THE UNIVERSITY OF TEXAS
BUREAU OF ECONOMIC GEOLOGY
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Mimeograph Circular No. 4
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[Stencils re-cut, June 1953]

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 ZAVALA COUNTY

R.L. Anderson No. 2, G.L. Bloom et. al.

Locatsd in the Crawford survey on the right bank of the Nueces River at the west end of the S.A.U. & G. R.R. bridge. Drilled by star rig, 1920.

Driller's Log

	Depth in Feet To		Depth in feet To
Gravel	28	Lime	365
Dark shale	50	Light green	370
Asphalt sand	65	Lime	385
Light shale	150	Light shale	420
Dark Shale	155	Lime	450
Asphalt sand (some gas)	173	Light shale	510
Dark shale	193	Black lime	525
Lime	195	Dark shale	535
Light shale	200	Light shale	587
Green shale (probably chlorite)	226	Black lime	595
Lime	240	Light shale	650
Green shale with shining particles (pyrite)	255	Black basalt	654
Light shale	265	Light shale	684
Brown shale	330	Black basalt	687
Light shale	350		

H. L. Graves No. 1

Located near the southwest corner of section 101, I. & G. N. survey, on the left bank of Nuela (Gata) Creek, northwest corner of county. Drilled by cable tools. Elevation estimated from topographic map as 800 feet.

Driller's Log (incomplete)

	Depth in Feet To		Depth in feet To
Black soil	4	Blue clay	128
White clay	14	Blue sand rock	165
Yellow clay	40	Coal	167
Blue clay	88	Blue clay	199
Blue sand rock	96	Water sand, heavy flow	264

Driller's Log, continued

	Depth in Feet To
Blue clay	311
Blue sand rock	318
Blue clay	329
Blue sand rock	335
Blue clay	400
Blue sand rock	412
Blue clay	431
Blue sand rock	440
Blue sand and clay	480
Blue sand rock	498
Blue, soft sand (15' of 12" casing set at 443'3")	502
Blue clay	540
Blue sand rock.	548
Water sand, salt water	634
Blue clay	656
Blue sand rock. Water flow 30 gals. per minute. Rose 20 feet above ground level	664
Blue clay	725
Blue sand rock	742
Blue clay	900
Blue limestone	945
Asphalt	960
Blue shale	995
Gray limestone, small show of oil, rock very hard	1005
Black limestone	1040
White limestone	1075
Blue shale	1080
Gray limestone	1095
White limestone	1165
White soft lime	1260
Soft gray shell	1275
Blue clay	1390
White hard rock	1392
Gray hard rock	1415
Total depth 3540 feet	

Description of samples by E. B. Stiles and D. D. Christner; submitted by G. Jeffreys, 1921.

Depth in feet

Dark brown to black bituminous limestone of very fine texture with some hard shale. In thin section the rock is seen to contain many minute crystals which are, in many fragments, disseminated through the granular rock while in other fragments the crystals are aggregated in such numbers as to form crystalline areas. Only one fragment was seen in section which contained fossils. This is a fragment of laminated dark shale and contains several Globigerina in cross section. This single fragment resembles Eagle Ford material (may be caving). The sample shows nothing determinative of age. In closed tube strong fumes of bitumen and of ammonia were given off - - - - - - - - - - - - - 3440-3460

Dark brown limestone, somewhat bituminous, and much dark-colored to white flint. In thin section the dark limestone is seen to contain many minute diamond-shaped crystals, which form crystalline areas. Some of the limestone is dolomitic and granular. The small diamond-shaped crystals are insoluble in cold acid but are entirely dissolved when heated; in a closed tube a little oil is deposited on the sides of the tube. The sample has the aspect of the Comanche limestone- - - - 3540

Ike T. Pryor No. 1, Century Oil and Gas Company

Located on Antonio Aguirre survey, about 9 miles east of La Pryor. Elevation given as 735 feet. Drilled by rotary.

Driller's Log

	Depth in feet To		Depth in Feet To
Shale and sandy shale, much gypsum; coal 205 feet	300	Shale, glauconitic sand	2037
Sandy shale and shale	560	Gas	2037
Carrizo sand	730	Limestones and gumbo	2100
Carbonaceous	1100	Gas and oil	2100
Oil sand	1105	Chocolate shales	2140
Fine sands and dark shales	1398	Pulliam sand	2160
Main coal (?)	1410	Limestone and shale; gray	2338
Mainly dark	1590	White sandy limes and dark shales; Show of oil and gas at 2370 feet	2380
Oil shale	1590	Dark shales and sandstones; show oil and gas at 2519 feet	2517
Shales and fossil limes, type Midway at 1640 feet	1749	Shales and thin limes. Oil and gas show 2575-2598 feet. Calcareous and siliceous gray-blue soft opalescent type of slaty shales with veinlets of calcite	2598
Limestones and carbonaceous shales, Pulliam	1950	Hard white lime	2681
Oil and gas	1950	Gray shale	2705
Lime and shale	2000		
Oil and gas	2000		

Description of samples by E. B. Stiles, H. T. Kniker, and W. M. Winton; submitted by Lee S. Miller, Uvalde, 1921.

Depth in Feet

Gray marl. After washing, a small residue consisting of fine sand some of which is in small calcareous lumps, pyrite in small spherical lump thickly studded with very small hemispherical knobs, and a few foraminifera. An occasional small grain of glauconite was seen. Among the fossils noted were small fragments of a thick shell, a minute ostracod, several minute Textularia, and several small Anomalina. This material is probably from well up in the Cretaceous series - 2172

Like sample from 2172 feet. Anomalina abundant - - - - - - - - - - - - 2190

Gray marly clay which contains some fine sand mostly less than one-fourth mm in size, some of which is cemented by calcareous material. Some pyrite and glauconite and a few fragments of lignite are present. Fossils noted: fragments of thick oyster-like shells, Cristellaria/cf. limbata, smooth ostracods, Anomalina (at least two species), minute Textularias, Cristellaria (minute) ?, a few Globigerina, Inoceramus prisms, a Nodosaria, a Cythere specimen, and a base of an echoniod spine. When sample was heated in closed tube, faint bituminious fumes and ammonia fumes were given off- 2329-2339

Gray marly clay. In washed material were noted large fragments of fine grained calcareous sandstone containing some pyrite and a few pyrite concretions of which several are cylindrical in shape. Fossils noted: fragments of oyster-like shells, fragments of fish bones and scales, several large Cristellarias (one-half mm in size), Cristellaris sp. (minute), and a few specimens of Textularia, Globigerina, and smooth ostracods. When sample was heated in closed tube, bituminous fumes and ammonia fumes were

Depth in feet

given off. Upper Cretaceous - 2346

Gray noncalcareous shale and some noncalcareous impure sandstone. The shale when heated becomes very hard and turns brownish in color. In thin section it is seen to be fine grained in texture and to contain some small sand grains. It is finely laminated, and two fragments show lignitic imprints of small leaves. Otherwise no fossils were noted. When sample was heated in closed tube, faint bituminous fumes were given off. Impossible to determine horizon from this sample - - - - - - - - 2390

Bluish-gray marly silt containing some sand. The coarsest grains are etched and also polished. In washed material several ornamented ostracods, an occasional prism of an Inoceramus shell, Globigerina, Textularia, Cristellaria of. limbata, and Cristellaria of. mamilligera, Anomalina, and Pullvinulina (?) and a single segment of a ribbed Nodosaria were identified. Pyrite and dark green glauconite are quite plentiful in the sample. The sand is mostly angular to slightly worn and is principally between one-fourth and one-eighth mm in diameter. Believed to be rather high in the Cretaceous section, possibly in the Taylor - - - - - - - - - - - - - - - 2540-2570

Dark gray marly and glauconitic shale, sandy. Glauconite abundant ranging in size from 1/8 to 1 mm. A few minute and partly oxidized fragments of pyrite present. Fragments of pink quartz present. Fossils noted: fragments of shell of Inoceramus; fragment of a shark tooth; Bythocypris; fragments of small pelecypod shells. No foraminifera noted. When heated in closed tube gave off bituminous fumes with some ammonia - 2670

Ike T. Pryor No. 1, La Pryor Oil and Gas Company

Located on Antonio Aquirre survey, 10 miles northeast of La Pryor (northeast corner of Pryor ranch). Elevation reported 810 feet.

Casing record: 12" to 190', 8" to 1010'.

Driller's Log

	Depth in Feet To		Depth in Feet To
Shale and argillaceous sand	53	Compact impure lime	1183
Carrizo sand, water	197	Limy shale, caves	1200
Carbonaceous shales	305	Shales. Oil about 19°, partly dark brown or black, pumped about 3 bbls, per day	1206
Lignite	312	Limestone, some oil; harder	1210
Carbonaceous shale	374	Limestone gritty almost limy and sandstone; oil scattered through sand	1233
Hard sandstone	400	Gray-black dark slaty shales, less oil	1240
Carbonaceous shales	590	Mixed shale and lime caves	1260
Coal mixed with shales	597	Shales, lime, and mud rock: no oil	1280
Shale, water in shale	605	Shot at 1200 to 1233 feet	
Fine sandstone, water	630		
Gray green sandy shale	845		
Alternately shale and lime	1141		
Asphalt and very hard lime rock	1170		

Description of samples by J. A. Udden and P. T. Seashore; submitted by G. Jeffreys, 1921

Depth in feet

Dry gray slightly calcareous shale containing some fine sand. A few scattered grains of glauconite. Fossils: Anomalina, ammonoids, Nodosaria, Globigerina and other foraminifera. An ostracod and several fragments of crinoid stem noted - 827

Very dark gray slightly calcareous shale containing some sand. Some of this is of a kind called "rice sand". Glauconite present in great abundance. The glauconite grains show a tubercular exterior. Some pyrite in the form of crystals and oolitic spherules noted. Fossils: several very large Anomalina with stout high ridges, Globigerina, Nodosaria, Textularia and other foraminifera. Several ostracods and fragments of crinoid stems noted. Formation doubtful - 850

Ike T. Pryor No. 1, National Oil and Refining Company

Located in the northwest corner of the Hugh McCrary survey on the left bank of the Nueces River, about 9 (5) miles northeast of La Pryor.

Description of samples by J.A. Udden and H.T. Kniker; submitted by G. Jeffreys, 1919.

Depth in feet

Soft brecciated material cemented by much lime. No fossils were noted in washed material - 843

Piece of clay-ironstone 3 inches in diameter adhering to the outside of which is a crushed breccia of marly material, cemented with much calcite. This crushed material resembles that found on the outside of igneous intrusions in Onion Creek, near Pilot Knob. The clay-ironstone is cut by veins of calcite. The veins cut through the clay-ironstone and straight out into the adhering material- 840

Grayish-green calcareous sandstone. In thin section angular and rounded quartz sand grains were noted. Crystals and fragments of limestone and many rounded, mostly oblong, glauconite grains were also seen. A few fragments consist of very fine-grained green indurated shale which contains fine calcite veins and a few sand grains - - - - - - - - - - - - - -855-899

A soft greenish-gray breccia, breaking rectangularly and cut by many joints and fissures. The greater part of the rock is structureless gray mass in which are imbedded irregular crystals of calcite and small nodular pieces of quartz. Some calcite grains were of bright red color. A single crystal of a dark green mineral like hornblende was noted. The material is of the kind seen in contacts between igneous intrusions and sedimentary rocks - 992

Dark gray very slightly calcareous and very fine-grained shale containing small black specks from imbedded vegetation, and a few grains of very fine sand. A one-half inch fragment shows a slightly curved slickensided surface -1002-1012

Depth in feet

Fine slightly rounded and etched sand, dark gray very fine noncalcareous shale, fragments of slightly calcareous sandstone, some fragments of impure coal, and a few fragments of calcite and pyrite. Glauconite noted - - - - - - 1145

An indurated greenish, very cark arkose consisting of a mixture of fine mud with sand, among the grains of which are some calcareous fragments - 1305

A very dark and greenish conglomerate, cemented with calcite. Some pebbles are of limestone, many are of green chlorite. The largest seen was about an inch in diameter. Many are rounded. Crystals of calcite and of quartz noted - 1495

An indurated mixture of fine gravel, sand and mud; some pebbles are calcareous, others not. Probably a crushed breccia. The fragment examined showed two thin calcite veins - 1525

Like sample from 1525 feet. Several quartz veins are present - - - - - - 1630

A rock consisting of lumps of limestone which have been crushed and kneaded together with smaller pebbles and mud. Considerable secondary calcite is present. The fragments examined are cut by some calcite, quartz, and pyrite veins - 1649

Samples from 1305 to 1649 feet consist of material such as is usually found along the contact of igneous masses with soft shaly rock.

Ike T. Pryor No. 2, National Oil and Refining Company

Located in southwest corner of Hugh McCrary survey, on left bank of Nueces River, about 4 miles south of Uvalde-Zavala County line, 7200 feet east-southeast of Ike T. Pryor No. 1.

Casing record: 20" to 120'; 15" to 575'; 12" to 1106'; 10" to 1286'; 8" to 2050'.

Driller's Log

	Depth in feet to		Depth in feet to
Alluvial	9	Gray and brown shale	670
Brown-grennish-pink sandy shale	25	Gray shale	750
Brown-white-pink sandy shale	50	Gray shale(small white fossils)	780
Green and pink sandy shale	80	Gray and brown shale	805
Lignite	88	Gray calcareous sandstone	815
Sandy shale	100	Sandy gray fossiliferous shale	860
White sand, water	120	Hard calcareous sandy shale	870
Blue shale	210	Gray shale	900
Brown chocolate shale	240	Finegrained water sand	902
Brown sandy shale	255	Hard calcareous sandstone and sandy marl	912
Brown and gray carbonaceous shale	470	Gray shale and marl	980
Coal	485	Lignite	983
Gray shale	495	Shale	988
Gray water sand	510	Oil and gas in sandy shale. Oil and gas	992
Gray shale	560		
Gray laminated sandy shale	610		

Driller's Log, continued

	Depth in feet to
Black-gray sandy shale	1050
White sand	1055
Shale	1110
Oil show in sandy shale. Oil and Gas	1115
Asphalt in shale	1126
Gas and oil show. Oil and gas	1131
Lime	1140
Gas and lime sand. Gas	1142
Blue shaly lime	1155
Gas below lime and sand. Gas	1157
Limy shale	1187
Gas	1190
Soft white and green shale, salt water	1216
Chlorite; igneous and pale green, wet	1230
Dray gray, sandy lime and brown shale	1240
Chlorite, black-green	1266
Pure green shaly lime, calcite veins	1288
Oily gas sand	1296
Mixed chlorite and white hard metamorphosed lime, some green sand	1326
Chlorite, dark speckled-white variety	1420
White chips	1730
Calcite veins in chlorite	1770
Chlorite	1875
Breccia, lime present in chlorite matrix	1885
Gray sub-crystalline lime	1920
Hard black lime and shale	1946
Hard white lime	1956
Gray calcite and white lime	2035
Dull drab gray and black flakey lime	2045
Soft calcite white marl	2142
Gray marl	2270
Black limy shale	2280
Blackish partings in Austin	2380
Black siliceous shale	2400
Brown siliceous lime and shale also siliceous	2444
Hard black and gray siliceous, calcareous shale	2475
Black siliceous shale, some gray, very bituminous, and strong oil odor throughout	2622
White lime--water	2735
Blue-gray shale	2875
Limestone	2885

Interpretation of log -

	Feet
Wilcox	0-120
Midway ?	120-510
Midway and undifferentiated Upper Cretaceous	510-1885
Austin and Eagle Ford	1885-2622
Buda	2622-2735
Del Rio	2735-2875
Georgetown	2875-2885

Ike T. Pryor No. 1, Old Dominion Oil Company

Located 2 miles north and 1 mile east of La Pryor.

All of the samples are cuttings. Description by E.H. Sellards and O.M. Richey, 1925; submitted by Mr. F.F. Kuhlman, San Antonio.

	Depth in feet
Sand, fragments of dark and light gray limestone, and gypsum. Subangular to rounded grains of clear quartz noted in the washed material. Similar samples at 325, 330, and 335 feet - - - - - - - - - - - - - - - -	320
Largely gypsum including fragments of dark gray limestone and some quartz. In the washed material of this and succeeding samples down to 470 feet, the clear quartz grains were seen to be subangular to rounded - - - -	345

Depth in feet

Gypsum, light and dark gray limestone, and sand. Some pyrite noted in the washed material - 355

Gray limestone, gypsum, and sand. Both clear quartz and rose quartz were noted in the washed material. Some pyrite was present in the finest washed material - 365

Dark gray and light gray limestone, clear quartz, and gypsum - - - - - - - 370

Dark gray and medium gray limestone, clear quartz, and some gypsum - 375

Dark and light gray limestone, clear quartz, and gypsum. A very little pyrite was noted in the finest material - - - - - - - - - - - - - - - - - 380

Gray sandstone with calcareous cement, black quartz pebbles, and some light gray limestone. There was present a large number of almost perfect crystals of rose quartz combination forms of a hemihedral form of a prism of the first order, together with a plus or minus rhombohedran, the former being predominant. Some gypsum noted - 385

A very small amount of pyrite present in the finest material. With little doubt the quartz crystals formed in place in the sand. They probably did not form in a cavity or vein as both ends are complete - - - - - - - - 385

Fine sand, fragments of light gray and dark gray limestone, black quartz pebbles, a little gypsum, and noncalcareous gray shale. A very little rose quartz present, in which the crystals are not perfect as in the preceding sample. A little pyrite present in finest material - - - - - - - 390

Fine sand, fragments of light and dark gray limestone, and some black quartz pebbles. Four almost perfect crystals of rose quartz, like form previously described, noted. A little pyrite present in finest material - 395

Fine sand, light gray limestone, and black quartz pebbles. Several rose quartz crystals present - 400

Fine sand and fragments of light gray limestone. Some pyrite noted in finest material - 405

Like sample from 405 feet - 410

Light and dark gray limestone, clear quartz. Some pyrite present - - - - 415

Light and dark gray limestone and clear quartz. Gypsum and pyrite were noted in the washedmaterial. A little rose quartz present - - - - - - - - -443

Like sample from 443 feet - 445

A piece of slightly calcareous, reddish-brown shale. Some gypsum present as selenite - 450

Like sample from 443 feet - 452

Gray limestone, gypsum, clear quartz, and some rose quartz - - - - - - - - 455

Light gray limestone and gypsum. Some clear quartz noted in the washed material - 460

Depth in feet

Light gray limestone, gypsum, and some sand - - - - - - - - - - - - - - - - 470

Reddish brown, noncalcareous shale. Fragments of gray limestone, gypsum, and sand grains were noted in the washed material - - - - - - - - - - 480

Gypsum and some limestone. Some clear quartz noted in the washed material - 485

Light gray limestone; some perfect crystals of rose quartz noted. Gypsum and fragments of sandstone were seen to be present in the washed material - 515

Gray limestone. Gypsum and clear quartz were noted in the washed material - 535

Like sample from 535 feet - 540

Medium gray limestone. Some clear quartz noted in the washed material - 545

Very fine cuttings of medium gray limestone. A little clear quartz and some pyrite were noted in the washed material. Similar samples at 565 and 570 feet - 555

Very fine cuttings of gray limestone - 575

A piece of medium dark gray, calcareous shale. A few small fragments of limestone and a very little pyrite were noted in the washed material - - - 580

A piece of gray calcareous shale. Fragments of gray limestone, gypsum, and clear quartz, and a little pyrite were noted in the washed material - - - 585

Like sample from 585 feet - 590

Pieces of reddish-brown noncalcareous shale with a very little light greenish-gray noncalcareous shale. Gypsum, some clear quartz, and pyrite were noted in the washed material - 595

Reddish-brown noncalcareous shale in which a few specks of light green noncalcareous shale and a little gypsum were seen. Clear quartz was noted in the washed material - 600

A piece of gypsum covered with a thin coat of reddish-brown noncalcareous shale. Some clear quartz noted in the washed material - - - - - - - - - 605

Gypsum and reddish-brown noncalcareous shale. Clear quartz noted in the washed material - 610

Gray limestone, gypsum, and some clear quartz - - - - - - - - - - - - - - - 615

A piece of reddish-brown, noncalcareous shale. Gypsum and clear quartz were noted in the washed material. Some of the quartz crystals were seen to be almost perfect - 620

Depth in feet

Gypsum and reddish-brown noncalcareous shale. Clear quartz was noted in the washed material. Similar samples at 630, 635, 640, 645, 650, 655, 660, 665, 670, 675, 680, 685, 690, 695, 700, 705, 710, 715, 720, 725, 730, 735, 741, 746, 750 feet - 625

Pieces of medium gray noncalcareous shale showing a few pieces of gypsum. Fragments of gray limestone and angular grains of clear quartz were noted in the washed material - 755

Cuttings of gypsum. Clear quartz was noted in the washed material - - - 760

Salt at 768, 775, 780, 785, 792, 797, 804, 810, 815 and 820 feet.

Gypsum - 827

Samples wanting from 827 to 1837 feet.

Dark gray and some greenish-gray, calcareous shale - - - - - - - - - - -1837

Dark gray calcareous shale. Some clear quartz present - - - - - - - - -1837-1839

Like sample from 1845 to 1846 feet -1846-1847

Like sample from 1845 to 1846 feet -1847-1848

Gray limestone. Some sand noted in washed material - - - - - - - - - - 1849-1850

Very fine cuttings of limestone and sandstone. One large Cristellaria noted in the washed material- 1850-1853

Pieces of medium gray limestone - 1860-1916

Cuttings of medium light gray limestone - - - - - - - - - - - - - - - - - 2885-2890

Cuttings of light gray limestone. A few subangular grains of clear quartz were noted in the washed material - - - - - - - - - - - - - - - - - 2960-2970

Light gray limestone. A few subangular grains of clear quartz were noted in the washed material - 2860-2872

Cuttings of light gray limestone and a few fragments of dark gray, calcareous shale. A few clear quartz grains noted in the washed material - 2980-2986

Cuttings of light gray limestone and a few fragments of dark gray calcareous shale - 3080

Dark gray calcareous shale. Globigerina and several large Textularia noted in the finer washed material. Oil colledts at side of tube on heating. Eagle Ford? - 3200-3215

Cuttings of dark gray calcareous shale. Some pyrite and clear quartz noted in the washed material. Globigerina and Textularia present - - - - 3215-3227

Two small pieces of grayish-white limestone - - - - - - - - - - - - - - - 3227-3239

	Depth in feet
Dark gray limestone. Pyrite and clear quartz were noted in the washed material. A large Globigerina and echinoid spines present. Eagle Ford?	3273-3285
Dark gray limestone. Eagle Ford?	3335-3350
Dark gray limestone. Some clear quartz present	3409-3418
Medium and dark gray limestone and a little white limestone. Pyrite and clear quartz present in the washed material. Globigerina present	3419-3427
Dark gray and white limestone. Buda?	3430-3435
Medium gray calcareous shale. Del Rio	3580-3585
Dark gray calcareous shale. Pyrite noted in the washed material. Del Rio	3590
Dark gray calcareous shale. Pyrite and a little clear quartz noted in the washed material. Cristellaria, ostracods, and echinoid spines present. Del Rio	3590
Dark gray calcareous shale. Del Rio	3600
Dark gray calcareous shale. Pyrite and clear quartz were seen to be present in the washed material. Cristallaria and ostracods present	3605
Dark gray calcareous shale. A very little clear quartz noted	3610
Like sample from 3610 feet. Some pyrite present	3617
Dark gray calcareous shale. Some pyrite noted. Del Rio	3625

An unusual condition in this well is the presence of salt and a large amount of gypsum. As indicated from the samples, salt is shown from the depth 768 to 820 feet, or through an interval of 52 feet. Above this salt from 320 to 768 feet, it is largely gypsum. The salt is apparently within the Tertiary. No other wells have thus far reported confirming this occurrence of salt.