further in this direction. A number of selenite needles up to 4" long were found in this passage. All along the ceiling of the Hall of the Unicorns there are numerous rudistids. These fossils frequently protrude several inches from the wall or ceiling and their long straight shape is strongly reminiscent of the fabled unicorn's horn. To the left of the Hall a steep slide leads for some 15' to the main drops in the cave. The main pit, which is at the end of this slide, consists of a steep slope dropping 50' to a ledge and then vertically for an additional 50' to a round gravel-bottomed pit. From this pit a walking passage extends for about 20' to a short drop and then a few more feet to a tight crawl. The crawl required excavation to enter, but after about 20' of loose dirt and gravel the crawl becomes 1' high and 3' wide. This continues an estimated 300'-400' without becoming appreciably larger. At the end of the explored part of the crawl a gravel bar has been built up requiring digging to continue further, but the passage definitely opens again and the air current in the crawl is so strong as to almost extinguish a carbide light. This passage also takes most of the flood water entering the cave, as evidenced by great quantities of silt in the bottom room. The cave apparently fills to this point and then overflows down this crawl. The water left in the bottom then drains through a small drainage channel at the end of the last room in the cave. To the south of the gravel-bottomed pit a very steep slope drops about 20' to the top of a double-bottomed pit, 30' deep. This pit has been cut in half by a large saddle 5' from the top. At the bottom of this pit a steep slope leads down for about 20' to a 50' long, 5' wide passage ending in a 30' deep circular pit dropping vertically. At the bottom of the pit a steep slope extends down an additional 25' to the bottom of the cave, 371' below the entrance. A small drain leads downward at a very steep angle but is too small and clogged with silt to enter. A steep slope leads back from the bottom of the pit for about 50', rising a total of 30' to the top of a 30' pit. A passage extends from the bottom of this pit about 100'-150' to the bottom of a very high dome, which can be climbed about 50' before it becomes unclimable, but can be seen to extend much higher.

History: The cave has been visited a number of times by local people in Langtry, primarily for the purpose of collecting the large gypsum crystals for sale to tourists. It was believed, however, that the cave ended at this point. Early trips by the UT Grotto returned with the reported that a fairly large cave ended in gravel-filled lower levels. The possibility exists that the main crawl to the Hall of the Unicorns was blocked with gravel and subsequently cleared by a flood, but most likely the crawls were simply not explored. In 1958 the cave was first entered by Bill Russell and other members of the UT Grotto, but exploration was stopped by lack of equipment. A trip was made in 1959 by Bill Russell, Roger Sorrells, and Jim Tennison and the bottom of the cave was reached, as well as the passage to the top of the last 30' pit. A trip consisting of Bill Russell, James Reddell, Bud Frank, Jim Tennison, and Bill Irving explored the last pit and dug out the crawl back to the second gravel bar. The next trip to the cave was made in April 1961 by James Reddell, Dudley Roberts, and Bud Frank at which time the cave was mapped from the entrance to the beginning of the Hall of the Unicorns. In July 1961 the map of the cave was completed to the top of the last pit by Bud Frank, Dick Smith, Philip Russell, and Dick Smith. The total surveyed length of the cave is 1575'.

Bibliography: Estes, James H. "Noteworthy Caves of Texas," page 6. The Texas Almanac: 1961-1962.
Sorrells, Roger. "Lead Cave," pages 10-11, 17. The Texas Caver, Vol.IV, No. 2. Mar.-Apr. 1959.
Widener, Donald L., ed. Texas Cave Survey, Vol. 1, No. 2, page 17.

prominent joints, 10'-20' high and 10' long have been formed along the passage and perpendicular to it, but all are too small to enter for any distance. Known as Reef Pit, the pit is distinguished by having a great accumulation of rudistids along its walls. These protrude as much as 6" in places and make excellent hand and foot holds for part of the chimney. Although two small pools of water were found on ledges in the pit on one trip they are usually dry. The only fauna observed in the cave were crickets, millipeds, and a few surface-type beetles. The skeleton of a large bobcat was found in the cave many years ago. In November of 1961 air was observed to be blowing out of the cave. Total depth of the cave is 272'.

History: The cave was first reported by Patrick J. White in Bulletin 10 of the NSS in 1948. Apparently at that time the only part of the cave known was the 120' level, and the description of the length of the cave was greatly exaggerrated. The first full exploration of the cave occurred in March 1958 when Charles Curtis, Jay Maxwell, Bill Russell, and Tom Woods of the University of Texas Grotto of the NSS explored it. A rough map of the cave was made at that time, but in November 1960 Bud Frank, Graham Bell, Jim Tennison, and James Reddell made a brunton and tape survey of the cave, with the exception of the pit. The pit was mapped in April 1961 by Dudley Roberts, James Reddell, and Bud Frank.

Bibliography: Estes, James. "Noteworthy Caves of Texas," page 63. The Texas Almanac: 1961-1962.
Widener, Donald L., ed. Texas Cave Survey, Vol. 1, No. 2, page 10.
White, Patrick J. "West Texas Caves and Shelters: More Notes on Val Verde County," page 77. The Caves of Texas. Bulletin Ten of the National Speleological Society. April, 1948.

Ref: UTG files, TSS files

FISHER'S FISSURE (FISHER SINK) (LANGTRY SINKHOLE) Val Verde County (# 4)

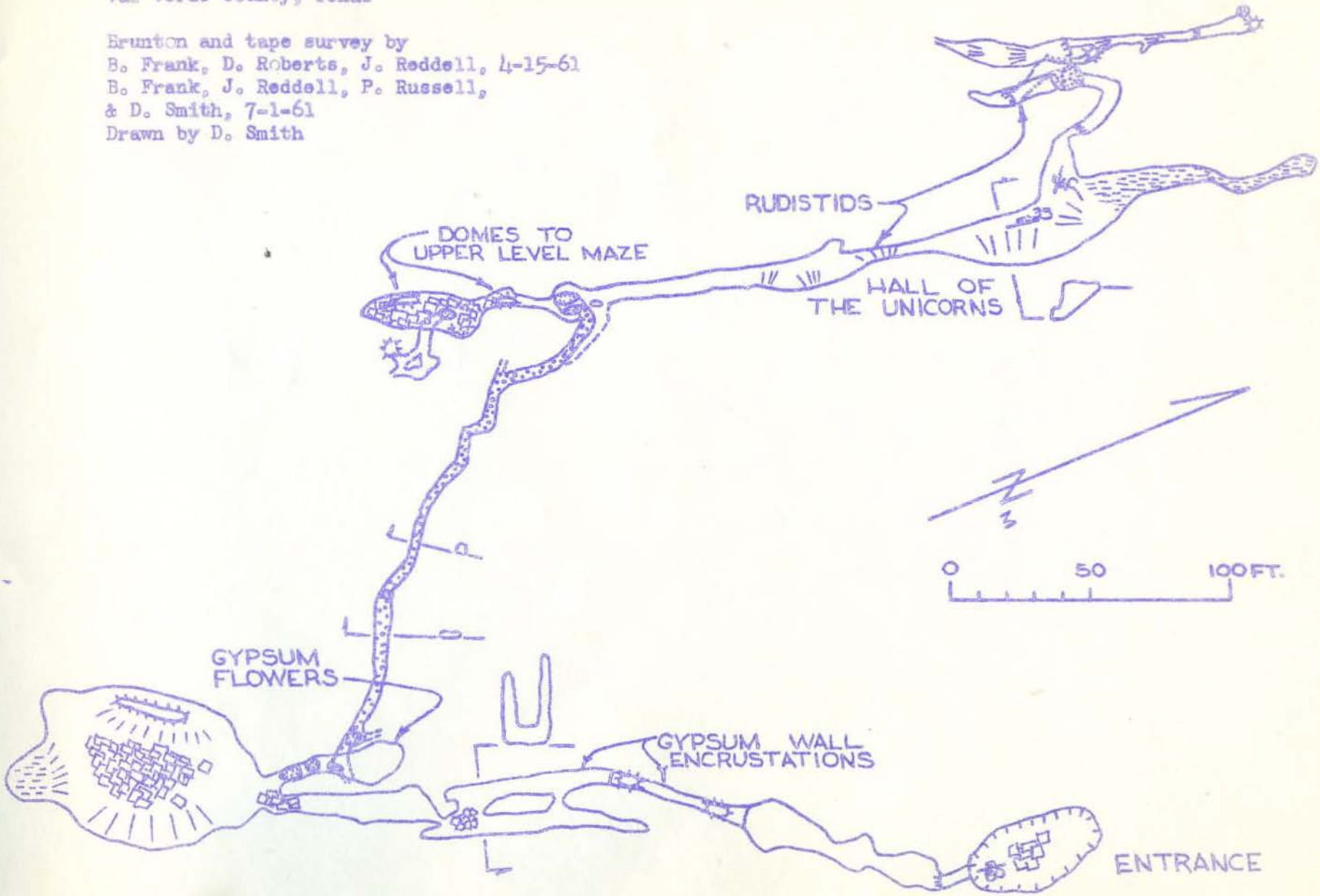
Langtry 15' Quadrangle

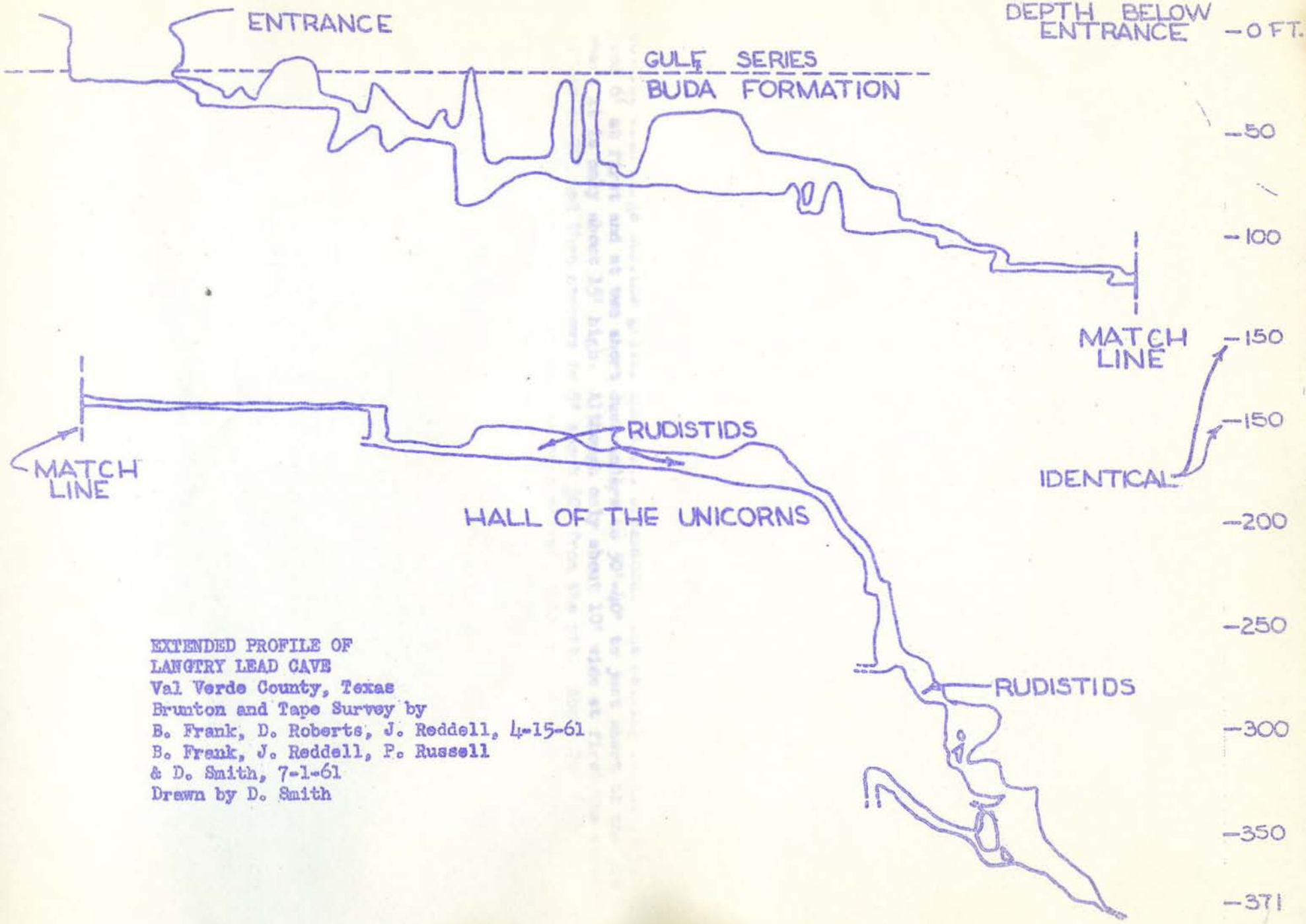
Owner: J.E. (?) Fisher

Description: The entrance to Fisher's Fissure lies at the mouth of a small feeder canyon emptying into Osman Canyon and about 20' above the bed of Osman Canyon. The entrance is essentially a large solution sink with two holes leading off. The main entrance is about 10' wide and 20' long, while the second is a small hole about 3' in diameter to one side of the main entrance. Both drop about 20' are are connected by a natural bridge about 5' wide and 10' thick. Going south from the small entrance there is a 15' high, 20' wide passage floored with large breakdown and much clay fill. After about 150' the passage drops a few feet into a 2' wide, 20' high fissure floored with bedrock. After a short distance a 10' drop lets you into a 15' wide, 15' high and 30' long room floored with clay and breakdown. Two small passages lead out on opposite sides of the room, but both end after only a few feet. At the south end of the room a steep slope of clay leads through a narrow fissure only 3' wide until a 20' wide, 3' high and 25' long room is reached. The end of the room is blocked by red clay fill. The clay in this part of the cave is very dry and infested with thousands of fleas. At the bottom of the main entrance there is a circular room about 20' in diameter and floored with breakdown, having a 5' slump pit in the center. A 15' deep pit along the southeast side of the room leads to a small dead-end crawl. A 2'-3' wide fissure leads north out of the room for 15' before opening into a small "room" 10'

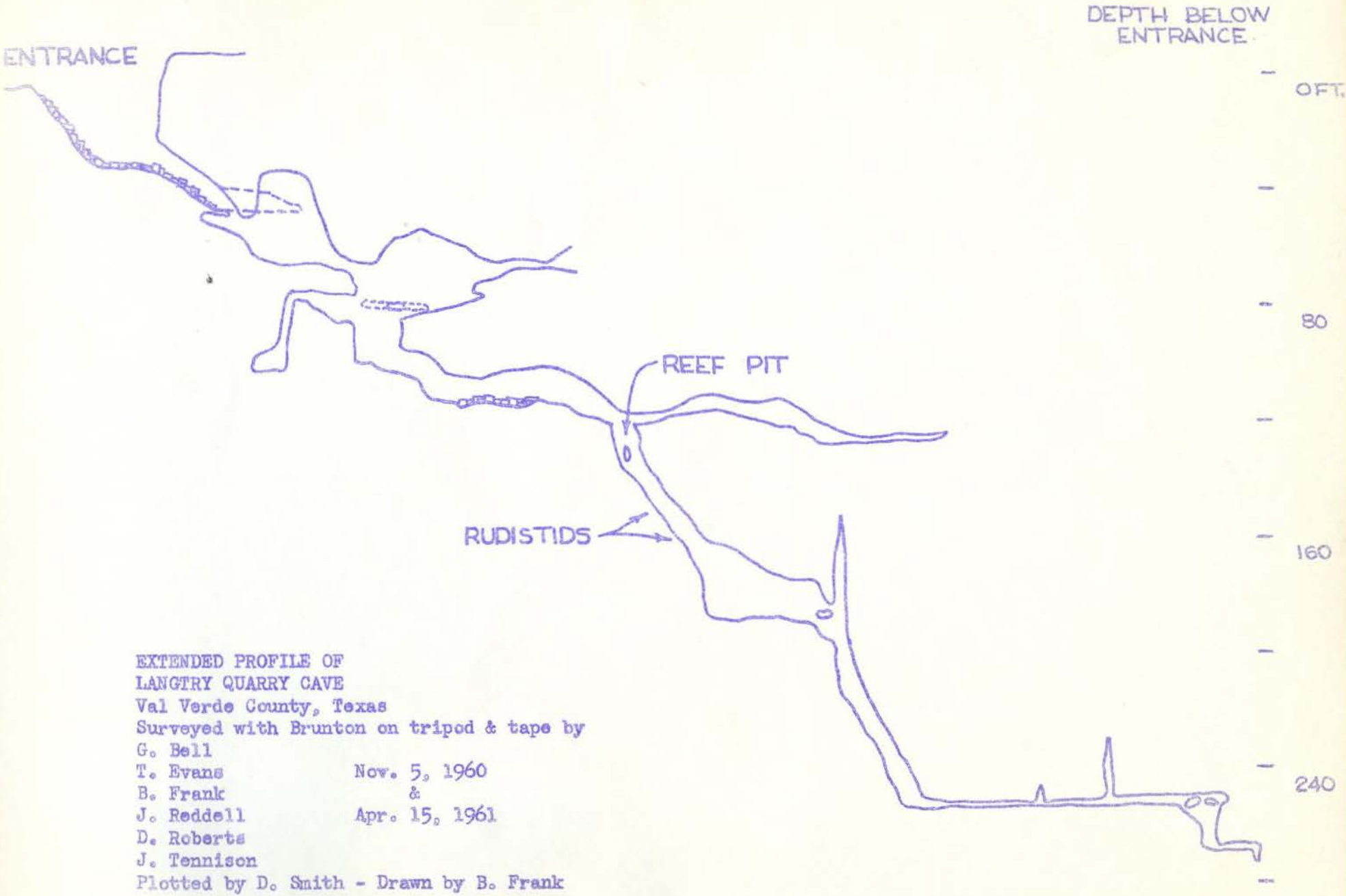
LANGTRY LEAD CAVE
Val Verde County, Texas

Brunton and tape survey by
B. Frank, D. Roberts, J. Reddell, 4-15-61
B. Frank, J. Reddell, P. Russell,
& D. Smith, 7-1-61
Drawn by D. Smith





EXTENDED PROFILE OF
LANGTRY LEAD CAVE
Val Verde County, Texas
Brunton and Tape Survey by
B. Frank, D. Roberts, J. Reddell, 4-15-61
B. Frank, J. Reddell, P. Russell
& D. Smith, 7-1-61
Drawn by D. Smith



EXTENDED PROFILE OF
LANGTRY QUARRY CAVE
Val Verde County, Texas
Surveyed with Brunton on tripod & tape by
G. Bell
T. Evans
B. Frank
J. Reddell
D. Roberts
J. Tennison
Nov. 5, 1960
&
Apr. 15, 1961
Plotted by D. Smith - Drawn by B. Frank

EMERALD SINK (EMERALD CAVE) Val Verde County (# 2)

Langtry 15' Quadrangle

Owner: Arnem Humphries

Description: The entrance to Emerald Sink lies about 20' above the bed of Eagle's Nest Creek on a flat shelf of limestone. A 5'-10' deep, 4' wide slot has been dissolved in the limestone for about 20' before the circular pit-type entrance to the cave. This "pit" is about 10' in diameter but numerous small ledges make the 20' climb into the cave fairly easy. This pit is covered with an emerald green moss, hence the name of the cave. At the bottom of the entrance a passage extends in both directions, bearing northeast-southwest. The passage to the southwest is formed sporadically on two levels with most of the connecting divisions between the levels gone. The passage is about 5' wide for 30' where it widens to about 10' and the ceiling rises to 10'-20'. The floor of the passage is partly bedrock, but in places gravel and sand can be found. The largest formation in the cave is to be found about 50' down the passage, it being a great mass of flowstone 10' high and 15' diameter. Several smaller formations may also be seen in the passage but none are alive and all are colored a dirty brown. After about 200' the normally high passage becomes quite low and widens to 15'. A passage to the left connects to one to the right after about 20', where a small 3' high room is formed, housing a few bats. Going northeast from the entrance a high fissure striking almost due north-south is encountered. Here a 15' climb is required to drop down in the fissure, whose ceiling height is between 25' and 30'. The fissure ends after about 15' to the north and after about 30' to the south, where a steep climb puts you near the top of the fissure. A second fissure paralleling the entrance fissure intersects this passage, going northeast. The floor of this passage from here to the pit is covered with large surface gravel and small breakdown. The ceiling height varies from 6' at first and at two short duck-unders to 30'-40' to just short of the pit where it is only about 15' high. Although only about 10' wide at first the passage widens to 20' and then narrows to 5' about 30' from the pit. About 75' down the passage another north-south fissure is encountered, this one, bearing the misnomer of Backreef Crawl, is a narrow, high fissure which extends 250' before it lowers to a 1' crawl for 20', and then becomes a 20' high fissure once again. Two 30' domes, one before and one after the crawl, connect to form a short upper level. After the crawl it extends an additional 175' before it becomes very narrow and tortuous, finally becoming virtually too small to continue. The fissure ranges in width from 2'-5', the walls being covered with a strange reddish calcite (?) deposit, as well as numerous small fossils indicative of a backreef. The main passage continues striking northeast for about 150' from its junction with Backreef Crawl where it encounters a joint striking almost due east-west. After about 30' it again strikes northeast and after about 30' ends in the pit. The pit seen from the top is a 5'-7' wide, 20' long hole in the passage, which itself appears to continue beyond the pit. Bats roost either above the pit or in the passage beyond the pit. Total depth of the pit is 141' and is vertical the entire distance, the last 50' being the top of a 40' long, 25' wide room. A hole to the west of the room leads to a 20' wide, 1' high crawl over gravel for about 30' where it turns at a right angle to the south. Here the floor is of bedrock covered with several inches of mud and silt, the ceiling height averageing 3'. This continues for about 50', turns due west for 75'-80', and then turns due north for about 100' where it ends in a 50' deep pit. The walls of the pit for 25' are covered with guano and silt, but a keyhole at this point opens into the top of a room. At the bottom of the pit a steep slope and short climbable drops let you climb down an additional 40'-50' to a fair-sized deep lake at the water table. It is not known if any passages extend from beneath the surface of this lake. Although the cave has only been mapped to the top of the Guano Pit, where it is 209' deep, total depth approaches 300'.

History: The cave was not known to spelunkers until 1958 when it was found while looking for Langtry Lead Cave. At that time it was explored to the pit by UT Grotto members. A trip in March 1958 by Charles Curtis, Jay Maxwell, and Bill Russell explored the cave to the bottom. Several other trips have been made to the cave since but no passage has been discovered. It was mapped to the top of the Guano Pit by Dick Smith, Bud Frank, Philip Russell, and James Reddell on July 2-3, 1961. Total surveyed length of the cave is 1285'.

Bibliography. Anonymous. "News of the Grottos", p. 84. The Texas Caver, Vol. VI, No. 7. July, 1961.

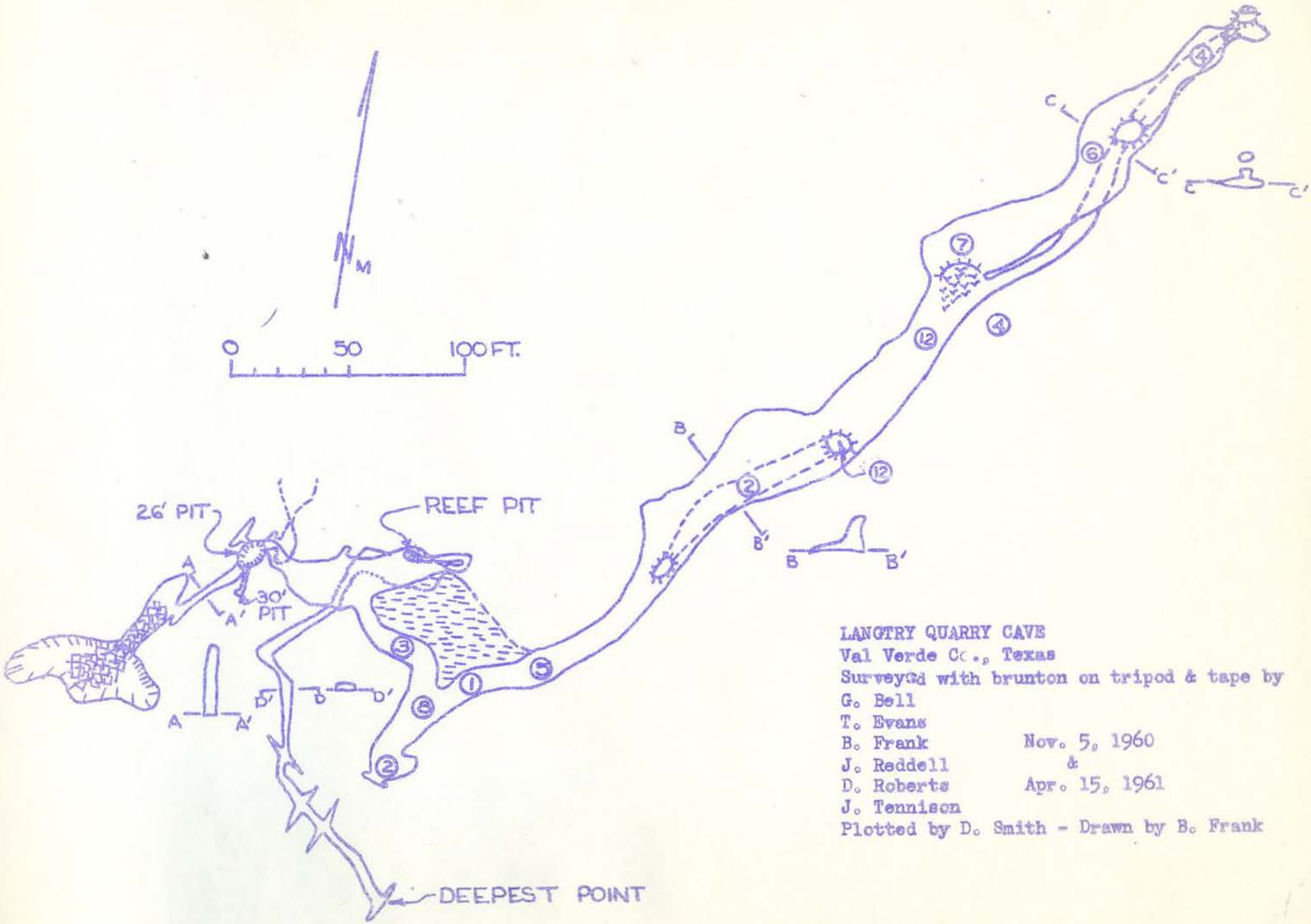
Refs: UTG files, TSS files

LANGTRY QUARRY CAVE (QUARRY CAVE) Val Verde County (# 3)

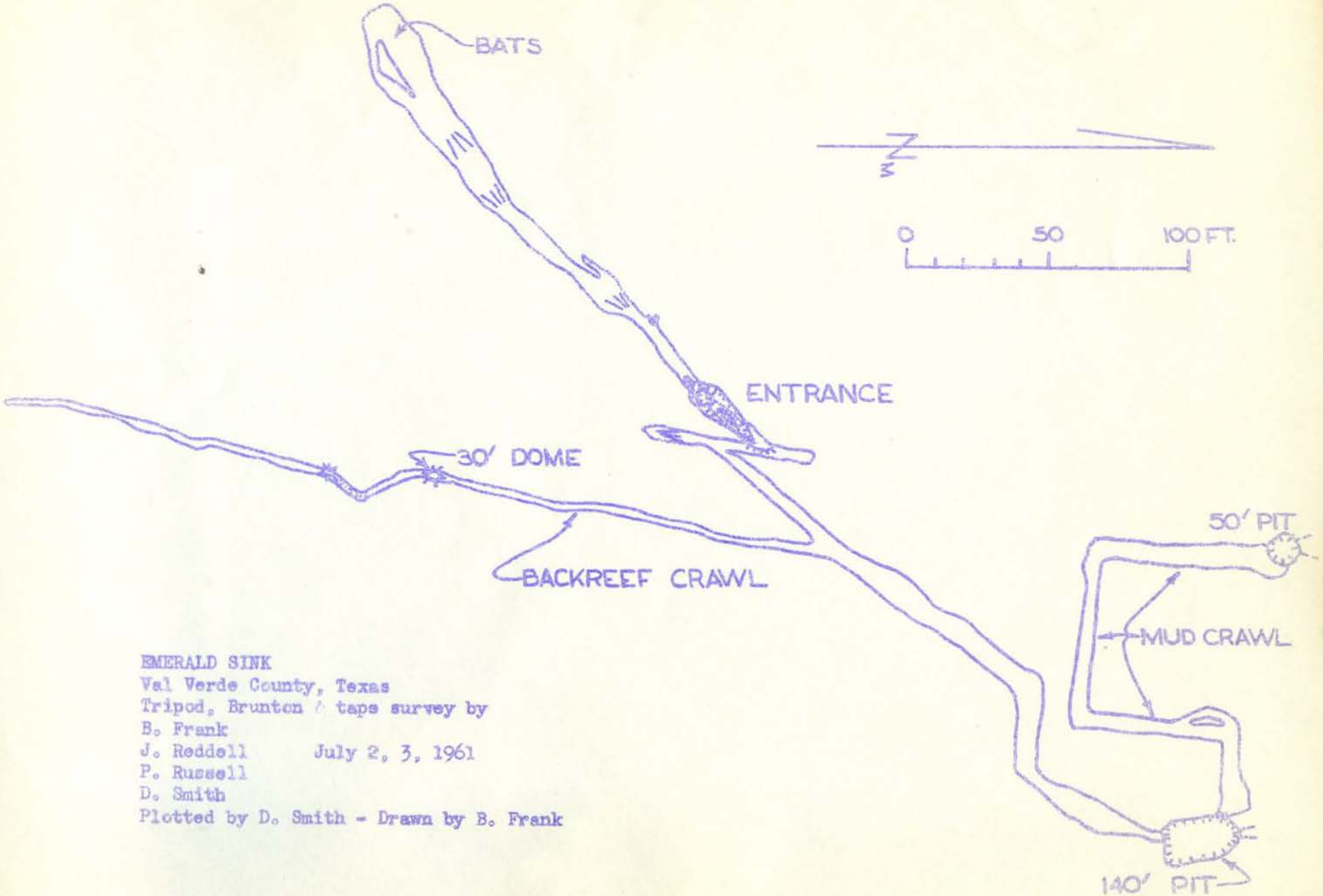
Langtry 15' Quadrangle

Owner: Arnem Humphries

Description: The actual entrance to the cave is a 6' high, 12' wide slope leading down from the bottom of a 40' deep sink formed in the Boquillas Flags formation of the Cretaceous. The sink itself is about 30' across and 20' wide, climable on the south side, while the other three sides drop vertical to the floor of the sink. Severe slumping over the entrance give the impression that it will collapse at any moment. A small quarry has been dug about 30' from the cave entrance, but has not been used for many years. The slope at the bottom of the sink extends about 50' where a junction is reached. The passage straight ahead becomes too small to enter while that to the right drops down a 10' breakdown slope and into a 20' high, 4' wide fissure. This extends for about 50' to a dome-pit which drops about 15' to a ledge and then an additional 15' to the floor. A hole from the ledge leads to a 25' deep pit with no passages leading out. From the bottom of the pit, which is 107' below the surface, a duck-under leads to a room about 20' wide, 40'-50' long, 15' high and floored with a very dry clay fill and breakdown. At the end of the room clay fill rises either to the ceiling or to within a few inches, except for about 3' along the right wall. Here a 3'-5' high, 4' wide passage leads to a low wide area, where the clay has filled the entire passage to within 10" of the ceiling. After about 50' the ceiling rises and the passages extends for 700'-800' as a stoopway-crawlway ranging in width from 20' to a narrow passage along the side of the ever-present clay fill. Where the clay has contracted and separated from the walls it is possible to see that in places the fill is at least 15' thick. After 600' a deposit of very old powdery guano is found, and the cave begins to follow two parallel fissures connected at the bottom, but frequently broken into two separate upper levels connected to the lower by a series of 10' domes. After a total length of 1000' the passage ends in breakdown and fill. By following the room at the bottom of the pit to its end along the left wall a 3' in diameter hole is found dropping straight down. Some gypsum has been deposited in this area as encrustations on the ceiling, as well as in the sand. The hole leads to a narrow fissure which may be chimneyed for a total of 181' horizontal and 150' vertical distance. The last 60' of the chimney, which averages 3' in width and 10' in length, becomes a circular funnel 5' in diameter dropping almost vertical. Although it can be climbed it is slick and very dangerous, a ladder or at least hand-line is highly recommended. At the bottom of the pit a crawl extends for about 200' where it encounters a 16' drop at the bottom of which a short low crawl extends to a 5' drop into an enlarged joint too small to follow. Several



LANGTRY QUARRY CAVE
Val Verde Co., Texas
Surveyed with brunton on tripod & tape by
G. Bell
T. Evans
B. Frank — Nov. 5, 1960
J. Reddell — &
D. Roberts — Apr. 15, 1961
J. Tennison
Plotted by D. Smith - Drawn by B. Frank



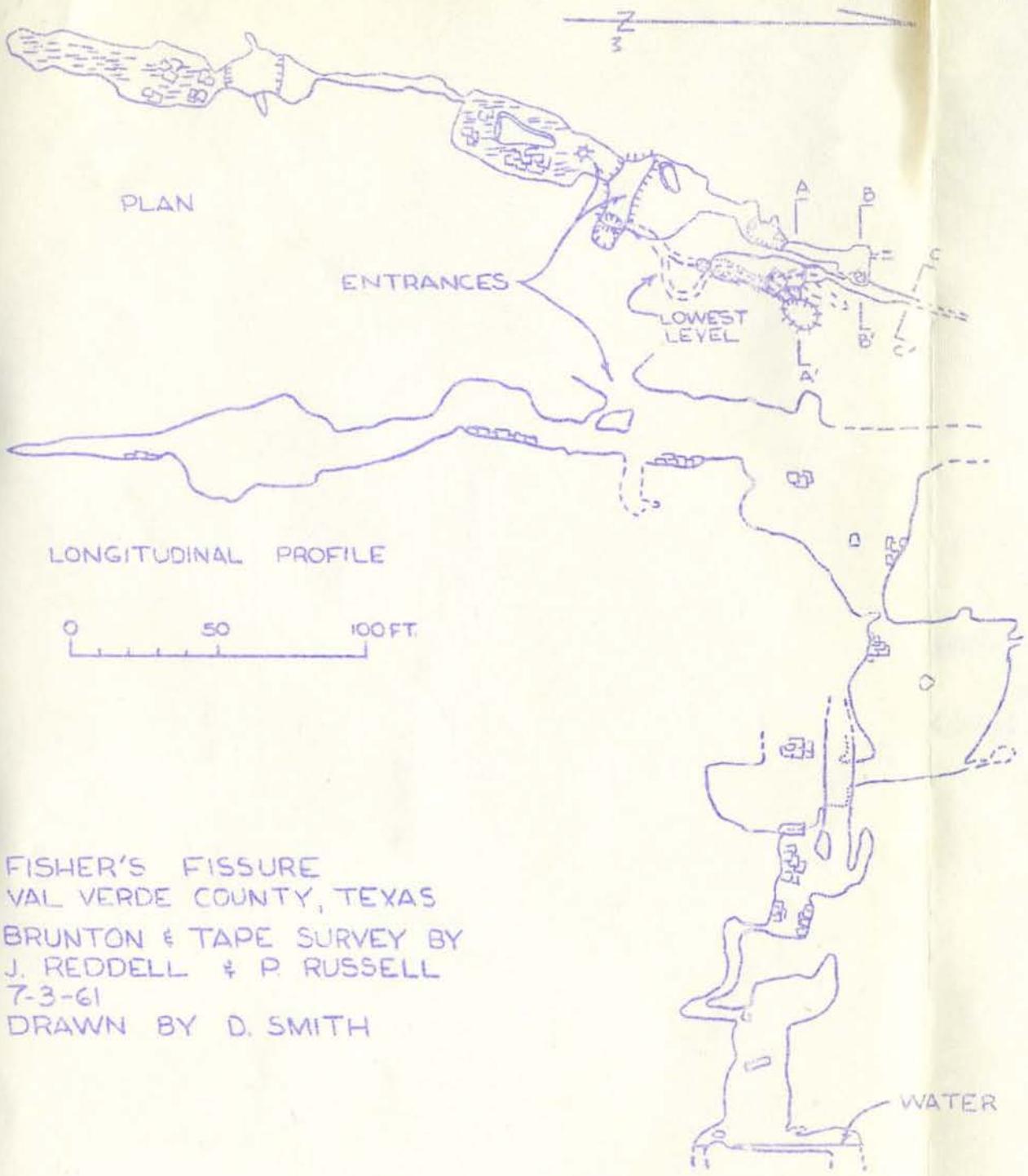
EMERALD SINK
Val Verde County, Texas
Tripod, Brunton & taps survey by
B. Frank
J. Reddell July 2, 3, 1961
P. Russell
D. Smith
Plotted by D. Smith - Drawn by B. Frank

wide and 15' long. At the end of the room the fissure narrows again and the floor drops away, ledges allowing you to traverse the top of the deep fissure for 30' where it is possible to climb onto a breakdown pile and reach a 25' high dome in a short dead-end passage. A hole in the room about 4' in diameter lets you onto the steeply sloping floor of the fissure 20' down. The bottom of the fissure drops steeply down, in places being vertical for a few feet, until the bottom of the fissure is reached. At the bottom a 10' in diameter room has formed with a small hole, parly covered by a large boulder, letting you climb 10' down onto a plug of rocks wedged in a 30' long, 3' wide fissure paralleling the fissure at the entrance. Although part of the chimney can be climbed it widens to 10' after a short distance and equipment is necessary to reach the floor 45' down. At the bottom a passage leads north for a short distance as a crawl before opening into a small dead-end room. To the south a 6' drop may be climbed to a point where three fissures intersect to form a room about 20' in diameter. It is necessary to chimney one of the fissures about 10' down into the room. From here a hole on the left drops 8' to a ledge and then drops vertically for 30', only part of which can be climbed. At the bottom of the drop a passage leads back to the bottom of a 50'-70' high dome. From this point an 8' drop lets you into a small room from which a 15' long crawl leads to a circular pit, 30' deep and 4' in diameter. Although it can be chimneyed it is desirable to have equipment for the drop. At the bottom of the pit, which is covered with mud, a muddy passage leads immediately to a 10' drop. A passage to the right leads to a 10' drop into a low muddy crawl ending in breakdown. A passage to the left extends back under the main part of the cave for about 75' where it ends as a 45' pit, which is the same fissure along which the high dome has formed. The pit is about 3' wide at the top and 20' long, with no passage on the opposite side. At the bottom, the pit widens to 5' and has 6" of water on the floor. It ends quickly to the south, while to the north it extends for 5' as a 4' high passage, then as a high passage for a short distance further before it ends in an extremely deep pool, the ceiling meeting the water level. A crawl to the left past the duck-under has not been explored because it is too small, but it can be seen to extend as a 2' high, 3' wide passage for at least 20'. At this point the cave has apparently reached the water table for the area and any further exploration with require either much climbing of domes or diving with aqua lungs. Total depth of the cave is 250'. The only fauna observed was cave crickets, a few bats near the entrance, small dipterans, spiders, and earthworms.

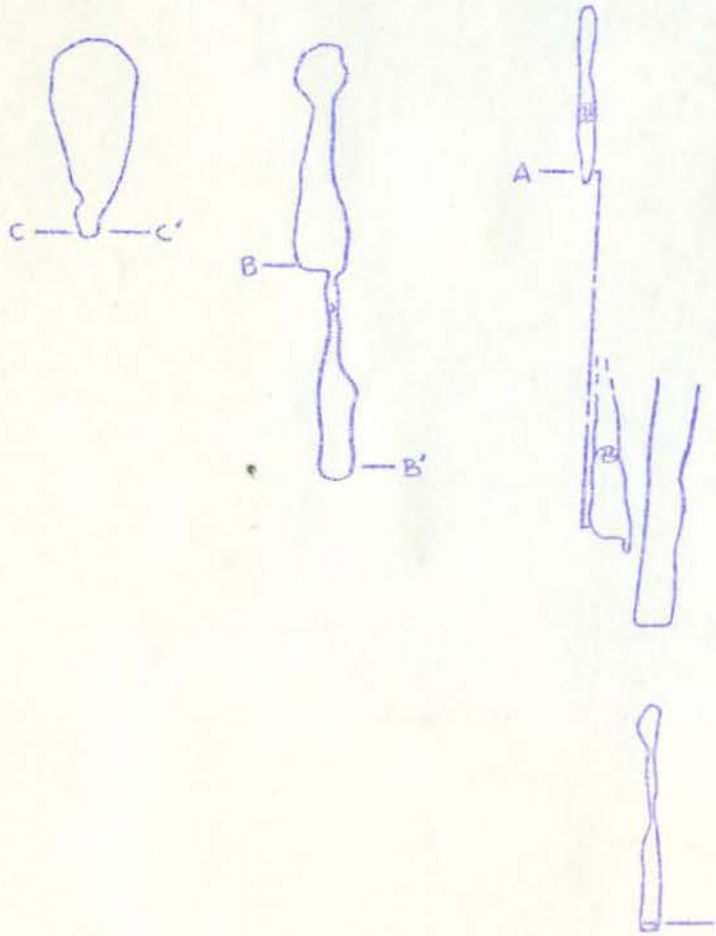
History: The first reported exploration of the cave by a group of spelunkers was in 1958 when a group from the University of Texas Grotto of the NSS explored the cave to its end. This group consisted of Tom Woods, Bob Riddle, Charles Curtis, Jay Maxwell, and Bill Russell. Further exploration by UTG members has failed to yield any new passage. It was mapped on July 3, 1961 by James Reddell and Philip Russell to the top of the circular pit, and the map completed in August 1961 by James Reddell, Philip Russell, and Tommy Evans. Total surveyed passage is about 650'.

Bibliography: Anonymous. "News of the Grottos," page 84. The Texas Caver, Vol. VI, No. 7. July 1961.

Ref: UTG files, TSS files



FISHER'S FISSURE
VAL VERDE COUNTY, TEXAS
BRUNTON & TAPE SURVEY BY
J. REDDELL & P. RUSSELL
7-3-61
DRAWN BY D. SMITH



LANGTRY GYPSUM CAVE (LANGTRY CAVE) (CRYSTAL CAVE) Val Verde County (# 5)

Langtry 15' Quadrangle

Owner: State of Texas

Description: The cave is entered by a 3' wide, 6' high hole in a road cut on the south side of US 90 west of Langtry. The passage extends about 15' into the hill, the last 10' being the top of a 52' deep fissure. Although difficult the fissure can be chimneyed. Near the bottom of the fissure the passage widens to 15', the floor being covered with small breakdown. A breakdown slope to the south extends for about 60' where it dead-ends. A small hole in the floor near the end leads to a room about 10' down and with no passages leading out. Going north from the entrance, under the highway, the passages goes down a breakdown slope, reaching the deepest point of the cave at about 65'. From here to the end the passage is essentially a high fissure, 10'-20' wide at the bottom of the fissure, but narrowing to only a few inches near the top, some 30'-50' up. After about 150' the passage encounters a slight rise up a breakdown slope and numerous large gypsum crystals are encountered. These crystals range from a fraction of an inch to several inches long and from an almost clear white to a very dark orange in color. A small side passage to the left dead-ends after only a few feet. At this point the passage, which has been about 20' wide, narrows to only 5'-10' and the ceiling becomes perceptibly higher. After about 175' further the passage makes a slight bend to the left, continues an additional 125' and ends, a hole far too small to enter continuing. The floor throughout the cave is of small breakdown and gypsum sand. The walls of the cave are almost entirely covered with slabs of gypsum, both as powdery flakes and as large individual crystals. Local mineral collectors have done great damage to the cave through their collecting, but despite the inordinate collection of the crystals the cave still remains an impressive and beautiful one.

History: The entrance to both this cave and nearby Langtry East Gypsum Cave were uncovered by workers laying US 90, when they cut through a small hill, prior to 1948. The cave has been frequently visited by local people and spelunkers, but except for crystals removed for sale to tourists and collections it is little vandalized. The cave was mapped on July 3, 1961, by Bud Frank, James Reddell, Philip Russell, and Dick Smith.

Bibliography: Estes, James H. "Noteworthy Caves of Texas," page 63. The Texas Almanac: 1961-1962.
Hudson, Bob. "Caves of Big Bend, Texas," pages 5 & 8. NSS News, Vol. 13, No. 7. July, 1955.
Walker, Jimmy. "Wild Caves of Texas: An Underground Wonderland," pages 16-18. Texas Parade, April, 1957.
West Texas Geological Society. Geology of the Val Verde Basin and Field Trip Notebook: Nov 5, 6, 7, 8, 1959.

Ref: UTG files, TSS files

LANGTRY EAST GYPSUM CAVE (ROAD CUT CAVE) (LANGTRY CAVE) Val Verde County (# 6)

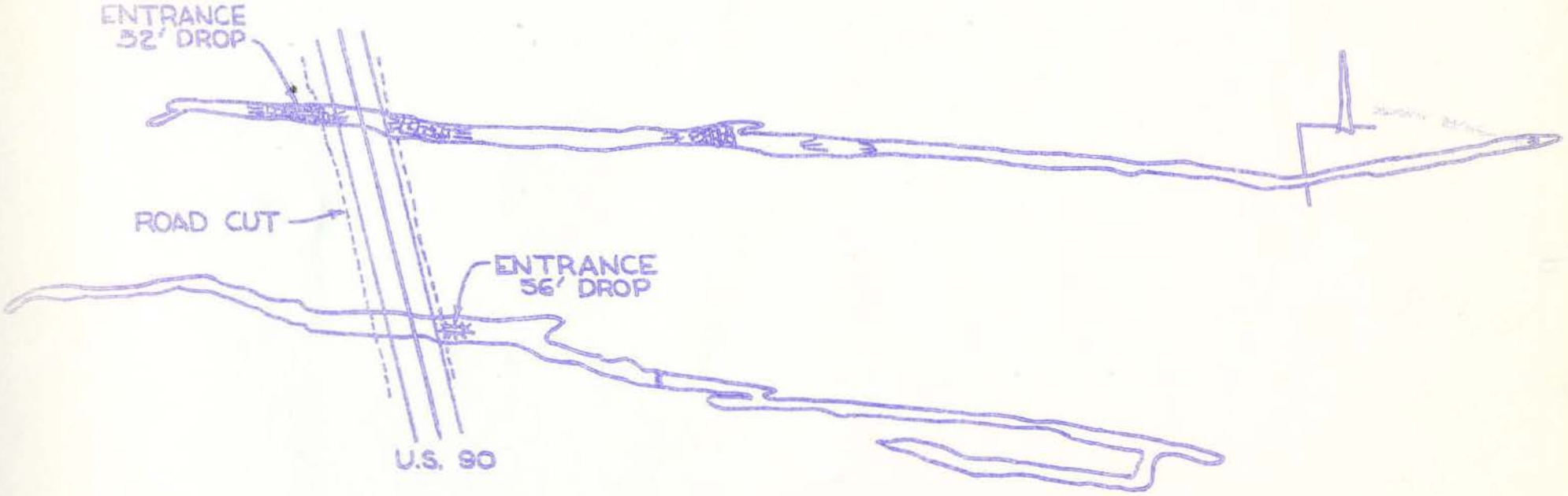
Langtry 15' Quadrangle

Owner: State of Texas

Description: The entrance to Langtry East Gypsum Cave is on the north side of US 90 in the same highway cut that Langtry Gypsum Cave is located. The cave is located about 100' east of the western cave. A hole opposite the cave entrance extends only about 10' before dead-ending, it apparently having been filled by the highway crew. An 18" in diameter hole drops almost vertically from the side of the cut for about 10' where it hits a breakdown plug in the main fissure along which the cave is formed. From this point the cave drops 46' to the floor of the cave, here floored with small breakdown. The drop is unclimable, rapidly opening to 15' wide after being narrow enough to chimney for about 15'. At the bottom the cave extends south under the highway for about 75' where a slope goes down and then back up. Here the cave becomes a narrow fissure with much breakdown wedged in the passage. The walls are covered with a shimmering orange and bronze colored gypsum encrustation. After about 100' a small duck-under leads into a small room with the passage becoming too small to negotiate. Going north from the entrance the passage continues as a narrow 20' high passage for about 30' where a slope leads up for a few feet, just after a gentle turn to the right and a change in the passage to a higher, more narrow fissure. The walls in this part and in the remainder of this fissure and that paralleling it are completely covered with pure white gypsum in the form of delicate gypsum flowers, flakes, hair-like clumps of gypsum whiskers, and long selenite needles. After about 300' of this passage and a narrow parallel fissure the passage ends. It also dead-ends to the south from its junction with the entrance fissure after about 30'. Just before the northern end of the passage a low wide crawl extends for about 30' to a small room with breakdown along the left wall. From here the passage extends for about 125' as a low, 3'-4' wide passage floored with small breakdown and sand formed of gypsum primarily. The passage finally pinches out. In general this cave has suffered much less than has Langtry Gypsum Cave. The difficulty of entrance, as well as the smallness of the entrance, has discouraged most people from entering the cave. Also the formations are not suitable for sale and are not as spectacular for collections as are those of the larger and better-known cave.

History: The cave, like Langtry Gypsum Cave, was hit by a road-crew digging through a small hill near Langtry. It is not known is the entrance was uncovered at that time or if it opened later. The latter is more likely since it is not reported by Patrick White in Bulletin 10, where Langtry Gypsum Cave is described. The first reported explorateion was in the early 1950's when a group from the University of Texas Grotto of the NSS made a trip through West Texas. At that time they lacked the necessary equipment to descend the drop but further trips were made to the cave and it has been completely explored. It was mapped in August 1961 by James Reddell, Philip Russell, and Tommy Evans.

Ref: UTG files, TSS files



LANGTRY GYPSUM CAVE
Val Verde County, Texas
Triped, brunton, & tape survey by
B. Frank, J. Reddell, P. Russell,
& D. Smith, July 3, 1961
Plotted by D. Smith - Drawn by B. Frank

LANGTRY EAST GYPSUM CAVE
Val Verde County, Texas
Brunton & tape survey by
T. Evans, J. Reddell, P. Russell
August 1961
Plotted and drawn by D. Smith

SKILES RAILROAD CAVE — Val Verde County (# 7)

Langtry 15' Quadrangle

Owner: Guy Skiles

Description: The cave is formed in the Buda formation and was hit by a railroad cut along a now abandoned spur. The entrance is a small hole about 18" in diameter going almost straight down for about 4' before levelling off and entering a fissure striking N5E. The fissure may be followed south for about 10' before a plug blocking it ends and you can chimney down a 10" wide fissure. The fissure ends after about 10' to the south and 15' to the east. Total depth is about 20'. Fills with rock and silt at both ends.

Ref: TSS files

SKILES FISSURE CAVE — Val Verde County (# 8)

Langtry 15' Quadrangle

Owner: Guy Skiles

Description: The entrance to the cave was hit by a limestone quarry and has only been open a few years. It is formed in the Buda formation. The entrance is a 2' wide fissure, dropping 14' to a point where the fissure has been plugged by fallen rock. The fissure at the top is 10' long but at the point where it is plugged it is at least 20' long, the last 15' being the top of a very deep, narrow fissure, striking 345 degrees. The fissure is apparently 25'-30' deep but is only 12" or less wide and has not been explored.

Ref: TSS files

SKILES QUARRY CAVE — Val Verde County (# 9)

Langtry 15' Quadrangle

Owner: Guy Skiles

Description: The entrance to the cave opened only within the last year and before that consisted of a small shallow depression in which water stood. Formed in the Buda formation there is a 6" layer of gravel over the surface of the ground at this point. This is probably a product of the quarrying operations which uncovered the nearby Skiles Fissure Cave and cut into the surface over this cave. The entrance is an oval-shaped fissure about 2' wide and 4' long, dropping to a floor of rocks filling the fissure 10' down. The fissure strikes 350 degrees. Going south along the fissure you can crawl over breakdown in a 3' wide, 4' high passage for about 15' until the fissure is seen to drop at least 15' to another breakdown plug. At this point it is about 20' long and 12" wide, requiring a cable ladder to descend. It has not been explored beyond this point. Rock fall blocks the passage to the north. A black widow spider was found at the entrance.

Ref: TSS files

BABB CAVE NO. 1 — Val Verde County (# 10)

Langtry 15' Quadrangle

Owner: Walter Babb

Description: This cave is formed along the same or a parallel joint to that at the entrance to Fisher's fissure. It is a 50' pit with 50' of passage at the bottom.
Ref: Mills Tandy

BABB CAVE NO. 2 — Val Verde County (# 11)

Langtry 15' Quadrangle

Owner: Walter Babb

Description: This cave is a 50' pit with no passages leading off from the bottom.
Ref: Mills Tandy

BABB'S RIVER CAVE — Val Verde County (# 12)

Langtry 15' Quadrangle

Owner: Walter Babb

Description: This is a 25'-30' long crawlway extending back into a cliff overlooking the Rio Grande.

Ref: TSS files

MILE CANYON TALUS CAVE — Val Verde County (# 13)

Langtry 15' Quadrangle

Owner: Guy Skiles (?)

Description: The cave is formed by the splitting away from the walls of Mile Canyon of several large boulders and the subsequent covering of the fissure with smaller rocks and dirt. It is between 50' and 75' long and may be walked through from one entrance to the other.

Ref: TSS files

"WORLD'S DEEPEST POTHOLE" — Val Verde County (# 14)

Langtry 15' Quadrangle

Owner: Guy Skiles (?)

Description: Known and advertised locally as the "World's Deepest Pothole" this large pothole has been formed essentially as a plunge pool at the base of a 60' high waterfall in the dry bed of Mile Canyon just south of US 90. About 30' in diameter at the top the pothole narrows to about 20' 15' down. It extends at least 30' below this and local people say it is much deeper. The presence of water in the hole at all times in this extremely arid area indicates considerable depth and a connection with the water table in the area, which at this point will be near the elevation of the Rio Grande. No diving has been done in the pothole, so it is not known if it has any horizontal extent.

Ref: TSS files