THE LACASA AREA, RANGER DISTRICT, NORTH-CENTRAL TEXAS.

By Clarence S. Ross.

INTRODUCTION.

The area 6 miles square described in this report lies in the Ranger oil district, in the southeastern part of Stephens County, Tex., its south line corresponding approximately with the south border of the county and its east line lying 6 miles west of the east border of the county. (See fig. 50.) The village of Lacasa, after which it has been named, is near its northeast corner. Strawn, on the Texas & Pacific

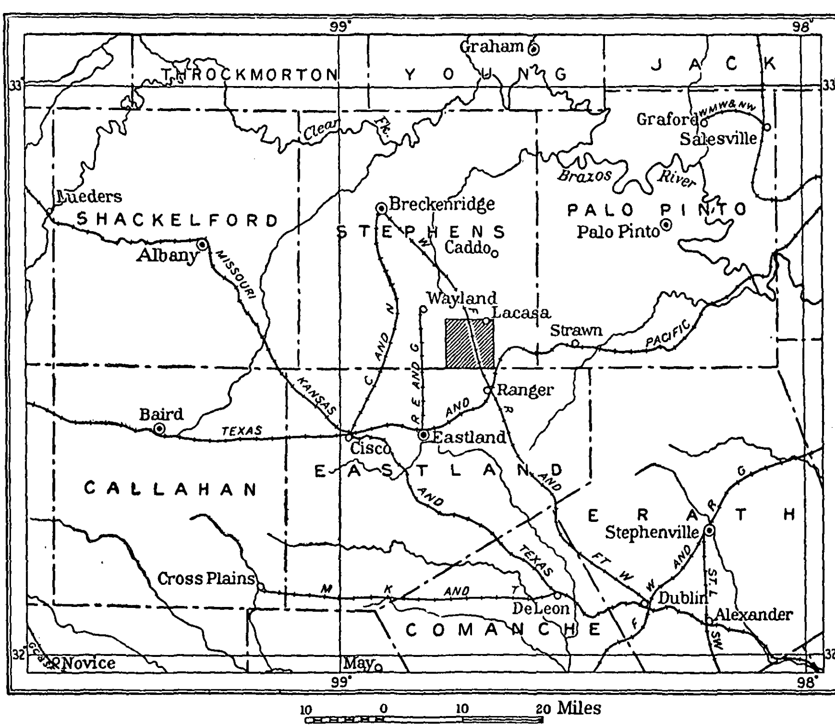


Figure 50.—Key map of north-central Texas showing location of Lacasa area.

Railroad, is about 10 miles east of its east border, and Ranger, on the same road, lies 4 miles south of the south border. Caddo Creek drains the eastern part of the area and flows in a general northeasterly direction, crossing the north line not far from the village of Lacasa.

Gonzales Creek and its tributaries drain the western part of the area and flow in a northwesterly direction, leaving the area near its northwest corner. The country is gently rolling, and the maximum relief is about 320 feet. The eastern and northern parts are the most rugged, and the southern part is characterized by high sand flats. About one-third of the area is covered by timber, in which scrub oak predominates.

The field work was done during April and May, 1919, by the writer, assisted by W. G. Argabrite. Locations and elevations for working out the geologic structure were determined by plane table and telescopic alidade.

For convenience in reference the Lacasa area has been arbitrarily divided into 144 blocks by 12 north-south coordinates and 12 east-west coordinates, as shown on Plate LIII. Beginning at the upper left-hand corner of the area the blocks are numbered consecutively toward the east and lettered consecutively toward the south. Thus K-5 designates a block 11 units south and 5 units east from the northwest corner of the area, or, as each block is half a mile square, 5½ miles south and 2½ miles east from the northwest corner.

STRATIGRAPHY.

GENERAL CHARACTER OF EXPOSED ROCKS.

The rocks exposed at the surface in the Lacasa area, having an aggregate thickness of about 600 feet, are illustrated graphically in figure 51. The oldest are Pennsylvanian; above these are Cretaceous rocks; and still younger beds are probably Tertiary. Local unconformities occur within the Pennsylvanian, and profound unconformities between the Pennsylvanian and Cretaceous and between the Cretaceous and the Tertiary(?).

Pennsylvanian rocks are exposed in the northern and eastern part of the area, those in the northern and northeastern parts belonging to the Cisco formation and those along the eastern border to the Canyon formation. The Canyon formation is characterized by massive limestones with intervening shales and sandstones. Shales predominate in the Cisco formation, but thin limestones are present and massive sandstones form considerable part of the formation.

After the deposition of the Pennsylvanian beds they were subjected to profound erosion, and after the lapse of a long period of geologic time the Trinity sand, of Lower Cretaceous age, was deposited unconformably upon them. The Trinity consists of conglomerates, sandstones, unconsolidated sands, siltlike material, clay, and some siliceous limestones, the whole very much cross-bedded. The pebbles of the conglomerate consist partly of such local material as limestone, sandstone, and shale, but most of them are foreign quartzite, vein quartz, or chert. Where the conglomerate has withstood the disintegrating action of weathering the spaces between the pebbles are filled with fine sand, which is firmly cemented with calcium carbonate. Over most of the area where the conglomerate is present, however, it has broken down into a mass of loose sand with pebbles and cobbles scattered through it, and the original nature and appearance of the indurated bed must be determined from small fragments that have withstood disintegration and from a few good exposures where the Cretaceous rocks are protected by a resistant layer of more recent material.

The conglomerate that caps the hills over much of the area and lies unconformably above the Cretaceous beds contains silicified wood, but no fossils have been found that permit a definite determination of its age.

It has been provisionally assigned to the Tertiary, but it is possibly of the same age as beds that have been called "Lafayette" in other parts of Texas.[1] It is made up of quartzite, quartz, and chert sand grains and pebbles reaching maximum dimensions of several inches. The only fragments of local rocks that have been recognized are rounded boulders of Trinity conglomerate. These materials are similar to those of the Trinity and no doubt have been derived in part or wholly from that formation, thus making it difficult to distinguish the two conglomerates. The Trinity has a cement of calcium carbonate, but the later conglomerate has a cement of chalcedony which gives it great resistance to weathering. The pebbles from the Trinity are waterworn but are not well rounded.

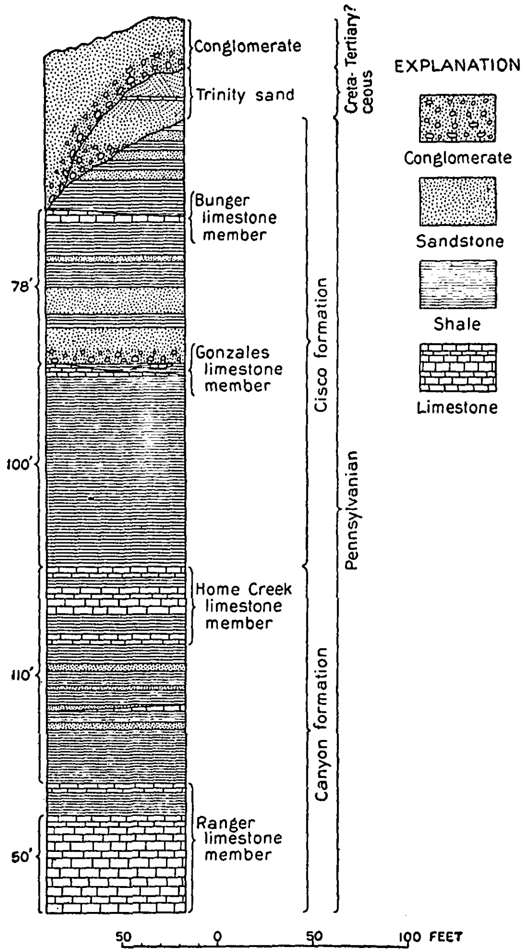


FIGURE 51.—Columnar section of rocks exposed in Lacasa area, Tex.

[1] Udden, J. A., Baker, C. L., and Böse, Emil, Texas Univ. Bull. 44, p. 91, 1916.

Those from the later conglomerate show a greater degree of attrition, and 90 per cent of the pebbles over an inch in diameter are dreikanters or show other evidences of wind erosion, thus presenting clear evidence that these beds were deposited under desert conditions.

KEY BEDS.

The beds that have been useful in mapping the geologic structure of the Lacasa area, named in the order of their deposition, are the main and upper benches of the Ranger limestone, the base and top of the Home Creek limestone, the Gonzales limestone, a fossil-bearing zone just above it, and the Bunger limestone. The sandstones have proved to be of little value in working out the geology, as they have very indefinite tops and can not be traced continuously.

Names.—So far as possible the names given to the beds have been those used by Frederick B. Plummer, geologist of the Roxana Petroleum Co. Mr. Plummer presented a preliminary paper[1a] on the stratigraphy of the Pennsylvanian formations of north-central Texas before the American Association of Petroleum Geologists at Dallas, Tex., in March, 1919, and has submitted a later unpublished paper to the United States Geological Survey for suggestions. In the later paper the names proposed by Drake[2] for the Colorado coal field have been used wherever suitable and where definite correlations have been possible. The bed which Mr. Plummer called "Eastland limestone" in the preliminary paper has now been correlated with the Home Creek limestone of the Colorado coal field. North-central Texas is the type area for all the other beds described in the present paper, and local names have been used by Mr. Plummer. The name Gonzales limestone is here given by the writer to the limestone exposed in the bed of Gonzales Creek.

Ranger limestone.—In the southeastern part of the Lacasa area occurs the Ranger limestone, the lowest bed appearing at the surface in the area. The main bench of the Ranger is a light-gray massive limestone 50 feet thick, forming a distinct and easily traceable scarp. The topmost ledge is a thin-bedded buff limestone 4 feet thick lying 16 feet above the main bench, from which it is separated by 12 feet of shale.

Home Creek limestone.—The Ranger limestone is overlain by about 70 feet of shale containing several thin-bedded calcareous sandstones and lenticular limestones. The only prominent lens of limestone forms a ledge lying 39 feet above the top of the Ranger. In the northern part of the Lacasa area it is 3 feet thick, but it thins toward the south and is entirely absent at the southern border. A series of alternating limestones and shales extending from 70 to 110 feet above

[1a] Plummer, F. B., Am. Assoc. Petroleum Geologists Bull., vol. 3, pp. 132–145, 1919.

[2] Drake, N. F., Report on the Colorado coal field: Texas Geol. Survey Fourth Ann. Rept., pp. 357–446, 1893.

the top of the Ranger limestone and locally known as the "Caddo lime" has been correlated with the Home Creek limestone by Plummer. Drake did not interpret the Home Creek as the top of his Canyon division in the Colorado coal region, but the top of the Home Creek appears to be the dividing line between the Cisco and the group of heavy limestones to which Cummins [3] gave the name Canyon in his report on the geology of the northern coal region, of which this area is a part. In the southeastern part of the Lacasa area the lowest limestone of the Home Creek member forms a continuous scarp about 76 feet above the top of the Ranger. Above this ledge are several benches of fine-grained light-gray limestone without fossil-bearing beds that can be used as horizon markers. No good section of the upper part of the Home Creek can be measured in this region, but by comparison of the structure contours the top is found to be about 110 feet above the top of the Ranger.

Gonzales limestone.—Above the Home Creek limestone lies a series of shales about 96 feet thick, which in the Lacasa area have been cut away by Caddo Creek to form a large valley. The east side of this valley is the alluvium-covered dip slope of the Home Creek limestone. The west side is a scarp capped by a limestone, which is also exposed along the headwaters of Gonzales Creek, and from these exposures it is herein named the Gonzales limestone member of the Cisco formation.

The Gonzales limestone occupies a position in the geologic section corresponding closely with that of a bed occurring in the vicinity of Jacksboro, to which Plummer has given the name Jacksboro limestone, and both beds are characterized by unusual numbers of *Campophyllum.* Plummer states that the Jacksboro thins toward the south and disappears 10 to 15 miles southwest of Jacksboro, and the writer finds that the Gonzales thins toward the north and disappears near the north border of the Lacasa area, leaving an interval of nearly 40 miles over which neither bed has been traced. For this reason a local name has been used for the limestone found in the Lacasa area.

Although the Gonzales limestone is thin or entirely missing in the northern part of the area it thickens rapidly toward the south and reaches a maximum thickness of about 4 feet. It is a coarse-grained dark-gray limestone containing large numbers of *Campophyllum,* and locally a thin shaly limestone carrying many specimens of *Myalina subquadrata* lies 8 feet above it. The interval between the top of the Home Creek limestone and the top of the Gonzales limestone can not be measured directly in this region but is about 100 feet. The top of the Gonzales is marked by a slight unconformity. In most of the area it is overlain by only a few inches of shale, above

[3] Cummins, W. F., Geology of northwest Texas: Texas Geol. Survey Second Ann. Rept., p. 374, 1890.

which lies a very massive bed, the base of which is an intraformational conglomerate containing ferruginous clay pebbles. This grades into a conglomerate composed of light-colored chert pebbles with quartz sand filling the interstices, and this conglomerate in turn grades into a normal sandstone whose top is about 20 feet above the top of the limestone. A second bench of sandstone slightly less massive than the first lies about 22 feet higher still. All the sandstones thicken from the northern to the southern part of the region. Shales predominate in the succeeding 31 feet, but a thin-bedded calcareous sandstone 16 feet above the second bench of sandstone and richly fossiliferous limestone lenses are common in the northern part of the area. Thin coal bands are locally present near the base of the shale.

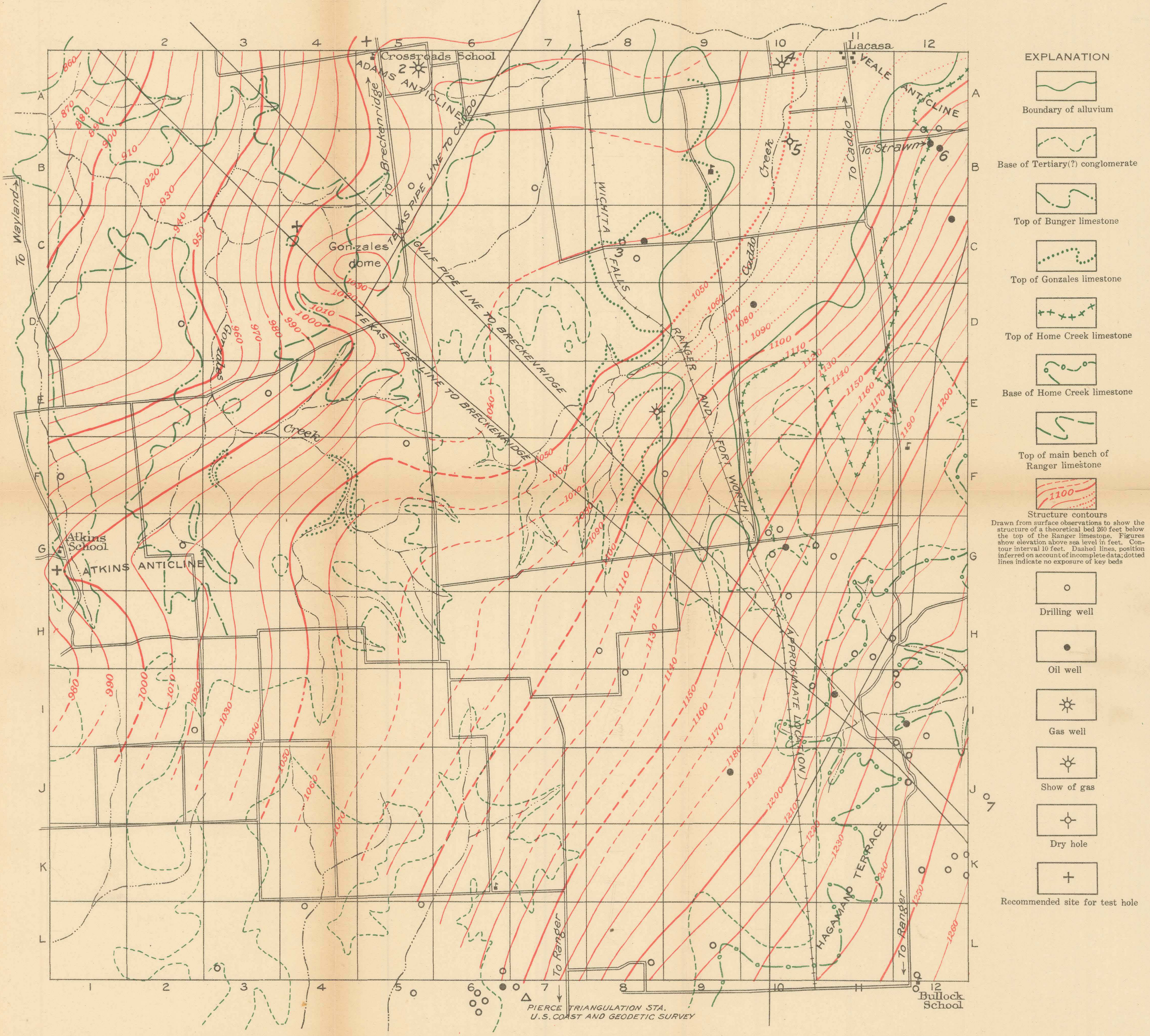
Bunger limestone.—About 78 feet above the top of the Gonzales limestone lies a very persistent limestone which has been called by Plummer the Bunger limestone. It is light gray, contains but few fossils, and forms a bench 2 to 5 feet thick. It makes a low but easily traced escarpment facing toward the southeast in the north-central part of the area and occurs along both sides of Gonzales Creek and its tributaries in the northwestern part. Above it is a series of alternating shales and sandstones containing chert conglomerates, and the highest bed in the Lacasa area is a sandstone lying about 60 feet above the Bunger.

STRUCTURAL FEATURES.

GENERAL STRUCTURE.

The geologic structure described below and portrayed on the contour map (Pl. LIII) is determined by observations on the beds of Pennsylvanian age. Although in some places the attitude of the overlying Cretaceous and Tertiary (?) rocks can be determined, it is believed that most of the deformation which affected the oil-bearing beds took place before Cretaceous time, and that observations on the Cretaceous and post-Cretaceous beds will not be of assistance in determining the location of deep-lying folds that may be of economic importance.

The general structure of the Lacasa area conforms to that of the Pennsylvanian beds of north-central Texas as a whole and shows a normal northwesterly dip averaging about 50 feet to the mile. The structure contours shown on Plate LIII are based for the most part upon observations on beds exposed at the surface; but in the south and central parts of the area rock outcrops are lacking, and well records have been used wherever available to determine the position of key beds. The structure contours are drawn on the surface of a theoretical bed lying approximately 260 feet below the top of the highest bed of the Ranger limestone. The position of the contours shown



MAP SHOWING GEOLOGIC STRUCTURE OF LACASA AREA, RANGER DISTRICT, TEXAS

Scale 1 : 31,250

0 ½ 1 2 Miles

1921

Surveyed in 1919 by C. S. Ross

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by broken lines is open to some doubt, owing to the lack of exposures of Pennsylvanian beds.

A study of the oil production in the Ranger field shows that the best yields of oil are obtained in areas where the surface beds show terraces, noses, or dipping anticlines. These surface features commonly mark much more sharply accentuated folds in the oil-yielding beds, and a surface fold that shows no closure may overlie a subsurface fold with a large closure.

AREAS OF FAVORABLE STRUCTURE.

In the Lacasa area there is a large pitching terrace in the southeastern part, a pitching anticline in the northwestern part, and a group of three noses or pitching anticlines in the central and northern parts. These features are described below.

HAGAMAN TERRACE.

In the Hagaman terrace, in the extreme southeast corner of the Lacasa area, the rocks dip to the northwest at only about half their normal rate. It extends eastward into the Wiles area and southward into the East Ranger area, and in the Lacasa area it covers all the territory south and east of a line running between squares G–12 and L–9. (See Pl. LIII.) It is marked by a pronounced moderation of the regional dip east of the line mentioned, with correspondingly steep dips west of the line. East of the "step" of the terrace, in the Wiles and East Ranger areas, the beds rise sharply southeastward. Such folding as has taken place has been parallel to the strike of the beds, and there is nothing in the Lacasa area to indicate cross folding in any other direction.

The terrace had been fairly well outlined by producing wells at the time the field work was done (May, 1918), and a great many test holes were being drilled. To judge from conditions known to prevail elsewhere in the Ranger district, the folding in the oil sands is more pronounced than that at the surface, and oil will probably be obtained outside the limits that would be set were surface structure alone considered. The work of comparing subsurface and surface folding has not yet been carried far enough to justify positive statements regarding the probable extent of producing area, but it appears probable that oil will be found farther to the west of the area of low dip than to the east of it, as in this particular part of the Ranger district preliminary work indicates that the deep-lying folds are likely to be offset to the west with respect to surface folds.

VEALE ANTICLINE.

In the northeastern part of the Lacasa area alluvium along Caddo Creek prevents complete mapping of the surface beds, but those that are traceable indicate a small pitching anticline beginning about a mile southeast of Lacasa and extending in a northwesterly direction into the Necessity area, to the north. This fold is here called the Veale anticline. Oil is being produced in commercial amounts from the Veale sand at a depth of about 3,800 feet in several wells in this area, and the reported initial daily production ranges from 80 to about 700 barrels. The probable extension of the field can not be foretold until the areas to the north and northeast have been mapped, but new wells can be expected north and west of those now developed. The Veale sand is within the Marble Falls limestone.

ADAMS ANTICLINE.

The Adams anticline, which runs in a northwesterly direction across blocks B-6, B-7, A-5, and A-6 (see Pl. LIII) into the Necessity area, to the north, forms one of the most promising undeveloped oil localities in the region. On the east the anticline is bordered by a shallow pitching syncline in blocks B-9, A-8, and A-9. On the southeast it merges into a large flat. On the south a shallow pitching syncline separates it from the Gonzales dome. The continuation of this anticline into the Necessity area has not yet been mapped (July, 1919).

The Adams gas well, in block A-5, on the crest of the anticline, reaches a gas sand at a depth of 2138 feet, but the deeper sands have not been tested in this locality. Wells drilled east and west of the Adams well along the north border of the area allow a study of the subsurface beds in this anticline. The Maxwell well No. 1 of the Texas & Pacific Co., 1 mile west of block B-1, was dry at a depth of 3,833 feet. The distance between this well and the Adams well is 3½ miles, and both the surface beds and the subsurface beds show a westerly dip between these points. Along the axis of the anticline, 1¾ miles southeast of the Adams well, is the Haney well, which was practically dry at a depth of 3,527 feet. Between these two points the surface beds show a slight northwesterly dip, and the subsurface beds dip in the same direction at about the same rate.

The Bradford well, in block A-10, 1½ miles northeast of the Haney well, had not quite reached the producing sands at a depth of 3,490 feet when the field examination was completed. This well and the Haney well are approximately on the strike of the surface beds, but the subsurface beds show a northeasterly dip that gradually increases with increasing depth. The top of the Smithwick shale, at a depth of about 3,050 feet, shows a reversal of dip of about 80 feet in 1½ miles. The Bobo well, about half a mile south of the Bradford well, in block B-10, is dry at a depth of 4,140 feet. It is slightly up the dip of the surface beds from the Bradford well, but at the top of the Smithwick shale there is a southerly dip of 90 feet in half a mile. The Veale well is 1 mile east of the Bobo well, and between these two points both the surface beds and the subsurface beds dip normally to the west.

These data indicate that the subsurface structure of the Adams anticline is marked by an eastern flank dipping sharply to the east, beyond which there is a sharp syncline occupying approximately the position of the syncline trending northwest from the Bobo well that has been mapped on the surface beds. Favorable locations for test wells lie along the crest of the anticline north and west of the Adams gas well.

GONZALES DOME.

Just east of Gonzales Creek in blocks C–4, C–5, D–4, and D–5 (see Pl. LIII) lies a low anticline with about 15 feet of closure that has been called the Gonzales dome. It is separated from the Adams anticline by a shallow westward-pitching syncline. On the south is a sharp westward-pitching syncline, and on the east lies a southern continuation of the flat that lies east of the Adams anticline.

The axis of this fold trends almost due west, diverging a few degrees from parallelism with that of the Adams anticline. The flexure is not nearly as extensive in an east-west direction as the Adams anticline, to the north, and the Atkins anticline, to the south, but some indication of it can nevertheless be detected 1½ miles west of the center of the dome.

No test holes have been drilled either on or near the axis of this fold, so its possibilities for oil production are not known. Furthermore, such test holes as were being drilled near by while the field work was in progress were not located advantageously with respect to the surface structure, and their failure would not condemn land nearer the axis of the flexure, although their success would make the territory that seems structurally more favorable appear particularly promising. Probably the most favorable location for a test well lies in the northwest corner of block C–4.

The outline of the Gonzales dome as shown on the structure map was controlled largely by elevations on the Bunger limestone, which furnished a reliable datum.

ATKINS ANTICLINE.

A pitching anticline extends from blocks F–5 and G–5 westward toward the Atkins School, in block G–1, after which it has been named, and crosses into the Gunsight area, to the west, just beyond that school. The plunging axis trends approximately parallel to those of the Adams anticline and the Gonzales dome. The dips to the northwest and southwest are pronounced, but to the east the anticline merges gradually into the regional monocline.

At the time the examination was made no wells had reached the beds which elsewhere in this region have proved to be oil bearing, and there is no hint as to the relation which the deep-seated structure may bear to that exhibited at the surface. However, a test drilling in block G–2, almost on the axis of the fold, and one in block F–1, on its northwest flank, should furnish a reliable indication of what may be expected in the way of production. The location of the well being drilled in block F–5 does not appear to be quite as favorable as the two mentioned above, but to judge purely from the surface indications this well should yield oil or gas. A comparison of the records of this well and those farther west will reveal the presence or absence of an easterly dip in the deep-lying beds. Should such a dip be present, the probability that there is a large anticline in the Smithwick and Marble Falls formations, underlying the strip covered by the Atkins, Gonzales, and Adams anticlines, should be considered. If this proves to be the case the synclinal areas that separate the surface folds can not be considered unfavorable for oil accumulation.

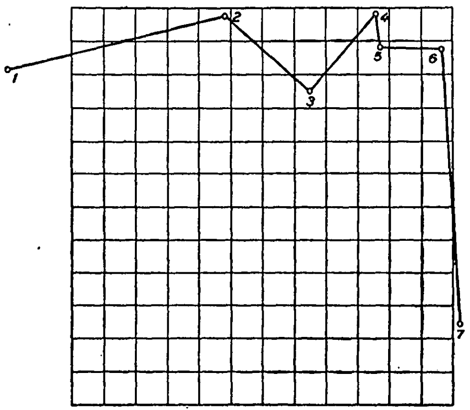

FIGURE 52.—Key map of Lacasa area, Tex., showing location of wells whose logs are given in Plate LIV.

The outline of the Atkins anticline was determined by elevations taken on outcrops of the Gonzales and Bunger limestones, which furnished reliable data upon which to base the structure.

AREAS OF UNFAVORABLE STRUCTURE.

Monoclines are not usually considered favorable localities for the accumulation of oil. In north-central Texas, however, the subsurface structure does not exactly correspond to that shown by the surface beds, and the conditions of the sand are known to have an important bearing on the accumulation of oil, and for these reasons the monoclinal areas that cover much of the Lacasa area can not be condemned as barren of oil.

The areas where marked synclines occur must be considered probably unfavorable for oil. The Bobo well, which was drilled in one such syncline, failed to yield either oil or gas, and the axis of this downwarp should be avoided in drilling. The syncline extending westward from the southeast flank of the Gonzales dome is also unfavorable. The syncline lying south of the Atkins School is not as sharp as the one last mentioned, but it is not nearly so favorable as the Atkins anticline, farther north.

WELLS.

The following table shows the names of some of the wells drilled or being drilled in the Lacasa area when it was examined, in May, 1919, the location of each well as indicated by the coordinates on Plate LIII, the character or status of the well, the name of the limestone bed nearest to the surface at the well, and the elevation of the well mouth. The logs of seven of these wells are given in Plate LIV, and the locations of the wells whose logs are given are shown in figure 52.

Wells in Lacasa area, north-central Texas.

Name.	Location.	Character or status.	Limestone bed nearest to surface.	Elevation (feet).
Adams No. 1, Texas & Pacific Co.	A-5	Gas well		1,584
Adams No. 2, Prairie Oil & Gas Co.	B-5	Being drilled	12 feet above Bunger	1,578
Adams, J. J., No. 1	G-11	do		1,471
Barnsley No. 1, Texas & Pacific Co.	A-12	do	4 feet above Caddo	1,480
Beck No. 1	I-8	do		1,537
Bobo No. 1, Texas & Pacific Co.	B-10	Dry hole		1,450
Bradford, E. T., No. 1, Texas & Pacific Co.	A-10	Being drilled		1,451
Brown, B. F., No. 1, Texas & Pacific Co.	E-8	do		1,581
Brown, B. F., No. 2, Prairie Oil & Gas Co.	F-9	Abandoned	2 feet above top of Gonzales.	1,500
Bullock School	L-12	Being drilled		1,557
Collins, Marshall, No. 1, Magnolia Co.	L-9	Oil well		
Dempsey, Ben, No. 1, Prairie Oil & Gas Co.	K-11	Being drilled	76 feet above Ranger	
Dempsey, Ben, No. 1, Prairie Oil & Gas Co.	J-9	Oil well		1,590
Denison lease, Brazos Co.	I-12	do	Ranger	1,484
Dupre No. 1, Philips Co.	H-8	Being drilled		1,544
Goforth, J. J., No. 1, Texas Co.	G-10	do	8 feet above top of Caddo	1,549
Goforth, W. H., No. 1, Prairie Oil & Gas Co.	I-2	do		1,622
Graves No. 1, Prairie Oil & Gas Co.	G-2	do	35±3 feet below top of Bunger.	1,533
Haney No. 1, Texas & Pacific Co.	C-8		8 feet below top of Gonzales.	1,502
Higgins No. 1, Prairie Oil & Gas Co.	F-5	Being drilled		1,582
Hill No. 1, Gladstone Co.	G-10	Oil well	10 feet above top of Caddo	1,548
Hill No. 2, Gladstone Co.	G-11	Being drilled	do	1,568
Hill No. 1, Plains Oil Co.	H-10	do		1,566
Ingram lease, Parker & Monitor	H-12	do	Ranger	1,486
Jennings No. 1, Sun Co.	C-12	Oil well	Caddo	1,512
Jennings No. 2, Texas & Pacific Co.	B-12	do	do	1,494
Jones, C. P., No. 1, Texas & Pacific Co.	L-6	Being drilled		1,580
Jones, L. G., No. 1, Texas & Pacific Co.	L-5	do		1,548
Lane No. 1, Humble Co.	G-10	do	6 feet above top of Caddo	1,554
Lane No. 2, Humble Co.	G-10	do	do	
McCleskey No. 1, Texas & Pacific Co.	C-8	Oil well	20 feet below top of Gonzales.	1,492
Pace, J. I., No. 1, Texas & Pacific Co.	B-7	Being drilled		1,519
Pearce, D. Z., No. 2, Prairie Oil & Gas Co.	E-3	do	73±3 feet below top of Bunger.	1,484
Simmons No. 1, Sinclair Co.	D-2	do	5 feet below top of Bunger	1,491
Suddarth No. 1, Texas & Pacific Co.	C-8	do	22 feet below top of Gonzales.	1,490
Terrill, C. E., No. 1, Magnolia Co.	L-8	do		1,609
Turner No. 1, Prairie Oil & Gas Co.	F-1	do	31 feet below top of Bunger.	1,485
Veale No. 1, Prairie Oil & Gas Co.	D-10	Oil well		1,589
Veale No. 1, Texas & Pacific Co.	B-12	do	Caddo	1,501
Wells, J. W., Sinclair Co.	H-11	Being drilled	76 feet above Ranger	1,564
Works, J. D., No. 1	L-3	do		

Other wells near this area that were used in determining the structure are referred to the nearest coordinates on Plate LIII in the following table:

Wells near Lacasa area used in determining structure.

Name.	Location.	Character or status.	Elevation (feet).
Barker, Charles, No. 1, North Ranger area	L-5	Being drilled	1,545
Veale No. 1, Sinclair Co., Wiles area	C-12	Oil well	1,501
Wiles area	I-12	Being drilled	1,598
Do	L-12	do	1,494

NOTE.—In Plate LIV the location of well No. 2 (Adams No. 1, Texas & Pacific Co.) should be given as 3 miles west of Lacasa, and that of well No. 3 (Haney No. 1) should be given as Stephens County, Tex., without more specific designation.

SELECTED WELL RECORDS IN THE LACASA AREA, RANGER DISTRICT, TEXAS

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