

UNIVERSITY OF TEXAS
BUREAU OF ECONOMIC GEOLOGY
AUSTIN, TEXAS

Mimeograph Circular No. 14
April 1929

The mimeograph circulars issued from the Bureau of Economic Geology contain the record of cores and cuttings from wells received and described in the Bureau. In some instances drillers logs and other data are given although it is usually impracticable to include logs of all wells, the logs given being selected as representative of the county or area to which the circular relates. The elevations given are for the most part those reported with the drillers log. In some instances the elevation given, as indicated, is that obtained from the location of the well on the topographic map. In all cases the elevation is to be regarded as approximate only.

E. H. Sellards

WELL RECORDS OF COKE COUNTY

Stroud 1, Robert Lee Oil Co.

Located on Wild Cat Creek, three miles west of Robert Lee.

Drillers Log.

The drillers log of this well is published in University of Texas Bulletin 1850, The Geology of Coke County, page 41, 1918.

Description of samples by J. A. Udden; submitted by W. P. Bentley, 1918.

	Depth in feet
Light reddish brown sandy clay. The sand is principally rounded grains of white quartz, some yellow and some red quartz. Calcite present, some gypsum noted and some hematite - - -	18-50
Red clay containing a large amount of red and white sand. Some gray limestone present. The sand is mostly smoothly angular. Gypsum, calcite, hematite, and some light gray chert, and some clear and some red quartz crystals present - - - - -	50-80
Light reddish colored marly clay with some light blue clay and some light yellow dolomite, gypsum noted. The finer sand is mostly white quartz, partly rounded. An arm fragment of cochinoid spine noted - - - - -	82-170
Red and blue clay, some red and white sand and some yellow dolomite. The larger sand grains are more rounded than the smaller. Some gypsum present - - - - -	170-350
Light bluish green clay containing some sand, coarse fragments of pyrites and small pieces of fine grained sandstone. The sand is composed partly of rounded and partly angular quartz grains. Some of the pyrite occurs in flat pieces showing its original form of veinlets - - - - -	360-450

Red clay containing a large amount of small gravel and fine grained sand. The clay exhibits a shaly appearance. The outer appearance of all the clay is a ferruginous red, but most of the particles show a light grayish blue color on a freshly broken surface. The color of the sand varies from a ferruginous red to pure white and clear. None of the sand grains are sharply angular. Pyrite and gypsum present - - - - -	450-517
Gray and salmon colored sandstone. Much white, reddish and brownish colored chert fragments present. Pyrite noted. The sandstone has a slightly calcareous matrix - - - - -	517-525
Like the preceding - - - - -	525-540
Red shale with some gray and pink dolomite and some fine grained gray and pink sandstone with a slightly calcareous matrix - - - - -	556-653
Red and bluish slightly calcareous gray shale with much gypsum. Some quartz sand grains present - - - - -	653-670
Gray dolomitic limestone with some gypsum and some anhydrite - - - - -	705-750
Red and blue shale with much gypsum and some dark gray dolomitic limestone - - - - -	795
Bluish gray and red shale with some gray and pink dolomite. Some gypsum and some quartz sand grains present. Some pyrite noted. The shale is slightly calcareous - - - - -	820
Gray dolomitic limestone with some red shale and some gypsum - - - - -	866-888
Red shale with some gray dolomite and some gypsum - - - - -	888-892
Red and light bluish green shale and some yellow dolomitic limestone - - - - -	897
Red and light bluish green shale - - - - -	897-916

	Depth in Feet
Like the preceding - - - - -	916-930
Red and greenish blue shale with some gypsum and some fine grained gray sandstone - - - - -	930-962
Like the preceding - - - - -	1002-1040
Dark gray anhydrite - - - - -	1040-1046
Red and greenish gray shale. Some gray dolomitio limestone and some anhydrite present - - - - -	1103-1120
Gray dolomitio limestone and some red shale. Some anhydrite present. In a thin section the limestone is seen to contain some crystals of dolomite - - - - -	1120-1200
Blue shale with some fragments of gray and red dolomite. Some gypsum present - - - - -	1200-1300
Red shale and light gray shale. Some gray dolomitio limestone, some gypsum, and much pyrite present. Light colored chert noted - - - - -	1340-1360
Like the preceding - - - - -	1360-1400
Light grayish blue shale. Much anhydrite present. A few fragments of black shale and some gray dolomitio limestone noted - - - - -	1400-1440
Light gray shale. Much anhydrite present. A few fragments of red shale noted - - - - -	1440-1480
Light gray shale, anhydrite abundant and dolomite present - - - - -	1462-1490
Light gray shale. Much anhydrite and some red shale present - - - - -	1480-1500
Like the preceding - - - - -	1500-1520
Like the preceding - - - - -	1520-1540
Light gray shale with some red shale. Anhydrite present - - - - -	1540-1600
Light gray and white anhydrite - - - - -	1557-1562
Light gray slightly calcareous shale and very dark gray shale. Some fragments of red shale and some anhydrite present - - - - -	1600-1620
Light greenish gray shale and some gray dolomitio limestone, anhydrite present - - - - -	1620-1650

Like the preceding.	Depth in Feet 1650-1680
Like the preceding.	1680-1700
Gray dolomitic limestone and gray shale. Some anhydrite and some gypsum present.	1740-1770
Like the preceding.	1770-1800
Gray limestone and gray shale. Some red shale and some anhydrite present. Heated in closed tube gives bituminous odor and ammonia fumes. An ostracod (?) noted.	1800-1830
Like the preceding.	1830-1860
Like the preceding. Much anhydrite present.	1860-1880
Gray limestone. Some anhydrite and some pyrite present. Heated in closed tube gives strong bituminous odor.	1880-1890
Dark gray limestone. Some red shale and some anhydrite present. Heated in closed tube gives strong fumes of bitumen. Ostracod noted.	1960-1980
Dark gray and black limestone. Some red shale and some anhydrite present. The black limestone is bituminous and will sustain a flame when heated to ignition. An abundance of ostracods and a Valvulina bulloids (?) noted.	1960-1980
Gray limestone with some fragments of black bituminous limestone and fragments of gray dolomite. Some anhydrite and some pyrite present. Echinoid spines, crinoid joints, a small brachiopod and ostracods noted.	1980-2000
Dark gray limestone and some anhydrite. Heated in closed tube gives bituminous odor and ammonia fumes. Echinoid spines, brachiopod spines, pelecypod fragments and ostracods noted.	2000-2020
Like the preceding. Brachiopod spines and ostracods noted.	2020-2040
Gray limestone. Some white chert and a little pyrite present. In one thin section it is seen to be partly crystalline. In another thin section it was seen to be entirely finely granular. In this thin section some streaks of calcitic material were noted. Crinoid stems, ostracods, and Valvulina bulloids noted.	2040-2060
Gray organic fragmental and foraminiferal limestone. In a thin section it is seen to be composed of organic fragments, mostly foraminifers, imbedded in a matrix of finely granular material. Fossils noted. Crinoid stems, ostracods, brachiopod spines, Nodosaria, Valvulina (?), and Trochammina (?).	2060-2080

Gray limestone. Some pyrite noted. Heated in closed tube gives faint bituminous odor. In a thin section it is seen to consist of finely granular material with some imbedded quartz particles. Ostracods noted.

2080-2100

Gray and black bituminous limestone. Some clustered crystals of calcite such as might be found in small cavities. In a thin section the limestone is seen to be mostly finely crystalline with some patches of more coarsely crystalline material. Brachiopod spines and ostracods noted. A fragment of pyrite with fibrous woody-like structure noted.

2100-2130

Gray organic fragmental and foraminiferal limestone. Heated in closed tube gives faint bituminous odor and ammonia fumes. Crinoid joints, brachiopod fragments and spines, ostracods, and Valvulina (?) noted.

2130-2160

Gray limestone. Some pyrite and some calcite present. Heated in closed tube gives faint bituminous odor and faint ammonia fumes. In a thin section it was seen to be finely granular. A calcite crystal noted in this section. A Dielasma (?), crinoid stems and ostracods noted.

2180-2197

Gray to dark gray limestone. Some anhydrite and some pyrite present. Heated in closed tube gives bituminous odor and ammonia fumes. In a thin section it is seen to be finely granular and finely crystalline. Brachiopod fragments and spines, crinoid stems and ostracods noted.

2197-2220

Like the preceding.

2220-2240

Gray limestone with a few fragments of brownish dolomitic limestone. Some anhydrite present. Heated in closed tube gives faint bituminous odor and faint ammonia fumes. Crinoid stems, echinoid spines, ostracods, brachiopod fragments and spines, and bryozoa noted.

2240-2260

Gray limestone with some dark gray to black organic fragmental bituminous limestone. Brachiopod spines and ostracods noted.

2260-2280

Gray limestone. Much anhydrite and some rounded quartz grains present.

2280-2310

Gray dolomitic limestone. Much anhydrite, some of which is bituminous present. Some pyrite and some minute quartz grains noted. Brachiopod spines present.

2310-2350

Gray to dark gray limestone with some brownish gray dolomitic limestone. Some anhydrite present. Heated in closed tube gives slight bituminous odor. A few brachiopod spines noted.

2350-2380

Gray limestone and gray dolomitic limestone. Some anhydrite present. Heated in closed tube emits bituminous odor and ammonia fumes. Ostracods noted. 2380-2410

Like the preceding. 2420-2440

Gray limestone. Some anhydrite present. Heated in closed tube gives bituminous odor and ammonia fumes. In thin section it is seen to be finely crystalline. Brachiopod spines and ostracods noted. 2410-2430

Gray limestone, dark gray shaly limestone and a little black shale. Some anhydrite and some pyrite present. A few rounded sand grains noted. Heated in closed tube gives bituminous odor and ammonia fumes. 2440-2460

Gray limestone. Some anhydrite present. In a thin section it is seen to be mostly finely crystalline. 2460-2480

Gray, porous, crystalline limestone. Some anhydrite present. In the thin section the limestone is seen to be finely crystalline. In another thin section many small calcite crystals were seen to be imbedded in a matrix of clear crystalline material. 2480-2500

Like the preceding. 2500-2530

Gray limestone, some anhydrite and some pyrite present. Some white chert noted. Heated in closed tube gives faint bituminous odor and ammonia fumes. 2530-2560

Gray to dark gray limestone. Much pyrite and much anhydrite present. Heated in closed tube gives bituminous odor and ammonia fumes. Ostracods noted. 2480-2420

Gray limestone. Some anhydrite and some chert present. Some fragments of limestone containing streaks of anhydrite noted. 2560-2590

Like the preceding. 2590-2615

Light gray and gray limestone and fragments of greenish shale. Some anhydrite present. Some rounded quartz grains noted. Closed tube test gives faint bituminous odor and ammonia fumes. Ostracods and brachiopod spines noted. 2600-2630

Like the preceding. 2615-2630

Gray to dark gray limestone. Some anhydrite and some chert present. Heated in closed tube gives bituminous odor and ammonia fumes. In a thin section the limestone was seen to be made up of small organic fragments. These fragments are mostly darker than the matrix that is mostly clear crystalline material. In another thin section the matrix was seen to be mostly coarsely granular. In this thin section a streak of calcitic material about one tenth mm.

wide transversed the section. At one end this streak was divided into two smaller streaks. In thin section such ~~form~~ forms as *Nodosaria*, *Valvulina*, and *Fusulina* (?) were noted. Ostracods, and brachiopod spines noted in the washed and screened sample.

2660-2680

Dark gray limestone. Some anhydrite and a few rounded quartz grains present. Heated in closed tube gives bituminous odor and ammonia fumes. In a thin section the limestone is seen to be made up of organic fragments and foraminifera embedded in a matrix composed of mostly clear crystalline material. Echinoid spines, crinoid stems, brachiopod spines and ostracods noted in the washed and screened sample. *Endothyra* and *Fusulina*(?) noted in thin section.

2680-2700

Gray limestone. Some anhydrite and some pyrite present. A few rounded quartz grains noted. In thin section the limestone is seen to be partly crystalline. It contains some small but irregular finely granular spots. The spots are not distinctly outlined but merge into one another. Some long narrow strips of calcite present in the thin section. *Endothyra* and *Valvulina* noted in thin section. Ostracods, crinoid stems and brachiopod spines noted in the washed and screened sample.

2700-2739

Gray and dark gray limestone. Some of the limestone is partly crystalline and some contains veinlets of bituminous material. Some calcite and some quartz grains present. In a thin section the limestone is seen to be made up of organic fragments, mostly foraminifera embedded in a copious matrix of crystalline material. Such forms as *Fusulina*, *Endothyra*, *Nodosaria*, *Trochammina*(?), *Valvulina*(?), and *Stacheia*(?).

2739-2784

Gray porous limestone. Some pyrite present. Heated in closed tube gives faint bituminous odor and slight ammonia fumes. *Fusulina* and brachiopod spines noted.

2784-2804

Gray porous limestone and some black shale. Some pyrite and some light colored chert present. Heated in closed tube gives faint bituminous odor and slight ammonia fumes. In a thin section the limestone is seen to be mostly finely granular. Brachiopod spines, crinoid ~~stems~~ stems and *Fusulina* noted.

2804-2830

Soft light gray limestone. In thin section the limestone is seen to be partially crystalline and partly finely granular. The finely granular material is segregated in minute irregular lumps. Some quartz sand is found in the matrix. No fossils noted.

2830-2860

Gray and dark gray limestone. Heated in closed tube gives bituminous odor. In thin section the limestone is seen to be partially crystalline. A lignolithic joint noted. A minute bryozoa and a few indeterminate organic bodies noted.

2860-2870

Gray limestone. Some rounded quartz grains, some crystalline quartz and some calcite present. A little pyrite noted. Brachiopod spines noted.

2870-2885

Like the preceding.

2885-2905

Light gray organic fragmental and porous limestone. Indistinct fragments of *Nodosaria*(?) noted. Crinoid joints present. Some fragments of a dark shaly limestone occur with the limestone.

2905-2925

Gray organic fragmental limestone. Some chert and some pyrite present. In thin section the limestone is seen to be partly crystalline. Crinoid stems and *Rhombopora*.

2925-2945

Gray limestone and a few fragments ~~xxxx~~ of dark shale. Much chert and some pyrite present. Crinoid joints, brachiopod spines and ostracods noted.

2950-2970

Dark gray limestone, granular in texture. Minute tubular structures like *Nosodinella*(?) noted; also a crinoid joint. Some chert present.

2970-2986

Gray limestone, much calcite and some pyrite present. The fragments are ground up too small by the drill to make a thin section. From the washed sample the limestone is seen to be mostly crystalline. *Fusulina* noted.

2986-3004

Continued on page 9.

Coke County

Depth in Ft.

Grayish-white limestone and some gray shale.
Some pyrite and some chert present. A few fragments
of anhydrite noted. In thin section the limestone
is seen to be partly crystalline. An echinoid
spine is noted 3004-3024

Greenish-blue marly shale and gray limestone.
Considerable pyrite present. Some rounded
quartz grains and some calcite noted. Crinoid
stems, echinoid spines, Fusulina, ostracods,
and fragments of brachiopod shells 3024-3044

Gray limestone and some bluish gray marly shale.
Much light colored chert and some pyrite present.
Heated in closed tube sample gives slight sulphur
odor and strong ammonia odor. Rhombopora and
brachiopod fragments notes 3044-3067

Gray limestone. Some pyrite and much calcite
present. Some chert noted. The limestone is
almost pulverized under the drill. Examination
of the washed sample shows that the limestone
is mostly crystalline. Some fragments of
crinoid stems and Fusulina noted 3067-3077

Bluish-gray shale and grayish-white limestone.
A few fragments of dolomite present. Much pyrite and
some chert present. A few rounded quartz grains
also noted. Crinoid stems, cythera, and bryozoa noted 3077-3108

Light gray limestone, almost straw white,
splitting into thin flakes under the drill. Crinoid
stems and a Rhombopora noted. Probably from the Cisco 3108-3123

Grayish-white limestone with some gray shale.
Some oolitic limestone and some gray dolomite noted.
Much pyrite, some chert and a few rounded quartz
grains present. The largest of the quartz grains
are about one-half mm. in diameter. In a thin
section the limestone is seen to be partly crystal-
line. Most of the crystalline material occurs as
rectangular particles of calcite (or dolomite). These
are about one-sixteenth mm. in size. A tubular bryozoa
and brachiopod spines noted 3123-3150

Gray organic fragmental limestone. In thin section
it is seen to be partly crystalline. Considerable pyrite
present, some of which is yellow. A little chert
present. Fusulina noted 3150-3177

Dark gray limestone and some gray dolomite. Much
pyrite and much chert present. Some of the limestone
is partly crystalline. Heated in closed tube gives
faint bituminous odor and slight ammonia fumes 3177-3180

Dark gray organic limestone. Much pyrite and
much chert present. Heated in closed tube gives
bituminous odor and slight ammonia fumes. Brachiopod
spines and Fusulina noted 3180-3190

Gray compact limestone. Much pyrite and some quartz sand grains present. In thin section the limestone is seen to contain many organic fragments imbedded in a matrix that is finely granular. Fragments of ostracod valves noted - - - - - 3190-3195

Gray to dark gray limestone with some greenish gray and some black shale. Much pyrite and some rounded quartz grains present. Much white chert noted. Heated in closed tube gives bituminous odor and ammonia fumes. Brachiopod spines, Fusulina(?) and Textularia noted. Driller's note: "Coal seam" - - - - - 3195-3223

Gray organic fragmental limestone. Some pyrite and some rounded quartz grains present. Heated in closed tube gives bituminous odor and ammonia fumes. Ostracods, bryozoa, brachiopod spines, and Modosaria (?) noted - - - - - 3223-3235

Gray to dark gray limestone. Some pyrite and a little anhydrite present. Much light colored chert noted. Heated in closed tube gives faint bituminous odor and slight ammonia fumes. Brachiopod spines and ostracods noted - - - - 3235-3255

John Saul 1, Transcontinental Oil Co.

Located 15 miles SW of Robert Lee, N. side of river.

Driller's Log

	Depth in Ft. to:		Depth in Ft. to:
soil	18		
red rock	40	blue shale	783
loose sand	50	shale and red rock- $\frac{1}{2}$	
sand and red rock	90	bailer water at 848'	
gravel and clay	110	shale and shells	848
clay and sand	148	soft white lime	880
red rock hard	188	blue shale	912
white sand rock, set 15'		white lime	944
of $\frac{1}{2}$ " oasg. at 186'	192	white sand-hole full of	
red lime	310	water at 944	972
gray lime	525	white shale	1016
white water sand-		red rock	1027
$\frac{1}{2}$ bailer water at 325	331	white shale	1037
red sandy lime	371	gray lime	1043
red lime	487	red rock-set 10" oasg.	
gray lime	650	at 1047'	1094
soft gray shale	683	hard lime	1144
hard gray lime--set 12-		blue slate	1169
$\frac{1}{2}$ " oasg. at 683'	693	red rock	1227
lime and shells	738	blue lime	1270
blue shale	783		

	Depth in Ft. to:		Depth in Ft. to:
white slate	1310	white slate	2150
hard lime	1315	lime	2185
gray slate	1360	hard white lime	2225
hard gray lime	1385	white lime	2387
white slate	1415	slate and shells	2625
pink rock	1429	sandy lime	2630
hard white lime	1449	slate and lime shells	2680
white clay	1485	slate and shells	2725
blue slate	1508	white lime shell	2775
red rock	1533	slate	2825
white lime	1574	gritty lime--3 bailers of	
white shale	1600	salty water at 2845'	2850
slate and shells	1625	lime and shells	2950
white lime	1734	lime	2977
blue lime	1823	lime	3012
soft blue slate	1882	lime and slate--hole full	
gray shale--set 8 $\frac{1}{2}$ " cas-		of water at 3111'	3135
ing at 1899'	1896	white sand-- 1 bailer of	
hard lime	2012	water at 3170'	3172
white slate	2025	hard black lime	3242
lime and slate	2115	hard black lime--set	
hard white lime	2142	6-5/8" casing	3286

Description of samples by Elizabeth B. Stiles; submitted by J. W. Beede, 1921.

Dark, bluish calcareous shale. Bryozoan including Rhombopora lepidodendroides are very abundant. A few fragments of broken sponge spicules and a few small tests of a flattened nodosaria like those figured in Fig. 11, Bull. 363, University of Texas. In closed tube strong sulphur fumes and fumes of ammonia noted - - - - -	2600
Gray and dark gray dolomitie limestone somewhat porous - - -	2735
Gray and dark gray dolomite containing considerable anhydrite apparently as filling in small cavities - - - - -	2775
Brown and gray finely crystalline dolomite - - - - -	2825
Gray and brownish gray dolomite some of which is quite porous - - - - -	2847
Dark gray and gray dolomitie limestone - - - - -	2876, 2904, 2931
Gray and brown somewhat dolomitie limestone - - - - -	2950, 2967
Gray organic limestone and somewhat porous granular dolomite - - - - -	3007

Organic fragmental limestone - - - - -	3018
Gray organic fragmental limestone - - - - -	3050
Gray organic fragmental limestone like that from 3050. Grinoid tissue and a Trochammina (?) as well as several other small Fusulina-like forms were seen in thin section - - - - -	3075
Gray granular limestone containing organic remains, some crystalline dolomite material, and some anhydrite - - - - -	3111
Gray granular limestone, dark finely crystalline dolomite and some black shale - - - - -	3147
Gray impure crystalline dolomite and limestone - - - - -	3160
Gray granular and crystalline limestone containing some chert - -	3185
Gray siliceous limestone and chert. No fossils seen - - - - -	3200
Gray organic fragmental limestone containing some chert - - - -	3210
Gray limestone. In washed material many small Fusulina-like forms and a coiled foraminifer possibly Endothyra were noted - - - -	3220
Light gray limestone very finely ground up - - - - -	3230
Gray limestone like that from 3230 - - - - -	3241
Gray siliceous limestone badly stained by iron rust - - - - -	3251
Dark gray granular chert with some limestone - - - - -	3314, 3320, 3341
Dark gray fossiliferous limestone which is somewhat cherty - - - -	3395
Dark limestone and shale and light gray limestone - - - - -	3612
Very light gray granular and finely crystalline limestone - - - -	3627
Light gray granular limestone ground too fine for sections. In washed material several small fusulina-like forms were seen. Some granular chert and a few slightly worn sand grains noted. In closed tube faint fumes of ammonia and of bitumen were given off - - -	3635

Schumacher No. 1 Wilson

Description of samples by F. C. Owens (?); submitted by J. H. Wilson.

	Depth in Ft.
Limestone gravel. In one thin section the limestone is seen to contain pockets of calcite. Many imperfect, indistinct organic fragments were noted. Those that can be recognized are a <i>Trochammina coronata</i> , fragments of crinoid spines. Evidently a gravel of the basal Comanchean. J.A.U.	14-18
Limestone gravel.	18-40
A bluish white marly material which contains pebbles of some white and yellowish white limestone and some quartz sand. A little pyrite was noted. In one thin section of a pebble, the limestone was seen to be crystalline and oolitic. In another section the limestone is seen to be partly crystalline. A few imperfect, indistinct organic fragments were noted, among which was an Echinoid spine.	40-45
Bluish white and light straw colored minutely crystalline limestone. Some white chert, some pyrite, and some quartz grains present. In thin section the chert is seen to contain many finely disseminated particles of dark material. In thin section the limestone is seen to be very fine grained and compactly textured.	45-70
Yellow and bluish white clay and silty material, some sandstone, and some white and straw colored gravels. Most of the quartz sand is seen to be angular. The grains are rounded.	70-75
Gravel and some sand. The quartz grains in the sand are from about one-eighth to one-sixteenth mm. in diameter. Some pyrite noted.	75-80
Calcareous sandstone. Most of the quartz grains are seen to be angular. The large grains are rounded. Some pyrite and some calcite present. Most of the sample consists of concretions in which the sand is cemented with clear calcite. These measure from one-sixteenth to one-third inch in diameter.	80-95
Pale green clay and calcareous sandstone. The sand grains are one-eighth mm. and larger in diameter and appear to be rounded. The grains less than one-eighth mm. in diameter are seen to be angular. Much of the sand is in small concretions. Some pyrite noted. A few grains of greenish sand noted.	95-105

	Depth in Ft.
Red clay, fragments of brownish red, and some straw colored limestone, and some sandstone. Most of the sand grains are about one-eighth mm. in diameter. Some pyrite noted.	125-150
A white and reddish white calcareous sandstone. The majority of the sand grains are angular and are about one-eighth to one-fourth mm. in diameter. Commanchean J.A.U.	150-170
Greenish gray and red clay, some sandstone, and some fragments of a white limestone. Pyrite present.	175-185
Red marl and pale green clay, some sandstone, and some white and reddish brown limestone. The sand grains are about one-eighth to one-fourth mm. in diameter. A little pyrite noted. In thin section the white limestone is seen to be oolitic and contains a Trochammina and many indistinct organic fragments. The reddish brown limestone is seen to contain pockets of crystalline calcite.	185-192
Straw colored limestone, brown limestone, and some reddish brown limestone. Some pyrite present. In thin section the straw colored limestone is seen to be finely granular and contains irregular shaped patches of crystalline material. In thin section the brown limestone is seen to contain organic fragments replaced by crystalline material in a granular matrix. The red limestone is seen to be finely and evenly granular. A few grains of quartz sand noted in the one-eighth mm. screen.	192-194
Red marl, fragments of red and brown calcareous pebbles, and some sandstone with a calcareous matrix. In thin section the brown limestone is seen to be very finely crystalline.	194-220
Reddish brown and greenish gray marl, some white dolomitic(?) limestone, and some calcareous sandstone. In thin section the limestone is seen to be fine-grained. Most of the sand grains are rounded and are about one-eighth mm. in diameter. A little pyrite.	220-270
Reddish and white translucent quartz, some white and straw colored limestone, and some greenish gray calcareous sandstone. Some pyrite noted. In thin section the white limestone is seen to contain large irregular patches of transparent calcite. The straw colored limestone is seen to be granular and to contain angular sand grains.	270-275
Greenish gray calcareous silt and sand, and some pyrite. The quartz sand is about one-eighth to one-fourth mm. in diameter.	275-285

Greenish gray calcareous silt and sandstone, some white gypsum and some pyrite. The sand grains are seen to be rounded. Most of the grains are about one-eighth mm. in diameter - - - - -	335-340
Greenish gray calcareous sandstone and silt. Some pyrite present. The sand grains are seen to be rounded. Most of the grains are about one-eighth mm. in diameter. - - - -	440-450
Light gray calcareous sandstone, some greenish gray slightly calcareous sandstone, and some gray slightly calcareous sandstone. Much pyrite present, also a little white mica. Most of the sand grains are seen to be angular and are from one-eighth to one-sixteenth mm. in diameter - - - - -	450-460
Light gray and greenish gray calcareous sandstone. Some pyrite noted, also a few grains of glauconite. The sand grains are seen to be rounded. Most of these grains are about one-eighth mm. in diameter - - - - -	470
Light gray calcareous sandstone, and some gray slightly calcareous sandstone. Some pyrite noted. Most of the sand grains are about one-eighth mm. in diameter. The grains are seen to be rounded. A few grains of glauconite were noted - - -	460-550
Light gray calcareous sandstone and some greenish gray marl. Some pyrite noted. A few greenish grains, probably glauconite, were noted. Most of the sand grains are about one-eighth to one-sixteenth mm. in diameter. These grains are seen to be angular - - -	550-600
Light gray calcareous sandstone, some greenish gray calcareous sandstone and a small amount of gypsum. Some pyrite noted. Most of the sand grains are about one-eighth mm. in diameter. The large grains are seen to be rounded. A few greenish grains, probably glauconite, were noted. - - - - -	600-610
Light gray calcareous sandstone, and some greenish gray marl. Some pyrite present. Most of the sand grains are seen to be angular. These grains are about one-eighth mm. in diameter. A few greenish grains, probably glauconite, were noted - - - - -	610-620
Greenish gray marl and some gray sandstone with a calcareous matrix, and a little red marl. Some pyrite present - - - - -	655-665