

**AN ARCHAEOLOGICAL SURVEY FOR THE FORT GRIFFIN SPECIAL
UTILITY DISTRICT WATER IMPROVEMENT PROJECT IN CALLAHAN AND
EASTLAND COUNTIES, TEXAS**

Antiquities Permit 6236



By

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AN ARCHAEOLOGICAL SURVEY FOR THE FORT GRIFFIN SPECIAL
UTILITY DISTRICT WATER IMPROVEMENT PROJECT
IN CALLAHAN AND EASTLAND COUNTIES, TEXAS

BVRA Project Number 12-04

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ABSTRACT

An archaeological survey for a water distribution line in Callahan and Eastland counties was performed by Brazos Valley Research Associates (BVRA) under Antiquities Permit 6236 on April 25, 2012. The area investigated consisted of nine acres. No evidence of previously recorded site 41CA7 was found, and no new sites were recorded. Much of the area consisted of shallow soils over limestone bedrock, and the ground surface visibility was excellent. Copies of the report are on file at the Texas Historical Commission (THC), Texas Archeological Research Laboratory (TARL), Texas State Library, Fort Griffin Special Utility District (SUD), Jacob & Martin, Ltd., and BVRA.

ACKNOWLEDGMENTS

I am grateful to those who helped ensure the success of this project. The field survey was conducted under the supervision of Jesse Todd with assistance from Brett Lange. Mark Gardenhire is the General Manager of the Fort Griffin SUD, and he answered questions regarding access and past use of the area. Jacob & Martin, Ltd. is the engineering firm for this project. Derek Turner and Alex Castillo are engineers at this firm, and they provided maps and logistical support. Jean Hughes, Records Conservator at TARL, checked the site files for previously recorded sites in the project area. Lili G. Lyddon of LL Technical Services prepared the figures, and she also edited the report. Jesse Todd provided the photographs that appear in this report, and Courtney Siegert helped prepare the records for curation at TARL.

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INTRODUCTION

The Fort Griffin SUD proposes to install approximately 4.6 miles of new water line along the north side of State Highway 6 in Callahan and Eastland counties (Figure 1). The water line begins at the Pueblo Processing Plant and ends at an existing pump station. The purpose of the proposed water line is to replace an existing 3" water line 2-3 feet to the south. The proposed water line will be centered in an easement twenty feet wide on private property and in Texas Department of Transportation (TxDOT) right-of-way. The pipe will be placed in a trench two feet wide with three feet of cover. The water line will cross one major stream (Battle Creek) and a tributary of Battle Creek (Eubanks Creek). Battle Creek will be crossed using the trenching method. The trench will be 30" deep and 15" wide, and the trench will be dug when the creek is dry. Eubanks Creek will be crossed using the horizontal directional boring method, and this can be done when there is water in the creek because the water line will be at least six feet beneath the creek channel. The entry point will be placed about twenty feet from the southeast bank of the creek, and the exit point will be placed about the same distance from the northwest bank of the creek. The borehole will be 10 feet from the entry and exit points until the creek is reached. At this point, the depth will be at least six feet. There is a stock tank about one-half mile west of Battle Creek, and this wet area will also be crossed by boring. That portion of the water line to be placed in TxDOT right-of-way begins at the processing plant and continues to Battle Creek. The rest of the water line will be on private property. Funding for this project will be provided by the United States Department of Agriculture, Rural Development, and the representative is Todd Powell. The project area is depicted on two United States Geological Survey 7.5' topographic quadrangles. They are Indian Knoll (3299-411) and Moran (3299-412) (Figure 2).

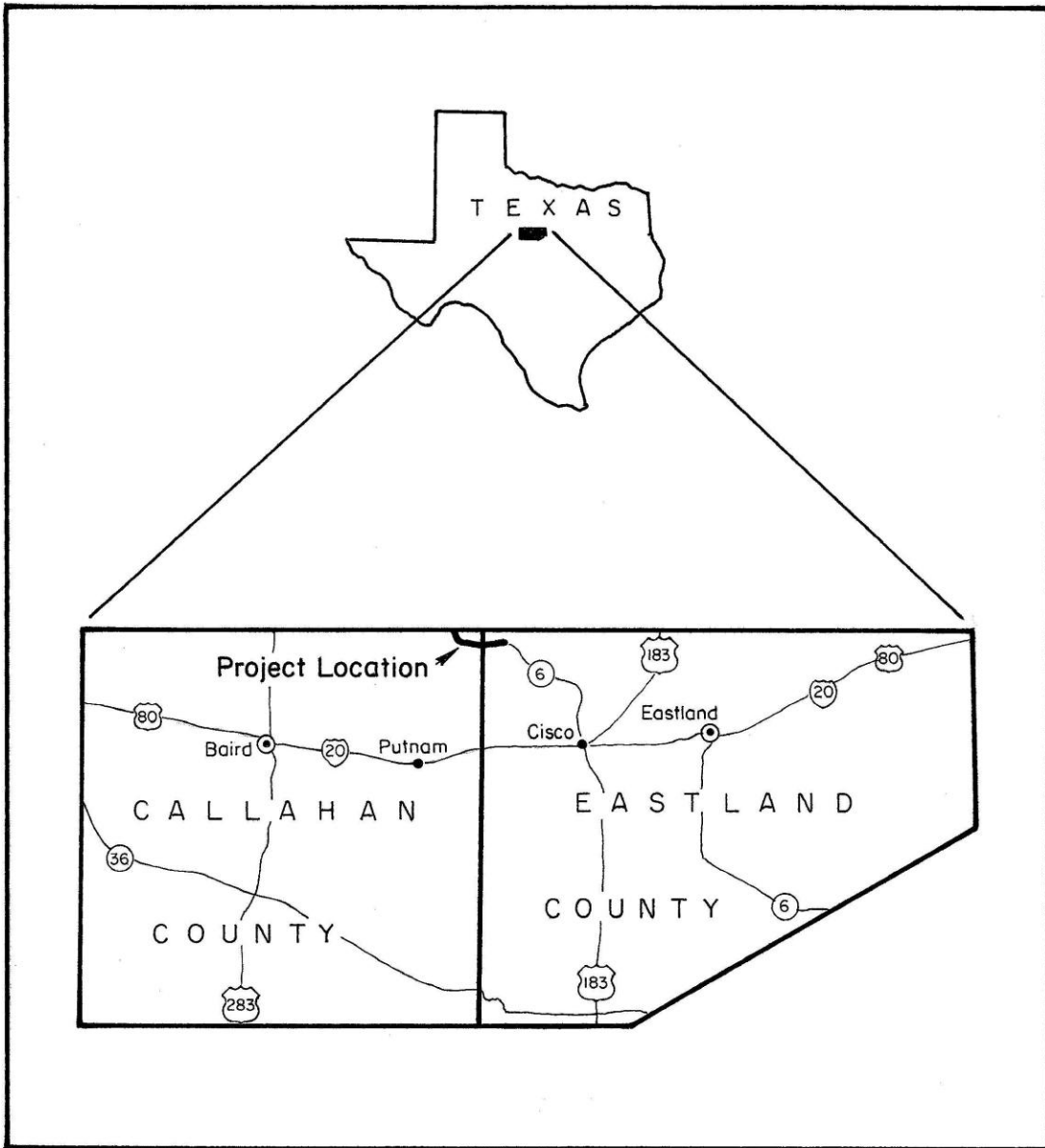


Figure 1. General Location

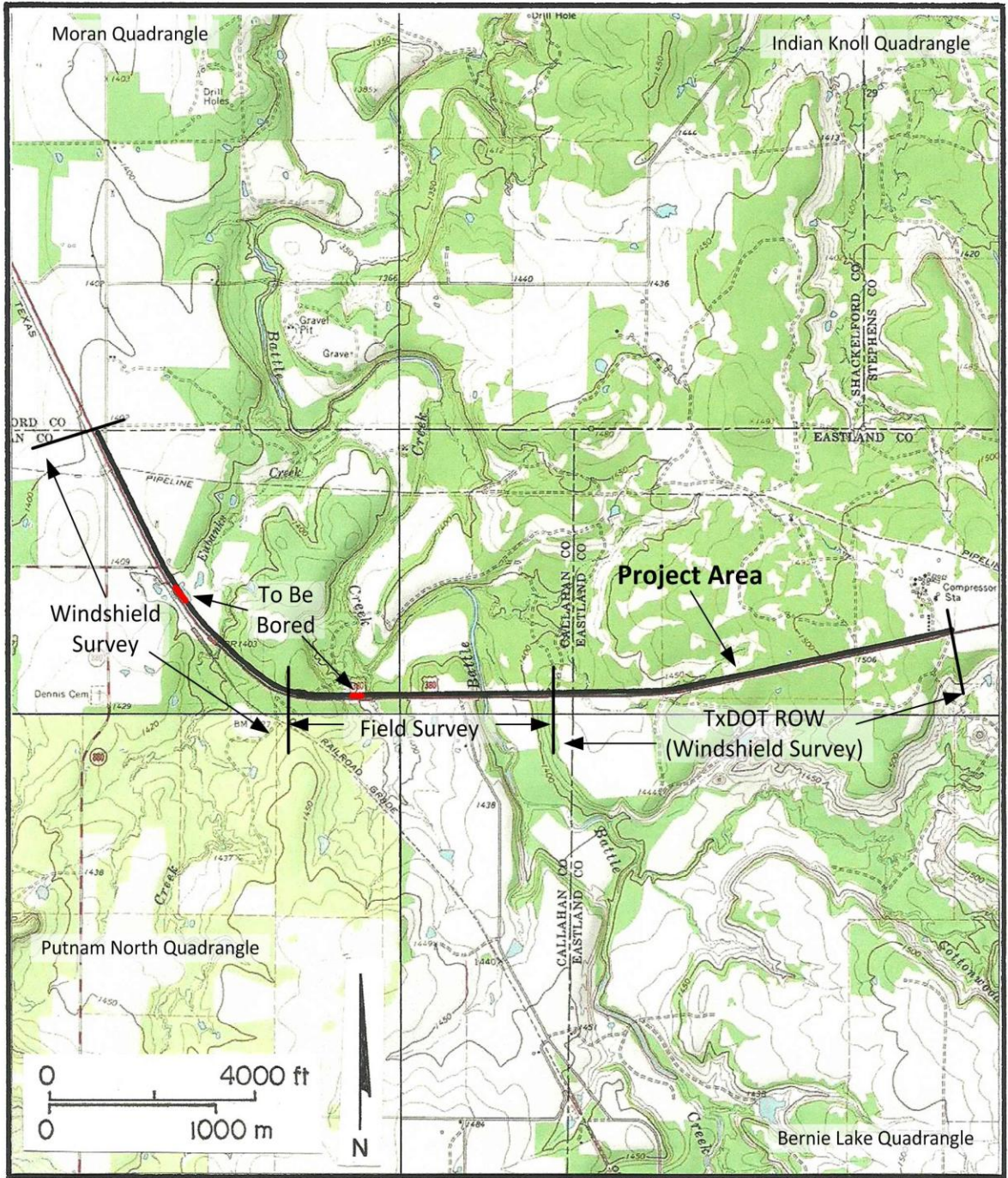


Figure 2. Project Area on Topographic Quadrangles

ENVIRONMENT

The project area is located in an upland setting in North Central Texas and is located in the Red Rolling Plains and the West Cross Timbers Land Resource Areas with some minor areas in the Edwards Plateau and the North Central Prairie. The topography is undulating to hilly, and elevation varies from 1250 to 2100 feet.

The soils in the project area formed under a savannah of grasses and post oak trees. The soils within the proposed pipeline route in Eastland County belong to the Tarrant-Bolar association that consists of gently sloping to hilly upland clays and loams overlying limestone (Moore et al. 1977:General Soils Map). The soils alternate between shallow clays overlying limestone to undeveloped deeper loams overlying clay (Moore et al. 1977:Sheet 1). The soils in Callahan County belong to the Throck-Speck-Lueders and the Leeray-Sagerton-Nukrum soil associations (Clower 1981:General Soils Map). Both series contain stony and cobbly upland loams. The Throck-Speck-Lueders association is east of Eubanks Creek and continues in that direction before it changes to the Tarrant-Bolar association. The Leeray-Sagerton-Nukrum association is west of Eubanks creek and continues to the end of the project area at the Shackelford County line. Throck-Speck-Lueders soils are shallower than those found in the Leeray-Sagerton-Nukrum association. The soils east of Battle Creek to Eubanks Creek consist of shallow loams overlying clays and limestone bedrock. According to Clower (1981:Sheet 6), both channels of Battle Creek and Eubanks Creek contain Gageby loam, occasionally flooded soil (19). The A horizon is calcareous loam from 0-29 inches. The B horizon consists of brown loam from 29 to 60 inches that formed from recent floodplain alluvium (Clower 1981:75, 85). Soils of the Bonti series are the most prevalent type in the area between the west bank of Eubanks Creek and the end of the proposed pipeline route. The A horizon of these soils consists of fine sandy loam from 0 to 8 inches, and the B horizon is sandy clay from 8 to 30 inches and overlies clay (Clower 1981:70). The A horizon for Gageby soils and soils of the Bonti series had been removed due to plowing. Therefore, the B horizon was exposed on the surface.

The area is drained by the Brazos River watershed on the north and by the Leon River and the Sabanno River on the south. The only streams in the project area are Battle Creek (Figure 3) and Eubanks Creek, a tributary of Battle Creek that is only 1.5 to 2 meters wide (Figure 4). At the time of this survey, it was dry.

The land in the two counties is mainly used as range and cattle and goats. Cultivation is also practiced, and wheat, oats, peanuts, cotton, and grain sorghum are the main crops. About 20% of the land in Callahan County is used for cultivation, and 30% of Eastland County is in cultivation. Crops are grown in the areas where sandy soils are present.



Figure 3. Battle Creek (facing West)



Figure 4. Eubanks Creek (facing West)

METHODS

Prior to entering the field, the site records at TARL and the Texas Archeological Sites Atlas were checked for the presence of previously recorded archaeological sites in the project area and vicinity as well as previous projects and surveys in the area. In addition archaeological reports documenting work in the area were reviewed. Mark Gardenhire, General Manager of the Fort Griffin SUD was interviewed regarding the nature of the area and access to that segment on private property. Scott Pletka at TxDOT was contacted and informed that a survey would be conducted on TxDOT right-of-way, and he said that it was not necessary for a TxDOT representative to sign the permit application.

The survey was conducted on April 25, 2012 under the supervision of the Project Archaeologist (Jesse Todd) who was assisted by Brett Lang. They began at the Pueblo Processing Plant in Eastland County and examined the Area of Potential Effect (APE) to a point about 400 meters east of Battle Creek just across the county line in Callahan County. This area was examined using the "Windshield Survey." This is a very low probability area that was not part of the area requested by the THC for survey. Also, this segment is located in the TxDOT right-of-way and past road construction has cause serious disturbance. Next, the crew examined the east bank of Battle Creek that is on private property. Surface visibility was excellent, and the surface contained exposures of limestone and gravel (Figure 5). A shovel test was attempted, but the A Horizon consisted of only a few centimeters of sandy silt before impenetrable limestone gravel was reached. Therefore, no additional shovel tests were excavated.

On the west bank of Battle Creek is a ridge where surface visibility was excellent and outcrops of limestone bedrock were present (Figure 6). West of Battle Creek there is a residence on the ridge. Although this residence is north of the APE, it is our opinion that construction of this house may have removed any cultural materials on top of the ridge. From the west bank of Battle Creek to the borehole entry point on the east bank of an unnamed, intermittent tributary of Battle Creek, the area was in improved pasture (Figure 7). From the borehole exit point west of the tributary, the pipeline route will be placed in an existing dirt road. The borehole entry point on the east bank of the intermittent tributary is in the area where site 41CA7 is depicted on the TARL maps. Despite an intensive inspection of the area, no evidence of this site was found. North of the borehole entry point and about 500 meters north of State Highway 6, a small trailer house and outbuildings were present. Push piles were present in the vicinity of the borehole entrance as well. Construction of the trailer house location and the outbuildings probably removed any cultural materials that may have been present in the southern portion of site 41CA7.



Figure 5. Ground Visibility East of Battle Creek (facing West)



Figure 6. Exposed Limestone Bedrock on Ridge



Figure 7. Improved Pasture

From the borehole exit point, the proposed pipeline route will follow a dirt, two-track road up the slope of a ridge in a westerly direction. Approximately 200 meters of this ridge was visually examined for cultural materials. Shovel tests were not excavated due to the excellent ground visibility and the fact that limestone bedrock was exposed on the ground surface. The field survey ended at a point about 200 meters west of Eubanks Creek, and the remainder of the proposed water line was examined using the “Windshield Survey” method with occasional stops to look at the surface on the ground.

It was not known at the time if boring would be used to cross Eubanks Creek. Therefore, the field survey was conducted on either side of the creek for a distance of 200 meters. Shovel tests were not excavated east of the creek due to the presence of shallow soils and outcrops of limestone bedrock at the surface. No shovel tests were excavated west of Eubanks Creek due to the good to excellent ground visibility and the fact that the sandy clay B horizon was exposed on the ground surface in the recently mowed hay pasture. Although the area west of Eubanks Creek appears to be a floodplain on the USGS map, visual survey indicates that the area is in an upland setting.

The APE from a point 200 meters west of the edge of the ridge to the end of the project was considered to be a very low probability area due to the distance from perennial water and disturbance from oil field and residential construction. Therefore, this segment was evaluated utilizing the “Windshield Survey” method. Prior to encountering the Shackelford County line, there is a wetland area that will be crossed using directional boring. No locations likely to contain a prehistoric archeological site in this area were noted. The project was documented through field notes and digital photography and a site revisit form was completed and submitted to TARL.

ARCHAEOLOGICAL BACKGROUND

General

The project area is located on the border of the Lower Plains and North Central Texas regions as defined by Biesart et al. (1985) in a statistical overview published by the Texas Historical Commission. When the overview was compiled in 1985, these regions were well documented in terms of numbers of sites when compared to other regions in Texas. At that time, there were 1302 known sites in the Lower Plains region and 2678 known sites in the North Central Texas region. In 1985, there were no recorded sites in Callahan County. Twenty-eight sites were known to be present in Eastland County. Of this number, five sites are described as General Archaic, and one site is referred to as Paleo-Indian. Disturbance to the sites in Eastland County is listed as mainly due to erosion with construction being the next in terms of number of occurrences. Today, there are 24 known sites in Callahan County and 33 known sites in Eastland County.

Previous Investigations

There have been no major archaeological investigations in either county. Most of the work has been performed by contract archaeologists associated with private firms and archaeologists working for state and federal agencies. Major studies in the area have been associated with reservoir construction. The three reservoirs nearest the current project area are Squaw Creek Reservoir in Hood and Somervell counties (Skinner and Humphreys 1973), Joe Pool Lake in Dallas, Ellis, and Tarrant counties (Moir et al. 1988), and Possum Kingdom Lake in Palo Pinto and Young counties. The Works Progress Administration was responsible for the work at Possum Kingdom Lake. Jean Hughes (personal communication) stated that no formal report was written for this project.

In Callahan County, eleven of the twenty-four known sites were recorded in the between 1928 and 1940 by E. B. Sayles and R. E. Forrester. Formal site forms were not used in those days, and the location of many of these sites is still in question. The rest of the sites were recorded by archaeologists from Hicks & Company during a survey of fire retarding structures for the National Resource Conservation Service in 1994 that recorded six sites, Mesa Field Services who examined a transmission line in 2000 and found three sites, and Horizon in 2011 during their survey of a proposed transmission line that recorded four sites. All of the sites are prehistoric except 41CA22 and 41CA25 where historic trash scatters were found. The only information for 41CA1 is the presence of mastodon bones. The prehistoric sites date to the Archaic and Late Prehistoric periods and consist of quarries, lithic scatters, camps, and burned rock middens. Sandstone hearths were reported at three sites.

In Eastland County, four of the thirty-three known sites were recorded between 1938 and 1940 by R. E. Forrester. Although they were the first sites to be visited and documented in the county, they did not receive TARL numbers until much later. The remainder of sites were recorded by professionals working for contract firms and the Highway Department. Other sites were documented by Archeological Stewards and the Tarrant County Archeological Society. Twenty sites are prehistoric, and the rest or historic. The majority of the prehistoric sites are described as lithic scatters or unknown prehistoric. Two sites are described on the site forms as containing diagnostic artifact that date to the Archaic period. Hearths and burned rock were observed at several sites. The historic sites are described as trash scatters, sheds, a log barn, a house foundation, farmsteads, cistern, and a park constructed by the Works Progress Administration.

The only investigation in the immediate area was the recording of site 41CA7 by R. E. Forrester sometime between 1937 and 1955. He described it as a lithic scatter with large sandstone hearths. Artifacts observed and collected included manos, dart points, and a corner-tang knife. He also mentioned a Paleo-Indian presence, but does not list any artifacts found at the site dating to this period. The description of the location of this site is difficult to interpret based on the sketchy site form. These early sites were plotted on highway maps and then to 15' topographic quadrangles. Later, efforts were made by TARL staff to plot them on the newer 7.5' topographic quadrangles.

Prehistoric Chronology

According to Alex D. Krieger (1946), the cultural patterns in this region tend to mirror those found to the east more than those identified farther west in the high plains of the Llano Estacado. Since no defined culture sequence has been established for the Lower Plains cultural unit, researchers are forced to borrow the sequences defined in nearby regions such as Central Texas or North Central Texas. Cultural chronologies for the North Central Texas area have been presented by Brown (1987), Krieger (1946), Prikryl (1987), and Skinner and Gallagher (1974). Chronologies for Central Texas have been prepared by Prewitt (1981, 1985) and Carlson et al. (1986). Although there is some difference in the terminology used by these researchers, they all agree that the last 10,000 to 12,000 years of prehistory and history for the area can be divided into four major temporal periods. These are Paleo-Indian (12,000 B.P. to 8000 B.P.); Archaic (8000 B.P. to 1250 B.P.); Late Prehistoric (1250 B.P. to 300 B.P.); and Historic (300 B.P. to Present).

RESULTS AND RECOMMENDATIONS

This survey did not discover any evidence of site 41CA7, and no new sites were recorded. The plotting of site 41CA7 on the maps at TARL is suspect, and it is possible that the site exists in a different area. If it is in the area as depicted on the TARL maps, it was probably destroyed as a result of construction of the trailer house location and the outbuildings. The soil in the project area is very shallow, and there is no possibility of a buried site.

It is recommended that the client be allowed to proceed with construction as planned. Should evidence of an archaeological site be encountered during the construction associated with this project, all work must stop until the THC can evaluate the situation in the area of the find. If a change is made to the route of the water line, the THC must be notified, as an additional archaeological survey may also be required. This survey was conducted in accordance with the Minimum Survey Standards as outlined by the THC.

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