THE UNIVERSITY OF TEXAS
BUREAU OF ECONOMIC GEOLOGY
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Mimeograph Circular No. 5
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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 driller's 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 driller's 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 KARNES COUNTY

Earl Butler 1, E. B. Reynolds Oil Company

Located on the Carlos Martinos Survey, 4½ miles west of Runge.

Description of samples by Dabney E. Petty; submitted by E. B. Reynolds, 1924.

Geologic location about top of Oakville. Except as otherwise indicated the samples are cuttings. Rotary drill.

	Depth in feet
Fairly pure cream-colored, bentonitic clay, which slakes rapidly in water, and is mixed with considerable sand and gravel. The washed material is made up of calcareous concretionary fragments; little pieces of sandstone of fine texture with a copious calcareous matrix; angular to rounded grains of clear quartz, some of which seem to be crystals, in part worn and mostly highly polished; brown, yellow, green, red, and black chert, and some grains of pink sand. No fossils found. A mechanical analysis of the washed material indicates approximately: 15% fine gravel, 4 mm or over in diameter; 2 mm to 1/4 mm, 75%; 1/8 mm or less, 10% - - - - - - -	120-140
Bentonitic clay of a creamy color. In the washed material a few small concretions of white calcareous material are found, some of which are stained with manganese (?)*** - - - - - - - - - - - - - - - -	140-226
Impure bentonite of a dark creamy to light brown color.*** - - - -	226-445
Bentonitic clay of a reddish cream color.*** - - - - - - - - - - - -	445-623
Light gray and brown, bentonitic clay, containing sand, gravel, and calcareous concretions.*** -	623-626
Creamy colored bentonitic clay (a few fragments showing a pale green color) containing calcareous concretionary fragments, some stained with manganese; some yellow and pink quartz grains.*** - - -	626-651

	Depth in feet
Slightly cream-colored and pale green, bentonitic clay.***	651-677
Cream-colored bentonitic clay.***	677-722
Pale green, calcareous bentonite and bentonitic clay.***	722-922
Pale green and some cream-colored cuttings of sand and clay, bentonitic and slightly calcareous.***	922-1002
Very pale green and cream-colored bentonitic and calcareous clay and sand, containing some gravel, fragments of calcareous concretions stained with manganese, and particles of pyrite.***	1002-1069
Pale green, calcareous bentonitic clay.***	1069-1134
Pale green, bentonitic clay, slightly calcareous.***	1134-1164
Pale green and cream-colored bentonitic clay, slightly calcareous*	1164-1196
Pale green and light brown clay and sand, bentonitic and slightly calcareous.***	1196-1230
Pale green and light gray cuttings of bentonitic clay; slightly calcareous.***	1230-1239
Pale green and cream-colored cuttings of slightly bentonitic and calcareous clay.***	1239-1359
Pale green and cream-colored cuttings of bentonitic clay, slightly calcareous.***	1359-1387
Green bentonitic clay, sand and slightly calcareous, similar to sample from 1359-1387 feet, except that this present sample contains less bentonitic and calcareous material and is of a darker green color*	1387-1435
Green, bentonitic clay, slightly calcareous.***	1435-1545
Green, bentonitic clay, somewhat calcareous.***	1545-1575
Pale green, bentonitic clay and much light gray sandy and calcareous material, and a little carbonaceous matter.***	1575-1736
Similar to sample from 1575-1736 feet	1736-1800

Core of very light gray, soft sandstone, slightly calcareous, and containing some volcanic ash (?). The washed material consists mostly of slightly rounded to angular grains of clear quartz, with a much smaller amount of yellow, pink, and gray grains. It slakes quite rapidly in water. A mechanical analysis is approximately: grains 2 mm in diameter, a trace; 1 mm in diameter, 5%; 1/2 mm 12%; 1/4 mm, 33%; 1/8 mm, 50%. The coarsest material consists mostly of calcareous concretions. The sample was labeled "volcanic

	Depth in fee
ash". This material is an original mixture of quarts sand and volcanic dust -	1756
Several pieces of gravel from one-fourth to three-fourths of an inch in diameter.*** -	1788
Pale greenish-gray clay, containing a small amount of bentonitic and calcareous material.*** -	1800-1811
Greenish and in part pinkish-gray, slightly bentonitic clay, in which occurs some fine gravel, and also some double pyramidal crystals of clear quartz, and some "rice sand".*** - - - - - - - - - - - - - - - - -	1811-1830
Pale green and brownish slightly calcareous sandy bentonitic clay**	1830-1893
Washed material, made up mostly of gray sandy clay, some slightly bentonitic and calcareous; calcareous concretionary fragments; fragments of fine non-calcareous sandstone; a few fragments of chert; and some quartz sand. A little fibrous material looking like separated silicified fibers of wood noted (?). See slide. Mechanical analysis is approximately: fine gravel, a trace; sand 2 millimeters in diameter, 31%; one millimeter, 34%; 1/2 millimeter, 14%; 1/4 mm, 17%; 1/8 mm, 4% -	1945 (Bottom of hole)
Pebble of banded chalcedonic flint, about 1 inch in diameter, and a fragment of white silicified wood. The material was found in the slush pit. No record of depth; also a fragment of bond - -	not given
Cream-colored, calcareous bentonitic clay (?). The sample was labelled "Fullers earth" with no depth given - - - - - - - - - - - - - - - - -	not given

From 120 to 722 feet the cuttings are mostly of a light cream color, and from 722 feet to 1387 feet they are pale green. Then from 1387 to 1575 feet they change to a darker green and from 1575 to 1893 feet change back to a pale green. Also from 922 to 1069 feet the cuttings are very sandy, averaging about 55% clay and 45% sand. These are the only breaks noted. Nothing was found in any of the samples to indicate the age of the formation drilled through.

Kenedy Well

Located at Kenedy. Drilled in 1920. The artesian flow furnished the Kenedy Hot Mineral Well Hotel with water for bathing purposes. There is a small amount of gas which is allowed to escape.

Driller's Log

	Depth in feet to		Depth in feet to
Clay soil	20	Yellow sand	285
Yellow soil	70	Brown gumbl	335
Sand and shell rock	140	Gray sand	395
Brown gumbo	270	Brown gumbo	467

	Depth		Depth
Yellow sand	562	Soft rock	1986
Soft red sand rock	622	Gumbo	1991
Yellow sand and shell (rock-salt W)	702	Hard sand shale and sand rock	2027
Gumbo	742	Shale	2047
Blue shale	781	Hard sand shale	2107
Gumbo	793	Rock	2110
Blue shale	823	Hard shale	2130
Gumbo	863	Hard sandy shale with streaks of C	2211
Rock 8-1/4 casing set 866'	866	Hard sandy shale	2266
Sand (salt water)	938	Gumbo	2272
Rock	939	Hard shale	2277
Blue shale and shell rock	1013	Gumbo	2312
Gumbo	1069	Hard sandy shale (oil)	2373
Blue shale and shell rock	1189	Rock	2375
Gumbo and shell rock	1248	Sand-water (gas and salt water)	2390
Rock	1250	Gumbo	2515
Gumbo and shell rock	1287	Blue shale	2570
Gumbo	1354	Rock	2573
Shale and shell rock	1411	Blue shale	2595
Rock	1415	Gumbo	2600
Shale and gumbo	1467	Blue shale	2700
Soft rock	1473	Shale (6" casing set at 2700')	2705
Shale	1493	Rock	2710
Gumbo	1510	Shale and rock shells	2742
Shale	1570	Blue shale	2757
Gumbo	1580	Blue sand (gas and hot water art flow)	2797
Rock	1586		
Gumbo	1648	Hard shale	2820
Hard blue shale	1688	Very hard blue shale	2830
Gumbo	1775	Hard shale	2865
Shale and gumbo	1825	Gumbo	2870
Hard blue sand	1875	Slate	2880
Soft rock	1880	Sandy slate	2900
Sand, hard, shale and sand rock	1981	Gumbo	3000

Manhattan Well

Located at Karnes City.

Description of samples by J. A. Udden and E. B. Stiles.

	Depth in feet
Black soil containing chert, very clear quartz, and white soft calcareous nodules -	1
Cream-colored siliceous silt containing volcanic dust and some calcareous nodules of same color - - - - - - - - - - - - - - - - - -	1-115
White marly and siliceous sandy silt.*** - - - - - - - - - - - - - - -	115-129
Sand consisting of grains of very clear quartz, of flint of various colors, and of black hematite grains. - - - - - - - - - - - - - -	129-186

	Depth in feet
A cream-colored siliceous silt, containing volcanic dust and some fragments of calcareous material, probably concretionary	186-196
Cream-colored sandy silt containing some volcanic dust and fragments of calcareous nodules	196-221
White sandy siliceous silt, containing volcanic dust.***	221-234
Light bluish marly clay of very fine texture, containing some small small crystals of pyrite.***	230-231
Yellowish-white calcareous silt, containing much volcanic dust and sand	241-248
Bluish-gray clay and silt.***	250-313
Gray silty marl containing fragments of shells.***	315-325
Bluish-gray marly clay, containing numerous fragments of small shells, one of which resembled a Cardium, and another Corbula aldrichi*	325-335
Gray marly clay containing a very small Cardium-like shell and a Truncatulina like ungeriana. ***	335-349
Dark gray marly clay.***	349-359
Light greenish-gray marl, some lignitic dark material giving bituminous and ammoniacal fumes on heating in a closed tube, some gray fine-grained limestone, and some sand.***	359-369
Bluish-gray calcareous clay, containing some fragments of shells and some pyrite.	369-379
Gray marly clay, with some lignitic material.***	379-389
Gray calcareous silt, part not calcareous.***	389-399
Bluish-gray clay marl and white limestone.****	410-419
Gray calcareous silty clay, with fragments of limestone and some of shells.	419-429
Gray calcareous silt, and silty soft sandstone.	429-439
Gray sandy and calcareous clay, giving faint sulfurous and ammoniacal fumes in closed tube.	439-449
Brown lignitic material, yielding fumes of oil, sulfur and ammonia, in closed tube; and containing some fine sand	449-459
Brown lignitic material, containing some fine sand, some pyrite showing woody fibres, and pollen-grains of several kinds.	459-469

	Depth in feet
Brown lignitic material, containing some fine sand, some pyrite showing woody fibres, and pollen-grains of several kinds.	469-479
Gray silty and marly clay with some sandstone of fine texture	479-484
Gray marly shale, and some fine sandstone.***	484-496
Gray limestone of fine texture.***	496-499
Gray and white limestone.	499-502
White clay containing spicules of sponges, and a white limestone, calcareous and crystalline, in which are imbedded spicules of sponges	502-504
Gray marl and sandstone of fine texture with some limestone.***	504-514
Gray marl and some sandstone, limestone, pyrite, calcite, and shell fragments.	514-527
Light gray limestone, calcareous, containing cubic crystals of iron pyrite about 0.01 to 0.04 mm in diameter and consisting of crystals of or particles of carbonate of lime somewhere near 0.04 mm in diameter.	527-530
Gray marly clay, containing some sandstone of fine texture and some pyrite crystals of very bright lustre.	530-531
In part gray clay, in part gray limestone, consisting of granules about 0.005 mm in diameter	531-532
Gray clay, very slightly calcareous, and some fine-grained sandstone.***	532-542
Gray sandy clay, with some sandstone of fine texture, and some limestone.***	542-552
Gray calcareous clay, and fragments of fine sandstone.***	552-560
Gray marly clay of fine texture.***	552-562
Somewhat dark gray clay, very slightly calcareous.***	572-582
Dark gray calcareous clay.***	582-592
Gray clay, slightly calcareous.***	592-601
Gray limestone, white limestone and some sandy and silty limestone	601-604
Gray clay, slightly calcareous, and containing some fine sand.***	604-614
Gray clay of fine texture, containing some sand.***	614-624

	Depth in feet
Dark gray clay, containing sand of fine texture.***	624-632
Gray silty and marly clay.***	632-641
Gray sandy silt containing some calcareous material.***	651-660
Some white limestone, which consists of uniform crystals about 0.02 mm in diameter.***	660-664
Gray marly silty clay.***	664-674
Gray clay, calcareous, some pyrite present.***	674-685
Gray sandy and silty clay, calcareous.***	685-697
Gray somewhat calcareous clay.***	697-704
Gray, silty calcareous clay and lignitic material.***	704-714
Gray, sandy calcareous silty clay and lignite.***	714-724
Gray, silty clay.***	724-734
Gray, silty clay and some lignite.***	734-744
Gray silty and calcareous clay.***	744-754
Dark gray calcareous clay, containing some silt.***	754-765
Gray sandy silt and some fragments of lignite.***	765-775
Gray sandy and marly silt.***	775-785
Gray sandy silt with some calcareous fragments and some fragments of lignite.	785-795
Gray silty clay, and some gray sandstone of fine texture.***	795-808
Three samples mixed into one. Most of the sample is a soft gray sandstone of fine texture, containing fragments of lignitic material. Some pieces consist of a fine white clastic material, which resembles bentonite. One large fragment of yellow flint, one large fragment of a flint-like moss agate, and some yellow calcareous and probably concretionary material was noted.	808-813 816-819 880-889
Gray sandy silt. (2 samples). ***	813-816, 819-829
Gray sandy silt, bentonite, pyrite and biotite noted.	829-839
Gray silty clay, containing some fine sand.***	839-849
Gray silty and sandy clay.***	849-859

	Depth in feet
Dark gray silty clay (2 samples)	859-869, 869-880
Gray sandy silt.	901-911
Gray silt.***	911-921
Gray silty and sandy clay. Bentonite present.	921-931
Gray silty clay.	931-941
Gray sandy silt containing fragments of mollusks, spherical concretions of pyrite from 1/2 to 1 mm in diameter and also cubic crystals of pyrite.	941-951
Gray silty sand of fine texture.***	951-961
Gray clayey silt and sand.***	961-971
Gray sandy silt, with many fragments of an exceedingly fine clastic material resembling bentonite.	971-981
Gray silt.	981-991
Gray sandy silt, with a faint tinge of green.***	1603-1613
Gray sandy silt.***	1593-1603
Gray sand.***	991-1001
Gray silty sand, slightly indurated, so that about half of the sample is in fragments of the soft rock.	1001-1011
Gray slightly indurated sandy silt.	1013-1023
Gray silty clay, containing some fragments of sandy rock and some fragments of a white very fine-grained clastic rock like bentonite	1023-1033
Gray silty clay.***	1033-1043
Gray silty and sandy clay, like the preceding.	1043-1053
Gray sandy silt. (2 samples)	1053-1063, 1063-1073
Gray silty sand.	1073-1083
Fine silty sand. Driller's note: "Sand rock".	1083-1093
Silty gray sand and some silt.***	1093-1103
Gray silty sand of fine texture.	1103-1113
Gray silty sand.	1113-1123

	Depth in feet
Gray silty clay with concretionary white material which is not calcareous (3 samples)	1123-1133,1133-1143, 1143-1153
Gray clay, silt and sand.	1153-1163
Gray clay and silt.	1163-1173
Gray sandy silt. Shell fragments noted.	1173-1183
Some sandy silt or fine sand, and some fine silt or clay.***	1183-1193
Gray sandy clay, containing glauconite grains, fragments of pelecypod shells, a small Ostrea and a small Turritella, fragments of lignite, and occasional grains of pyrite. (Bottom of rig was pulled out at 1203 feet.)	1203-1213
Gray clay containing some silt.***	1213-1223
Dark gray silty and sandy clay with many small pelecypod shells	1223-1233
Dark gray silty and sandy clay, containing many fragments of shells mostly pelecypods.	1233-1243
Dark gray silty clay.***	1243-1253
Dark gray silty clay, containing fragments of shells.***	1253-1263
Gray silty and sandy clay.*** (2 samples)	1263-1273,1273-1283
Gray sandy and silty clay.***	1283-1293
Gray sandy silt, as in preceding samples.	1293-1303
Greenish gray sandy and silty clay. Fragments of shells, a Leda pyrite, black chert grains, and mica noted. Glauconite present.	1303-1313,1323-1333
Gray sandy and silty clay, with green and black grains of quarts and chert. *** (2 samples)	1333-1343,1343-1353
Gray sandy and silty clay.*** (2 samples)	1353-1363,1363-1373
Light gray sandy material with some silty clay, like the preceding	1373-1383
Like the preceding, with fragments of mollusk shells.	1383-1393
Dark gray clay and sandy silt.***	1393-1403
Gray silt and sandy clay.***	1403-1413
Gray silt and clay.***	1413-1423
Mostly gray sand of fine texture.***	1423-1433

	Depth in feet
Greenish gray clay and sand.***	1433-1443
Gray clay and silty sand.***	1443-1453
Dark gray clay, and silty sand.***	1453-1463
Gray clay and silty sand.*** (3 samples)	1463-1473,1473-1483, 1483-1493
Gray sand of fine texture.***	1493-1503
Gray silty sand, containing fragments of mollusk shells.	1503-1513
Gray sandy silt and some silty clay.***	1513-1523
Dark gray sandy and silty clay.***	1523-1543
Gray sandy silt and clay.	1543-1553
Gray sand and silt.***	1553-1563
Gray silty sand, containing some pyrite, glauconite, and grains of black chert.	1563-1573
Sand, silt and clay.***	1573-1583
Gray sandy silt and clay.***	1613-1633
Gray sandy and silty clay containing pyrite, some white concretionary material, glauconite, grains of black chert, fragments of shells and scales of mica. (2 samples)	1633-1643,1643-1653
Gray sandy silt and clay containing Venericardia.	1653-1663
Gray sandy silt and clay.*** (2 samples)	1663-1673,1673-1683
Gray sandy silt and clay containing fragments of Venericardia, white concretionary material, glauconite, pyrite, mica, and grains of black chert.	1683-1693
Gray sandy silt, like the preceding, and containing fibrous calcite	1693-1703
Gray sandy silt and clay, containing white concretionary material, fragments of shells (Natica noted), glauconite, pyrite, grains of black chert, and mica scales.	1703-1713
Gray sandy silt and clay.***	1713-1723
Gray silty sand and sandy silt.***	1723-1733
Gray sandy silt and silty sand.*** (2 samples)	1733-1743,1743-1753

	Depth in feet
Gray silty sand and sandy silt.*** (2 samples)	1753-1763,1763-1773
Sandy gray silt and silty clay, containing concretions of soft white aluminous material.***	1773-1783
Greenish-gray sandy silt. *** (2 samples)	1903-1913,1913-1923
Greenish-gray silty sand, lacking a clayey ingredient.***	1923-1933
Greenish-gray sandy silt.***	1933-1943
Dark gray sandy silt, containing a piece of lignitic wood showing strong and straight medullary rays.***	1943-1953
Gray sandy silt.***	1953-1963
Dark greenish-gray sandy and clayey silt containing some lumps of a white kaolin-like soft material.***	1973-1983
Greenish-gray sandy silt.*** (2 samples)	1983-1993,1993-2001

W. E. Porter 1, Atlasta Oil Company

Located on Blanco survey, 6 miles south of Runge.

Description of samples by H. T. Kniker; submitted by Thomas S. McClure, San Antonio, 1920.

	Depth in feet
Gray marl containing much sand and small pebbles and many white calcareous fragments probably from caliche.	0-15
Pink well-rounded polished sand, some grains being of various colors; a few fragments of calcareous concretions; and a few fragments of lignite.***	15-250
Red marl containing well-rounded sand and a few fragments of white calcareous concretions.*** (2 samples)	250-260, 260-270
Red marl containing well-rounded sand grains, and some white concretionary calcareous material.***	270-280
Red marl containing some well-rounded sand grains, some calcareous concretionary fragments, and a few fragments of lignite***	280-290
Grayish-red marl containing fine rounded sand, a few calcareous concretionary fragments, and a few fragments of lignite.*** (2 samples)	290-300, 300-310
Gray and grayish-red marl containing rounded sand grains and a few fragments of lignite.***	320-330
Reddish-gray marl containing rounded sand, some fragments of	

	Depth in feet
concretionary material, and a few lignite and glauconite.*** (2 samples)	330-340, 340-350
Reddish-gray marl containing well-rounded yellow sand and a few concretionary calcareous fragments.***	350-360
Red and gray marl containing well-rounded pinkish sand, and fragments of concretionary, calcareous material.***	360-370
Gray and red marl containing polished yellow sand, calcareous material, and a few fragments of lignite.*** (2 samples)	370-380,380-390
Gray and red marl containing polished sand, some of which is composed of chert of various colors, and fragments of concretionary calcareous material.***	390-400
Gray and red marl.*** (2 samples)	400-415,415-420
Red and gray marl containing polished rounded sand and some fragments of concretionary calcareous material, and calcareous sandstone.***	420-430
Reddish sandy marl, some of the sand grains being composed of chert.*** (2 samples)	430-440,440-450
Grayish-red marl containing coarse polished sand, and a few fragments of sandy limestone.***	450-460
Reddish marl with much sand and a few fragments of sandy limestone.*** (2 samples)	460-480,480-490
Reddish-gray marl.***	490-500
Yellow marl containing rounded polished sand and a few fragments of concretionary calcareous material and lignite.***	500
Reddish marl.***	500-510
Reddish marl containing rounded polished sand, fragments of calcareous sandstone containing minute grains of glauconite, and fragments of concretionary calcareous material containing sand***	510-525
Reddish marl containing rounded polished sand, many small fragments of calcareous concretions, and a few fragments of calcareous sandstone and lignite.*** (2 samples)	525-535,535-550
Like sample from 525-535 feet, but more coarse sand is present and only a few Globigerinas were seen.	550-580
Reddish marl.*** (2 samples)	580-610,610-630
Light reddish marl containing polished sand and white concretionary calcareous fragments.***	630-650

	Depth in feet
Reddish marl with rice sand and some white calcareous concretions.*** (2 samples)	650-675,675-695
Mostly clear sand and some yellow marl.***	695-705
Light faintly reddish-gray marl containing rice sand and fragments of calcareous concretions.***	705-715
Reddish marl with much sand and some white calcareous concretions.***	715-735
Light gray calcareous material and small fragments of limestone concretions.***	835-855
Light gray volcanic ash and calcareous material.***	855-875
Light gray hydrated volcanic ash with calcareous material, sand, and a few fragments of lignite and some white botryoidal quartz*	875-895
Reddish-gray hydrated volcanic ash and calcareous material.***	895-905
Light greenish-gray marl containing sand and a few grains of glauconite.***	900
Reddish marl with some hydrated volcanic ash.*** (2 samples)	905-925,925-940
Pinkish-gray marl with sand and some hydrated volcanic ash.***	940-960
Reddish marl with some hydrated volcanic ash.***	960-980
Gray sand and marl.***	990-1000
Reddish-gray sandy marl.*** (2 samples)	1000-1020,1020-1040
Reddish sand and marl.*** (2 samples)	1050-1060,1060-1070
Reddish and greenish-gray sandy marl containing small fragments of calcareous concretions and a few fragments of lignite.*** (2 samples)	1070-1080,1080-1090
Grayish and reddish marl containing fragments of calcareous concretions and some fine sand.*** (2 samples)	1090-1100,1100-1110
Grayish-reddish marl containing fragments of white calcareous concretions, and sand.*** (2 samples)	1110-1120,1120-1130
Grayish and reddish marl containing sand and fragments of calcareous concretions.***	1130-1140
Pinkish marl with coarse sand and fragments of light gray calcareous concretions. *** (2 samples)	1130-1140,1140-1150

	Depth in feet
Reddish marl containing a small amount of fine sand and a few fragments of white calcareous concretions and lignite.*** - -	1160-1185
Reddish sand and some soft sandstone fragments cemented by a calcareous matrix.*** -	1185-1200
Coarse varicolored gray sand, with some reddish marly material	1200-1225
Light gray marl and coarse varicolored sand.*** - - - - - - - -	1225-1245
Greenish-gray marl containing some rather fine sand and some fragments of calcareous concretions.*** (2 samples) - - - - -	1245-1265, 1265-1285
Greenish-gray and pink sandy marl with streaks of white calcareous material. -	1285-1305

Note: In the samples above (0-1305 feet) the foraminifera are badly worn and many of them have a Cretaceous aspect. Probably most, if not all, of these fossils are of secondary origin. Many grains of "rice sand" seem to be composed of chalcedony.

W. E. Porter 2, Atlasta Oil Company

Located 6 miles south of Runge, on W. E. Porter's land.

Driller's Log

	Depth in feet to		Depth in feet to
Soft sandy and clay	15	Gray sand	672
Soft quick sand	20	Black sand	700
Ground rock	21	Blue gumbo	730
Soft yellow clay	40	Pink sand	755
Soft brown rock	45	Tough white gumbo	820
Gray sand rock	60	Lime rock	825
Soft blue gumbo	90	Gas and oil lime rock	828
Loose water sand	207	Tough white gumbo	900
Tough white gumbo	260	Brown gumbo	910
Brown rock	261	White shale	930
Gray quicksand	282	Brown gumbo	960
Tough gumbo	340	Hard black sand	1000
Black shale	345	Hard and soft white sand rock	1021
Blue gumbo	353	Tough blue gumbo	1042
Rock	400	Hard gray sand	1060
Gray gumbo	430	Brown gumbo	1070
Shale and boulders	456	Hard shale	1098
Gray sand	565	Blue gumbo	1103
Blue gumbo	590	Lime rock	1113
Gray sand	620	Shale and boulders	1175
Blue gumbo	632	Blue gumbo	1225
Gray sand	654	Shale and boulders	1255
Blue gumbo	668	Brown gumbo	1260

	Depth in feet to
Blue sandy shale	1268
Let 10" casing by mistake	1278
Water sand	1292
Oil and gas brown sand	1301
Fine gray sand	1320
Blue gumbo	1340
Blue sandy shale	1350
Blue sandy shale	1365
Black sandy shale	1385
Blue sand	1395
Soft shale	1420
Blue gumbo	1424
Hard blue shale	1451
White gumbo	1500
Gumbo	1565
Black shale	1570
Lime rock	1585
Oil and gas, hard brown shale	1685
Gumbo	1692
Oil and gas sandy shale	1802
8" casing set 1802-1810, gumbo	1836
Oil and gas sand	1839
Shale	1940
Hard sand	1970
Hard brown shale	2051
Blue gumbo	2065
Shale	2070
Gumbo	2085
Lime rock	2087
Gumbo	2100
Shale	2107
Gumbo	2125
Oil and gas, hard and soft sand	2158
Hard sandy shale	2178
Hard gray sand	2190
Lime rock	2195
Hard sandy shale	2225
Tough gumbo	2230
Hard rock	2240
Stem dropped 6" cavity	2246
Hard sand	2300
Gumbo	2310
Sandy shale	2330
Green sandy shale	2340
Gumbo	2350
Hard sandy shale	2360
Gumbo	2370
Hard sand	2386
Gumbo	2390
Hard sandy shale	2420
Hard sandy shale	2426
Hard rock	2430
Chalk rock	2445
Gumbo	2449
Hard lime	2457
Hard shale	2472
Hard rock	2476
Gumbo	2486
Hard shale	2496
Hard rock	2505
White gumbo	2540
Green shale	2590
Rock	2593
Hard sand	2603
Hard blue sandy shale	2620
Hard and soft gray sand	2685
Sand and gumbo	2705
Lime rock	2725
Sandy shale	2760
Gumbo	2764
Hard sand	2778
Gumbo	2784
Sandy shale	2838
Blue sandy shale	2885
Lime rock	2895
Gumbo	2930
Hard sandy shale	2980
Soft shale	2995
White gumbo	3010
39 sacks hard blue sand	3023
Gumbo	3053
Gray cave sand	3081
Gumbo	3090
Cave sand	3100
Gumbo	3119
Rock	3123
Gumbo	3134
Sandy shale	3150
Iron ore pure	3154
Gray sand	3160
Rock	3165
Gumbo	3190
Sandy shale	3197
Gumbo	3245

Description of samples by H. T. Kniker and S. M. Aronson; submitted by W. E. Porter, 1921.

	Depth in feet
Very light greenish-gray calcareous clay and some white clay, both slaking in water.*** (2 samples)	1396, 1406
Like sample from 1396 feet. Several clusters of pyrite grains showed quartz crystals growing on the outside. Some quartz crystals are clearly etched and also polished.	1416
Very light greenish-gray calcareous clay and white calcareous clay, both slaking in water.***	1426
Very faintly greenish and pinkish-gray calcareous clay, both slaking in water.*** (3 samples)	1436,1446,1456
Like sample from 1456 feet. A few grains of green chert were noted.	1466
Like sample from 1456 feet. (2 samples)	1476, 1486
White and some very light and faintly greenish-gray calcareous clay, both slaking in water.*** (2 samples)	1496, 1506
White calcareous clay and light greenish-gray calcareous clay which slakes in water.***	1516
White and very light greenish-gray calcareous clay, both slaking in water.*** (4 samples)	1526,1536,1546,1566
White and very light greenish-gray calcareous clay, both slaking in water.*** (5 samples)	1576, 1586, 1596, 1606, 1616
White calcareous clay which slakes in water.***	1626
Like sample from 1626 feet. A lump of granular pyrite was noted.	1636
Like sample from 1626 feet. (2 samples)	1646,1656
Like sample from 1626 feet. A few flakes of biotite crystals were noted, evidently secondary.***	1666
Like sample from 1626 feet. One Chara fruit case was seen.	1676
White calcareous clay which slakes in water.*** (6 samples)	1686, 1696, 1706, 1726, 1736, 1746
Very light gray calcareous clay which slakes in water.*** (3 samples)	1756, 1760, 1763

	Depth in feet
White to very light gray calcareous clay slaking in water.**(2 samples)	1776, 1780
Very light gray calcareous clay which slakes in water.*** (4 samples)	1803, 1815, 1835, 1845
A 2½ inch fragment of light gray noncalcareous clay which slakes in water.***	2200
A few small fragments of gray, calcareous clay, which, when washed, left a residue of a few grains of fine quartz sand and a few grains of gray chert.	2330
Light gray calcareous clay which slakes in water. *** (6 samples)	2335, 2346, 2350, 2360, 2370, 2380
Very light greenish-gray calcareous clay that slakes in water.*** (7 samples)	2390, 2395, 2400, 2405, 2415, 2426, 2436
Light greenish-gray and reddish slightly calcareous clay which slakes in water. (2 samples)	2450, 2465
Light greenish-gray calcareous clay which slakes in water.***	2470, 2480
Light greenish-gray calcareous clay and some reddish calcareous clay, both slaking in water. *** (2 samples)	2490, 2495
Fragments of calcareous concretions and a few of light gray and reddish clay.***	2505
Light greenish-gray calcareous clay and a few fragments of reddish calcareous clay, both slaking in water.**** (4 samples)	2545, 2560-2570, 2580, 2585
Very light gray calcareous clay which slakes in water.*** (3 samples)	2600, 2610, 2615
Very light greenish-gray calcareous clay, which slakes in water, and a few fragments of reddish clay.*** (3 samples)	2615-2640, 2621, 2640
Very light greenish-gray slightly calcareous clay with fragments of limestone concretions.***	2650
Light grayish-brown limestone heavily stained with iron rust.***	2670-2680
Gray non-calcareous non-slaking clay.***	2680
Light greenish-gray calcareous clay which slakes in water.***	2685-2700
Like sample from 2685-2700 feet, but large grains are rounded and polished.	2764-2770

	Depth in feet
Light gray greenish calcareous clay, slaking slightly in water.***	2770
Light gray greenish clay which is calcareous but does not slake in water.***	2780
Like the preceding sample from 2780 feet but only slightly calcareous.	2803
Light gray greenish clay and limestone mixture with the clay***	2824
Light gray greenish clayey limestone, and reddish clay which is non-calcareous. ***	2939
Light gray greenish calcareous slaking clay.***	2949
The sample is like the preceding one (2949) but has no slaking quality.	2960-(?)
Like the preceding sample at 2960-(?) feet. Clay is only slightly calcareous.	2990
A light gray greenish clay, which is non-calcareous and contains much volcanic dust.	3013
Light gray greenish and some reddish clay, both non-calcareous and non-slaking.*** (3 samples)	3030, 3042, 3067-?
Light greenish-gray non-calcareous clay, some gray non-calcareous clay, and a few fragments of reddish calcareous clay.***	3120
Greenish-gray clay which slakes in water.***	3125
Light greenish-gray and some gray non-calcareous clay.***	3134
Like sample from 3134 feet. A fragment of chalcedonic quartz was noted. Fossils: fragments of pelecypod shells and a pitted ostracod.	3144
Gray non-calcareous shale.***	3146
Fragment of very light gray, almost white, non-calcareous sandy clay containing some pyrite, and one 2-inch and one 3/4-inch fragment of sandstone which has evidently been baked by the drill.**	3150
Very light gray almost white sandy marl containing some pyrite.**	3150
Very light greenish-gray slightly calcareous clay which when washed left a residue of fragments of calcareous concretions, some fine sand, and a few fragments of chalcedonic quartz.***	3154
Light greenish-gray and some gray clay which when washed left	

	Depth in feet
a residue of fragments pf calcareous concretions, some pyrite, and sand and a few fragments of oyster and other pelecypod shells and several pitted ostracods. (2 samples)	3216, 3236
Gray non-calcareous clay which, when washed, left a residue of a few grains of very fine sand and the following fossiis: several specimens of a minute Anomalina, several small splinters of white bone, an otolith, and a fragment of a fish scale.	3309
Gray non-calcareous clay which, when washed, left a residue of some fragments of sandstone, pyrite, some fine sand, and a few fragments of chalcedonic quartz and one of lignite.***	3340
Like sample from 3340. A 6 mm long fish tooth was noted.	3335-3345
Rather dark gray very slightly calcareous clay, which, when washed, left a residue of a few grains of fine sand and of pyrite and a few fragments of pelecypod shells. (2 samples)	3360
Rather dark gray calcareous and finely sandy clay.***	3410
Light greenish-gray slightly calcareous clay and some gray non-calcareous clay.***	3576

Max Schorre 1, Runge Oil and Gas Company

Rotary rig located on Victor Blanco grant, La Buzan subdivision, 3 miles south of Runge.

Driller's log, given from memory. 1915

	Depth in feet		
	From	To	Thickness
Yellow silty clay, with layers of sandy material at, say, 15 feet apart	0	300	300
(Some lignitic material at about 200 feet)			
Sand rock, fine in texture	300	308	8
Yellow clay with layers of sand with a showing of oil (scum at 600 feet)	308	395	87
Green gumbo	395	900	5
Limestone	900	906	6
Sand, with a little oil	906	933	27
Yellow clay	933	973	40
Soft sand rock, with hard streaks	973	1073	100
Yellow clay, mixed with white, brown, green	1073	1110	37
Sandstone, fairly hard (oil-bearing; a bucket of oil said to have been collected during night)	1110	1150	40

Description of samples by E. B. Stiles; submitted by L. L. Nuson, Runge, 1921.

	Depth in feet
White soft but very compact and fine-grained limestone containing white quartz in crevices and occurring with much bluish-white chalcedony, like that in "rice sand". One fragment in the sample was about one-half inch in diameter. This when polished shows a brecciated condition with many irregular thread-like veins and pockets of chalcedony. Many fragments of the chalcedony are as large as a good-sized English pea. The limestone is apparently somewhat porous. No fossils were seen. - - - - - - - - - - - - - - - -	900-906
Polished subangular, clear quartz sand with grains of black, brown, and dull pink chert and quartz. No fossils were seen. - - - -	1100
Gray quartz sand polished and somewhat rounded. Considerable pink, brown, and black quartz and flint and some green quartz (?) present. No fossils were seen. -	1150